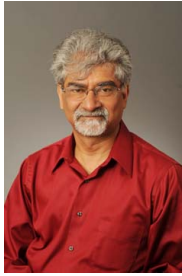


BIOGRAPHICAL SKETCH – Raja Parasuraman



Raja Parasuraman, Ph.D. is University Professor of Psychology at George Mason University, Fairfax, VA. He is Director of the Graduate Program in Human Factors and Applied Cognition and Director of the Center of Excellence in Neuroergonomics, Technology, and Cognition (CENTEC). Previously he held appointments as Professor and Associate Professor of Psychology at The Catholic University of America, Washington DC from 1982 to 2004. He received a B.Sc. (1st Class Honors) in Electrical Engineering from Imperial College, University of London, U.K. (1972) and a Ph.D. in Psychology from Aston University, Birmingham, U.K. (1976).

Raja Parasuraman has research programs in *human factors* and *cognitive neuroscience*. The first area concerns human performance in human-machine systems, particularly the role of human attention, memory, and vigilance in automated and robotic systems. His second area of research is the cognitive neuroscience of attention, where he has conducted studies using information-processing, neuroimaging (ERPs, fMRI, and fNIRS), and brain stimulation methods, both in healthy young adults and in relation to aging and Alzheimer's disease. He also has a research thrust in the molecular genetics of cognition. Finally, Dr. Parasuraman has merged his interests in human factors (ergonomics) and cognitive neuroscience by developing the field of *neuroergonomics*, which he defines as the study of brain and behavior at work. His books include *The Psychology of Vigilance* (Academic Press, 1982), *Varieties of Attention* (Academic Press, 1984), *Event-Related Brain Potentials* (Oxford University Press, 1990), *Automation and Human Performance* (Erlbaum, 1996), *The Attentive Brain* (MIT Press, 1998; reprinted in paperback, 2000), *Neuroergonomics: The Brain at Work* (Oxford University Press, 2007; reprinted in paperback, 2008, 2012), and *Nurturing the Older Brain and Mind* (MIT Press, 2012). Raja Parasuraman's research in these areas has been supported by over \$26 million in grant funds from federal agencies such as AFOSR, ARL, DARPA, NASA, NIH, NSF, and ONR, as well as by private foundations.

Raja Parasuraman served as a member of the National Research Council's Panel on Human Factors (Board on Human-Systems Integration) from 2000 to 2007 and served as Chair from 2001 to 2005. He is on the editorial board of several journals. He was elected a Fellow of the American Association for the Advancement of Science (1994), the American Psychological Association (1991), the American Psychological Society (1991), the Human Factors and Ergonomics Society (1994), the International Ergonomics Association (2006), and a National Associate of the National Academy of Sciences (2001). He was the recipient in 1997 and again in 2001 of the Jerome H. Ely Award for best paper in the journal *Human Factors* by the Human Factors and Ergonomics Society. In 2004 he received the Franklin V. Taylor Award for Lifetime Achievement in Applied Experimental and Engineering Psychology from the American Psychological Association (Division 21). In 2006 he received the Paul M. Fitts Education Award from the Human Factors and Ergonomics Society. He received the Outstanding Faculty Award in 2009 from the State Council for Higher Education for the State of Virginia. In 2010, he received the inaugural Raymond S. Nickerson Award for Best Paper in the *Journal of Experimental Psychology: Applied* by the American Psychological Association and the Admiral Kollmorgen Spirit of Innovation Award for Contributions to Neuroergonomics from the Augmented Cognition Technical Group, Human Factors and Ergonomics Society. His recent awards include the Triennial Outstanding Educators Award from the International Ergonomics Association and the Celebration of Scholarship Award from the College of Humanities and Social Sciences at George Mason University (both in 2012).

On a personal note, Raja Parasuraman has two college-age daughters, likes to cook, play guitar, go to the theater, and enjoys blues and world music, hiking, and traveling to distant lands.

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CURRICULUM VITAE

Raja Parasuraman

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Web sites: <http://archlab.gmu.edu/people/rparasur/>
<http://centec.gmu.edu>

EDUCATION

1976 Ph.D., Psychology, Aston University, Birmingham, U.K.
1973 M.Sc., Applied Psychology, Aston University, Birmingham, U.K.
1972 B.Sc. (1st Class Honors), Electrical Engineering, Imperial College of Science and Technology, University of London, U.K.

POSITIONS HELD

2010-present: Director, Center of Excellence in Neuroergonomics, Technology, and Cognition (CENTEC), George Mason University

2007-present: University Professor, George Mason University

2006-present: Director, Graduate Program in Human Factors and Applied Cognition, George Mason University

2004-2007: Professor, Department of Psychology, George Mason University, Fairfax, VA

1995-2005: Visiting Scientist, Laboratory of Brain and Cognition, and Section on Geriatric Psychiatry, National Institute of Mental Health, National Institutes of Health, Bethesda, MD

1986-2004: Professor, Department of Psychology, The Catholic University of America, Washington DC

1985-2004: Director, Cognitive Science Laboratory, The Catholic University of America, Washington DC

1982-1986: Associate Professor, Department of Psychology, Catholic University of America, Washington DC

1980-1982: Research Fellow, Department of Psychology, University of California, Los Angeles, CA

1978-1980: Lecturer, Department of Psychology, University of California, Los Angeles, CA

1977-1978: Lecturer II, Department of Economics and Social Studies, Wolverhampton Polytechnic, UK

1976-1977: Lecturer II, Department of Applied Social Studies, Lanchester Polytechnic, Coventry, UK

AWARDS AND HONORS

2012: Celebration of Scholarship Award for Directorship of CENTEC and Outstanding Professional Achievement and Dedication to George Mason University, College of Humanities and Social Sciences.

2012: Outstanding Educator Award, International Ergonomics Association Triennial Award

2011: Pioneer in Human-Automation Research Award, Cognitive Engineering and Decision Making Technical Group, Human Factors and Ergonomics Society.

2010: Admiral Kollmorgen Spirit of Innovation Award for Contributions to Neuroergonomics, Augmented Cognition Technical Group, Human Factors and Ergonomics Society.

2010: Inaugural Raymond S. Nickerson Award, Best Paper in Vol. 15 of the *Journal of Experimental Psychology: Applied*, American Psychological Association, "Detecting threat-related intentional actions of others: Effects of image quality, response mode, and target cueing on vigilance." (with E. De Visser, E. Clarke, W. R. McGarry, E. Hussey, T. Shaw, & J. Thompson).

2009: State Council for Higher Education for Virginia (SCHEV) Outstanding Faculty Award.

2008: "Pivotal Article" chosen for review in 50th (Golden) Anniversary Special Issue of the Human Factors and Ergonomics Society, "Humans and automation: Use, misuse, disuse, abuse", *Human Factors*, 1997.

2008: Distinguished Service Award, National Research Council, National Academy of Sciences, Washington DC

2007: First Prize Award, Runway Safety Challenge, FAA Airport Design Competition for Universities (Student team design award)

2006: Paul M. Fitts Education Award, Human Factors and Ergonomics Society

2006: Fellow, International Ergonomics Association

2004: Franklin V. Taylor Award for Lifetime Achievement in Applied-Experimental and Engineering Psychology, American Psychological Association (Division 21)

2001: National Associate, National Academy of Sciences

2001: Jerome H. Ely Award for Best Article in Vol. 42 of *Human Factors*, Human Factors and Ergonomics Society, "Fuzzy signal detection theory: Basic postulates and formulas for analyzing human and

	machine performance" (with A. Masaloni and P. Hancock)
2001:	Chair, Committee on Human Factors, National Research Council, National Academy of Sciences
1998:	Scientific Achievement Award for Contributions to Human Performance and Automation Control, Tidewater Human Factors and Ergonomics Society, Norfolk
1997:	Jerome H. Ely Award for Best Article in Vol. 38 of <i>Human Factors</i> , Human Factors and Ergonomics Society, "Effects of adaptive task allocation on monitoring of automated systems" (with M. Mouloua and R. Molloy)
1997:	Citation of Excellence (Highest Quality Rating) for the article in Vol. 39 of <i>Ergonomics</i> , "Alarm effectiveness in driver-centered collision-warning systems" (with P. Hancock & O. Olofinboba) by Electronic Intelligence, U.K.
1994:	Fellow, American Association for the Advancement of Science
1994:	Best Article Award for Vol. 1 of <i>Ergonomics in Design</i> , Human Factors and Ergonomics Society, "Human factors in intelligent travel systems" (with P. Hancock and W. Dewing)
1994:	Fellow, Human Factors and Ergonomics Society
1992:	Best Scientific Paper Award, <i>Journal of Cosmetic Chemistry</i> , Society for Cosmetic Chemistry, "Effects of olfactory stimulation on performance and stress in a visual sustained attention task" (with J. S. Warm and W. N. Dember)
1991:	Fellow, American Psychological Association (Divisions 1, 3, and 21)
1991:	Fellow, American Psychological Society
1989, 1990:	Senior Faculty Fellow, American Society for Engineering Education
1986:	President's Research Excellence Award, Catholic University of America
1984:	Scientific Achievement Award in the Behavioral Sciences, Washington Academy of Sciences
1983:	Fellow, Washington Academy of Sciences
1980-1982:	National Research Service Award, National Institute of Mental Health

CONTRACTS AND GRANTS

At George Mason University

Total contracts and grants: \$17,415,258

Summer 2014:	Sponsor, National Science Foundation Fellowship, East Asia and Pacific Summer Institutes (EAPSI) Program, Brian Falcone, \$5,000.
2013-2016:	Co-Principal Investigator (with Frank Krueger, PI), Air Force Office of Scientific Research Grant, "Neural Signatures of Trust during Human-Automation Interaction," \$698,591.
2012-2013:	Principal Investigator, Air Force Research Laboratory (Subcontract from Perceptronics Solutions), "Adaptive Interface and Management System (AIMS)," \$14,878.
2010-2015:	Principal Investigator, Air Force Office of Scientific Research Grant FA9550-10-1-0385, "CENTEC: Center of Excellence in Neuroergonomics, Technology, and Cognition," \$7,500,000.
2011-2012:	Co-Principal Investigator (with Tyler Shaw, PI), U.S. Army RDECOM Contract W911-11-1-0255 "Neuroergonomic Evaluation of Indirect Vision Displays for 360° Situation Awareness," \$39,099.
2011:	Sponsor, Research Grant to Brian Falcone, "Transcranial Direct Stimulation to Enhance Perceptual Learning and Retention," Augmented Cognition Technical Group. Human Factors and Ergonomics Society, \$500.
2010-2012	Co-Principal Investigator, (with Pamela Greenwood, PI), Mason-Inova Life Sciences Research Collaboration Fund, "Can cognitive training heighten integrity of mind and brain in MCI and healthy old age?" \$50,000.
2010-2011:	Co-Principal Investigator (with V. Ikonomidou, Principal Investigator), Virginia Center on Aging Grant 11-4, "Detection of ApoE-related white matter degeneration using Tissue Specific MRI", \$37,433.
2010-2011:	Principal Investigator, Army Research Laboratory, Collaborative Technology Alliance on Robotics Grant W911NF1020016, (Subcontract, University of Central Florida), "Human-Robot Team Trust Model," \$55,000.
2009-2010:	Principal Investigator, Army Research Laboratory Grant 125 - PO SCRI100633, "Neuroergonomic Monitoring for Improved Mobility and Operational Performance," \$75,000.
2009-2010:	Principal Investigator, Army RDECOM (Subcontract Perceptronics Solutions), "TECRA Experiments", \$12,500.
2009-2014:	Co-Principal Investigator (with G. Ascoli, K. Blackwell, T. Dumas, & J. Thompson, co-PIs), Office of Naval Research Multidisciplinary Research Program of the University Research Initiative (MURI) Grant N000141010198, "From Attentive to Automatic Performance: A Multi-Scale, Multi-Species, and Multi-Modal Investigation of Spatial Learning," \$2,869,910.
2008-2013:	Principal Investigator, Air Force Office of Scientific Research (AFOSR) Multidisciplinary Research Program of the University Research Initiative (MURI) Grant FA9550-080100356, "Modeling Synergies

	in Large Human-Machine Networked Systems" (Subcontract from Carnegie Mellon University), \$911,209.
2007-2013:	Principal Investigator, National Institute on Aging Grant 2R01AG019653, "Apolipoprotein E, Attention, and Alzheimer's Disease", \$2,561,004
2007-2009:	Principal Investigator, Army Research Laboratory Contract DAAD-19-01-C-0065 (Task Order 91), "Neuroergonomics of Attention, Action Recognition, and Action Performance Applied to Uninhabited Vehicles," \$370,000
2007-2008:	Principal Investigator, Army RDECOM (Subcontract, Perceptronics Solutions). Phase II SBIR, "Adaptive Delegation Interfaces for Human-Robot Teaming", \$150,000.
2005-2008:	Principal Investigator, Army Research Laboratory Contract DAAD 19-01-C-0065, "Adaptive Automation Architecture Documentation," \$347,000.
2006-2007:	Principal Investigator, Air Force Research Laboratory (Subcontract, Aptima Inc.) Phase I SBIR, "Quantitative Model of Human Dynamic Attention Allocation," \$29,902.
2005-2007:	Principal Investigator, Air Force Research Laboratory Contract FA 8650-05-C-6636, "Supporting Battle Management Command and Control: Designing Innovative Interfaces and Selecting Skilled Operators", \$96,292.
2004-2007:	Principal Investigator, National Institute of Aging Grant R01 AG19653, "Apolipoprotein E, Cognition, and Alzheimer's Disease," \$810,563.
2004-2006:	Principal Investigator, Department of Defense Research Office, Multidisciplinary University Research Initiative (MURI) Grant DAAD19-01-1-0621 (Subcontract from University of Central Florida, P. A. Hancock, Lead Investigator), "Mitigating, Stress, Workload, and Fatigue on the Electronic Battlefield," \$194,901.
2004-2005:	Principal Investigator, Army Research Laboratory Contract 6004.005.01-C, "Adaptive Automation for Human-Robot Interaction", \$201,457.
2004-2005	Principal Investigator, Defense Advanced Research Projects Agency Grant N00014-04-1-0655, "Neural and Genetic Assays of Mental Workload," \$80,000.
2004-2005	Principal Investigator, Army Research Laboratory Contract 6004.005-01-B, "Empirical and Computational Studies of Human-Robot Interaction," \$180,257.

At The Catholic University of America

Total contracts and grants: \$8,859,931

2001-2004:	Principal Investigator, National Institute of Aging Grant R01 AG19653, "Apolipoprotein E, Cognition, and Alzheimer's Disease," \$1,252,194.
2001-2004:	Principal Investigator, Department of Defense, Army Research Office, Multidisciplinary University Research Initiative (MURI) Grant DAAD19-01-1-0621 (Subcontract from University of Central Florida, P. A. Hancock, Lead Investigator), "Mental Workload, Brain States, and Adaptive Automation," \$315,099.
2004-2006:	Principal Investigator and Sponsor, NASA Graduate Research Sponsor Program Grant to Kathleen McGarry, "Alerting Technologies on the Runway for Preventing Runway Incursions," \$44,000.
2003-2006:	Principal Investigator and Sponsor, NASA Graduate Research Sponsor Program Grant to Marla Zinni, "Adaptive Automation Matched to Human Mental Workload as Measured by Cerebral Blood Flow Velocity," \$66,000.
2001-2003:	Principal Investigator, Defense Advanced Research Projects Agency Grant F30602-01-0577 (Subcontract from Cornell University, M. Campbell, Lead Investigator), "Human Centered, Multiple Initiative Control of Complex Automa-Teams (MICA)," \$218,000.
2001-2003:	Sponsor, National Institute of Aging Training Award to Yang Jiang K01 AG00986, Principal Investigator, "Neuroimaging of Complex Motion in Young and Old Individuals," \$538,156.
2001-2005:	Principal Investigator and Sponsor, NASA Graduate Research Sponsor Program Grant to Ericka Rovira, "Levels and Types of Automation in Future Air Traffic Management," \$88,000.
2001-2003:	Principal Investigator, NASA Ames Research Center Grant NCC2-1247, "Human Factors in Distributed Air-Ground Traffic Management," \$30,082.
2001-2002:	Principal Investigator, NASA Langley Research Center Grant NAG-1-01066, "Real-Time Adaptive Automation of Flight Tasks," \$38,837.
2000-2002:	Principal Investigator, Army Research Laboratory, Ft. Huachuca Grant DAAD17-00-P-0366, "Human Interaction with Automated Decision Aids: Levels and Types of Automation," \$50,000.
1999-2003:	Principal Investigator, NASA Goddard Space Flight Research Center Grant NAG 5-8761, "Human Biology-Based Adaptive Systems in Support of Space Exploration," \$638,920.
1999-2000:	Principal Investigator and Sponsor, Graduate Student Fellowship to Ulla Metzger, Flughafenstiftung Frankfurt Foundation, \$12,000.
1998-1999:	Principal Investigator, NASA Langley Research Center Grant NAG3-2103, "Cockpit Adaptive Automation and Pilot Performance," \$127,611.

- 1998-2001: Principal Investigator and Sponsor, NASA Graduate Research Sponsor Program Grant to Scott Galster, "Evaluation of Countermeasures to Automation-Related Complacency in IFR-Rated General Aviation Pilots," \$66,000
- 1996-2001: Principal Investigator, NASA Ames Research Center Grant NAG-2-1096, "Dynamic Automation Tools for Air Traffic Management," \$959,975.
- 1996-1999: Principal Investigator and Sponsor, NASA Graduate Research Sponsor Program Grant to Jacqueline Duley, "Operator Attention Strategies for Flexible Information Management," \$66,000.
- 1996-1998: Principal Investigator and Sponsor, NIMH Predoctoral Fellowship 1F31-MH-11361 to David Hardy, "Inhibition of Exogenous Orienting and Aging," \$26,016.
- 1995-1998: Principal Investigator and Sponsor, Minority Supplement Award for Stephanie Johnson, National Institute on Aging, RO1 AG07569, \$44,720.
- 1994-1997: Co-Principal Investigator (with Brian Hilburn, Principal Investigator), North Atlantic Treaty Organization Collaborative Research Grant CRG 94.1064, "Biobehavioral Assessment of Human Interaction with Real-Time Decision Aids," \$34,000.
- 1994-1999: Associate Investigator (with Pamela M. Greenwood, Principal Investigator), National Institute on Aging Grant RO1 AG12387, "Visuospatial Processing Across the Adult Life Span," \$439,454.
- 1993-1998: Principal Investigator, NASA Langley Research Center Grant NAG-1-1296, "Adaptive Task Allocation in the Cockpit," \$524,404.
- 1989-2001: Principal Investigator, National Institute on Aging Grant RO1 AG07569, "Attention in "Aging and Early Alzheimer's Dementia," \$1,683,134.
- 1993-1994: Principal Investigator, NASA Langley Research Center Grant NAG-1-1296, "First Automation Technology and Human Performance Conference," \$15,112
- 1993-1994: Principal Investigator, Office of Naval Research Contract N00014-94-1-0527, "First Automation Technology and Human Performance Conference," \$9,800.
- 1993-1994: Principal Investigator, School of Arts & Sciences, Catholic University Grant, "First Automation Technology and Human Performance Conference," \$2,000.
- 1993-1995: Principal Investigator, National Institute of Mental Health Contract 263-MD-345667, "Cognitive Science Laboratory Development," \$47,480.
- 1991-1994: Principal Investigator, Naval Air Development Center Contract N62269-91-C-0240, "Adaptive Function Allocation for Intelligent Cockpits," \$322,141.
- 1991-1994: Associate Investigator (with Pamela M. Greenwood, Principal Investigator) Alzheimer's Association Research Grant IIRG-91-043, "Visual Search and Brain Metabolism in Alzheimer's Disease," \$133,573.
- 1991-1993: Principal Investigator, NASA Langley Research Center Grant NAG-1-1296 "Automation and Operator Complacency in Monitoring," \$232,294.
- 1990-1991: Principal Investigator, Naval Air Development Center Contract N62269-90-0022-5931, "Executive Control Processes in Adaptive Automation," \$59,859.
- 1990-1991: Principal Investigator, NASA Langley Research Center Grant NAG-1-1118 (University of Minnesota subcontract G104995) "Automation and Operator Complacency in Monitoring," \$70,000.
- 5/1/90 - 7/14/90: Senior Faculty Fellowship, American Society for Engineering Education, at Naval Air Development Center, Warminster, PA, \$13,000.
- 1989-1990: Principal Investigator, Naval Air Development Center Contract N62260-89M-8435, "Monitoring Performance with Non-Linguistic Displays," \$5,612.
- 5/1/89 - 7/15/89: Senior Faculty Fellowship, American Society for Engineering Education, at Naval Air Development Center, Warminster, PA, \$10,612.
- 1988-1989: Principal Investigator, Naval Air Development Center Contract N62269-88-M-076, "Cognitive Vigilance Across the Adult Life Span," \$5,219.
- 1987-1990: Co-Principal Investigator (with Joel S. Warm & William N. Dember), Fragrance Research Fund, Ltd. Grant, "The Effects of Odor Administration on Performance and Stress in Sustained Attention Tasks," \$60,433.
- 1987-1990: Co-Principal Investigator (with James H. Howard, Jr.) Centers for Disease Control, Public Health Service, and Department of Transportation Grant R49/CCR302583, "Cognitive Implications of Closed Head Injury," \$859,119.
- 1986-1987: Principal Investigator, Gerontology Research Center, National Institute on Aging Contract 263-MD-712174, "Training Sustained Attention," \$12,731.
- 1986-1989: Principal Investigator, Alzheimer's Disease and Related Disorders Association (ADRDA) Research Grant RG-II-86-080, "Attention, Brain Metabolism, and Cognitive Decline in Early Alzheimer's Disease," \$153,030.
- 1985-1987: Sponsor, National Research Service Award 1F31-MH-09315-01 to Paul G. Nestor, National Institute of Mental Health, "Attentional Cost of Encoding in Alzheimer's Disease," \$16,374.
- 1985-1986: Principal Investigator, National Institute on Aging Research Grant RO3 AG05781, "Patterns of Attentional Loss in Early Alzheimer's Disease," \$21,596.
- 1985-1986: Principal Investigator, Alzheimer's Disease and Related Disorders Association (ADRDA) Research Grant RG-85-051, "A Prospective Study of Cognitive Decline in Alzheimer's Disease," \$11,979.

- 1983-1984: Principal Investigator, Biomedical Research Support Grant, Catholic University, "Detection and Identification of Pathology in Medical Images: Evaluation of User-System Performance," \$2,073.
 1983-1984: Principal Investigator, Catholic University Research Fund, Equipment Grant, \$13,292.

At The University of California, Los Angeles

- 1981-1985: Principal Investigator, Air Force Aerospace Research Laboratory and University of Dayton Research Institute Contract F33615-81-C-0512, "Vigilance, Monitoring, and Search," \$9,179.

SCIENTIFIC AND PROFESSIONAL AFFILIATIONS

Current

Association for Psychological Science (Fellow)
 Cognitive Neuroscience Society
 Human Factors and Ergonomics Society (Fellow)
 International Ergonomics Association (Fellow)
 Psychonomic Society
 Society for Neuroscience

Previous

American Association for the Advancement of Science (Fellow)
 American Psychological Association (Fellow, Divisions 1, 3, and 21)
 Association of Aviation Psychologists

REVIEWING ACTIVITIES

Editorial Boards

- 2014-present: Advisory Board, Series on "At the Forefront of Human Factors and Ergonomics", *Human Factors*
 2011-present: Editorial Board, *International Journal of Human Factors and Ergonomics*
 2010-present: Editorial Board, *IIE Transactions on Occupational Ergonomics and Human Factors*
 2007-present: Editorial Board, *Ergonomics*
 1999-present: Editorial Board, *Theoretical Issues in Ergonomics Science*
 2007-2010: Editorial Board, *Journal of Experimental Psychology: Applied*
 2001-2009: Editorial Board, *Human Factors*
 2001-2008: Editorial Board, *The Scientific World Journal (Higher Level Brain Function)*
 2001-2007: Editorial Board, *Neuropsychology*
 1998-2000: Editorial Board, *Acta Psychologica*
 1998-2001: Editorial Board, *Encyclopedia of the Human Brain*, Academic Press.
 1998-2001: Editorial Board, *International Encyclopedia of Human Factors and Ergonomics*, Taylor & Francis.
 1996-2000: Editorial Board, *Transportation Human Factors*
 1990-1994: Editorial Board, *Human Factors*
 1984-1991: North-American Editor, *Current Psychology: Research and Reviews*.

Grant Agencies

American Institute of Biological Sciences, Australian Research Council, Human Frontiers of Science Foundation, Israel Science Foundation, National Institutes of Health, National Science Foundation, The Alzheimer's Association, North Atlantic Treaty Organization, Virginia Council on Aging, Wellcome Trust.

Publishers

Academic Press, Ashgate Publishers, Erlbaum Associates, Elsevier Press, Fitzgerald Science Press, MIT Press, Oxford University Press, Palgrave MacMillan, Plenum Press, Sage Press, Taylor and Francis Ltd., Wiley Publishers.

Journals

Acta Psychologica, Air Traffic Control Quarterly, American Journal of Mental Deficiency, American Journal of Psychology, Applied Cognitive Psychology, Applied Ergonomics, Archives of General Psychiatry, Attention, Perception, and Psychophysics, Australian Journal of Psychology, Behavioral and Brain Sciences, Behavioral Brain Research, Behavioral Neuroscience, Behavior Research Methods, Instruments, and Computers, Biological Psychology, Brain Stimulation, British Journal of Psychology, Canadian Acoustics, Cerebral Cortex, Cognition, Cognitive Science, Consciousness and Cognition, Current Neuropharmacology, Current Psychological Research and Reviews, Developmental Neuropsychology, Ergonomics, Experimental Aging Research, Experimental Brain Research, Frontiers in Bioscience, Human Factors, Human Factors and Ergonomics in Manufacturing, Human Performance, IEEE Transactions on Systems, Man and Cybernetics (Parts A and C), IIE Transactions on Occupational Ergonomics and Human Factors, Interacting with Computers, International Journal of Applied Aviation Studies, International Journal of Aviation Psychology, International Journal of Geriatric Psychiatry, International Journal of Human Computer Studies, International Journal of Human Factors and Ergonomics, International Journal of Industrial Ergonomics, International Review of Research in Mental Retardation, Journal of Clinical and Experimental Neuropsychology, Journal of Cognitive Engineering and Decision Making, Journal of Cognitive Neuroscience, Journal of Experimental Psychology: Applied, Journal of Experimental Psychology: General, Journal of Experimental Psychology: Human Perception and Performance, Journal of Experimental Psychology: Learning, Memory, and Cognition, Journal of the International Neuropsychology Society, Journal of Neurophysiology, Journal of Neuroscience, Journal of the Washington Academy of Sciences, Nature, Nature Neuroscience, Nature Reviews Neuroscience, Neural Processing Letters, Neurobiology of Aging, NeuroImage, Neuropsychologia, Neuropsychology, New Ideas in Psychology, Perception and Psychophysics, Perceptual and Motor Skills, Proceedings of the Human Factors Society, Proceedings of the IEEE, Proceedings of the National Academy of Sciences (USA), Psychobiology, Psychological Bulletin, Psychological Medicine, Psychological Review, Psychological Documents, Psychological Science, Psychology and Aging, Psychonomic Bulletin and Review, Psychopharmacology, Psychophysiology, Quarterly Journal of Experimental Psychology, Robotics, Safety Science, Science, Simulation in Healthcare, Sleep, Social, Cognitive, and Affective Neuroscience, Theoretical Issues in Ergonomics Science, Transportation Human Factors, Visual Cognition.

MEDIA REPORTS ON RESEARCH (Partial List)

- August 2014: Research on multitasking and the COMT gene described in article, "Multitasking gene may help drone operators control robotic swarms", *Scientific American*, <http://www.scientificamerican.com/article/multitasking-gene-may-help-drone-operators-control-robotic-swarms/>
- August 2014: Research on transcranial Direct Current Stimulation (tDCS) described in article, "Prepare to be Shocked: Four predictions about how brain stimulation will make us smarter," *The Atlantic*, http://www.theatlantic.com/magazine/archive/2014/09/prepare-to-be-shocked/375072/?single_page=true
- March 2014: Research on non-invasive brain stimulation described in article, "Can Brain Zaps Boost Learning," *TXCHNOLOGIST*, <http://txchnologist.com/post/80785451699/can-brain-zaps-boost-learning>
- February 2014: Research on human-automation interaction described in article "Robots and Scientific Innovation," *GNOVIS*, <http://gnovisjournal.org/2014/02/11/robots-and-scientific-innovation/>
- January 2014: Research on the COMT gene and multitasking described in article, "Scientists Identify Gene That Determines Multitasking Abilities," in *Counsel and Heal: Mental Health* <http://www.counselheal.com/articles/8196/20140107/scientists-identify-gene-determines-multitasking-abilities.htm>
- January 2014: Research on aging, cognition, and health discussed in article, "Spotlight on recent advances in cognition and health at Banaras Hindu University," *The Times of India*, January 24, 2014. <http://timesofindia.indiatimes.com/city/varanasi/Spotlight-on-recent-advances-in-cognition-and-health-at-Banaras-Hindu-University/articleshow/29292862.cms>
- January 2014: Research on COMT gene and multitasking described in News section of the Human Factors and Ergonomics Society, "Is Multitasking Mastery in the Genes?" <https://www.hfes.org/Web/DetailNews.aspx?ID=326>
- November 2013: Also reported in *Science Newsline Psychology*, <http://m.sciencenewslines.com/news/2014010723590018>
- November 2013: Research on human-automation interaction discussed in feature article by Nicholas Carr, "All Can Be Lost: The Risk of Putting Our Knowledge in the Hands of Machines," *Atlantic Magazine*. November 2013. <http://www.theatlantic.com/magazine/archive/2013/11/the-great-forgetting/309516/>
- June 2013: Research on automation discussed in an article by Jayne O'Donnell, "Driverless cars should slow down, some say." *USA Today*. <http://www.usatoday.com/story/money/cars/2013/06/10/automakers-develop-self-driving-cars/2391949/>
- March 2013: Research on cognitive aging and book, *Nurturing the Older Brain and Mind*, featured in an article in the *Alexandria Gazette*, "Preserving mental health as people age." <http://www.alexandriagazette.com/news/2013/feb/07/preserving-mental-health-people-age/>

- March 2013: Featured in an article in the news magazine of the School for Behavioral and Cognitive Neurosciences, University of Groningen, Netherlands. <http://www.rug.nl/research/behavioural-cognitive-neurosciences/news/bcn-newsletter-89.pdf>
- January 2013: Research on human supervision of unmanned vehicles featured in an article, "I spy with my faraway eye." *New Scientist*, January 26, 2013, 46-49.
- August 2012: Quoted in article on "Humanlike features in automated decision tools build trust" *American Medical News*, <http://www.ama-assn.org/amednews/m/2012/08/06/bsdo807.htm>
- July 2012: Research on genetic basis of "automation bias" discussed in article, "Genes predict who places their trust in machines," *New Scientist*, July 19, 2012. <http://www.newscientist.com/article/dn22079-genes-predict-who-places-their-trust-in-machines.html>
- June 2012: Featured in article on "New Study Shows Learning Benefits from Brain Stimulation," *Mason Newsdesk*, <http://newsdesk.gmu.edu/2012/06/new-study-shows-learning-benefits-from-brain-stimulation/>
- March 2012: Featured in article on "Healthy Habits May Lead to a Sharper Mind in Old Age, Psychologists Find", *Mason Newsdesk*, <http://newsdesk.gmu.edu/2012/03/healthy-habits-may-lead-to-a-sharper-mind-in-old-age-psychologists-find/>
- March 2012: Featured in article and video on the Arch Lab in *Observer* (Volume 25, Number 3, page 10) magazine of the Association for Psychological Science, "APS Lab Profile: George Mason University Arch Lab." <http://www.psychologicalscience.org/index.php/video/aps-lab-profile-george-mason-university-arch-lab.html>
- January 2012: Quoted in article regarding a FRA-sponsored study of distraction in railway engineers. *Railway Age*, January issue, p. 14. <http://www.nxtbook.com/nxtbooks/sb/ra0112/#/18>
- December 2011: Quoted in an article on information overload and business waste in *Business Standard*, <http://www.business-standard.com/india/news/indira-rajaramancheklistwaste/457361/>
- September 2011: Quoted in an article on the effects of information load due to the proliferation of unmanned vehicles, "Military Battles Information Overload from Robot Swarms." *Innovation News*, <http://www.innovationnewsdaily.com/battlefield-drones-information-overload-2240/>
- July 2011: Commentary on use of EEG in driver-assistance technology, "Brain waves make a fast brake" *Science News* http://www.sciencenews.org/view/generic/id/332892/title/Brain_waves_make_a_fast_brake
- April 2011: First prize submission to the Human Factors and Ergonomics Society competition on "What is Human Factors?" <http://www.youtube.com/watch?v=HJMpajaLEeY>
- January 2011: Quoted in front-page article in the *New York Times* (January 17, 2011) on neural effects of data overload, "In New Military, Data Overload can be Deadly," <http://www.nytimes.com/2011/01/17/technology/17brain.html?hp>
- December 2010: Featured in video recorded at the National Press Club of the National Research Council's 30th anniversary meeting of the Committee on Human-Systems Integration, "Presentations by Former Chairs." <http://vimeo.com/18276785>
- September 2010: Article in *GMU News* on establishment of CENTEC, Center of Excellence in Neuroergonomics, Technology, and Cognition. <http://news.gmu.edu/articles/4151>
- April 2010: Research on early detection of Alzheimer's disease using cognitive and MRI measures. Three linked multi-media articles in *American Observer* magazine, April 2010. <http://inews6.americanobserver.net/articles/alzheimers-challenges-families-scientists>
<http://inews6.americanobserver.net/articles/families-caregivers-and-researchers-fight-alzheimers-all-fronts%20>
<http://inews6.americanobserver.net/articles/alzheimers-grim-diagnosis-hope-cure%20>
- December 2009: Research on human-automation interaction described in an article in *IEEE Spectrum* magazine, December 15, 2009, on "Automated to Death." <http://spectrum.ieee.org/computing/software/automated-to-death>
- June 2009: Neuroergonomics research, including EEG and genetic studies, described in *Popular Mechanics* magazine, June 2009, in an article entitled "Brain Man: Questions for Neuroergonomics Expert Raja Parasuraman." <http://www.popularmechanics.com/science/health/nueroscience/4319679>
- June 2009: Research on human-automation interaction described in an article on the MetroRail crash in the *Washington Post*, June 29, 2009, entitled "Metrorail Crash May Exemplify Automation Paradox." <http://www.washingtonpost.com/wpdyn/content/article/2009/06/28/AR2009062802481.html>
- January 2009: Outstanding Faculty Award from the State Council for Higher Education of Virginia, January 2009. Announcement: <http://www.schev.edu/schev/newsReleases/nr-jan2009/nr012609.asp>
Article: <http://www.schev.edu/adminfaculty/OFA/09Parasuraman.asp>
Photos from Award Ceremony: <http://picasaweb.google.com/SCHEVCommunications/OFA2009?feat=directlink#>
- December 2008: Video of invited address on Neuroergonomics at the Annual Army Science Conference, Orlando, FL. <http://video.google.com/videoplay?docid=-5136428309509134803#>
- July 2007: Article in *Psychological Science Agenda* on First Prize Award, Runway Safety Challenge, FAA Airport Design Competition for Universities. <http://www.apa.org/science/about/psa/2007/07/safety.aspx>
- May 2007: Article describing First Prize Award, Runway Safety Challenge, FAA Airport Design Competition for

Universities.

<http://platinum.ts.odu.edu/Apps/FAAUDCA.nsf/2007%20Winners%20Fact%20Sheet.pdf?OpenFileResource>

- October 2005: “Famous Faces of Human Factors.” Spoof 2006 Year Calendar, Created by the University of Central Florida Student Chapter of the Human Factors and Ergonomics Society.
- September 2004: Article on research in neuroergonomics: “The Baggage Screener’s Brain Scan” in the September issue of *APA Monitor*. <http://www.apa.org/monitor/sep04/baggage.aspx>
- June 2004: Research on vigilance and on human-automation interaction discussed in an article in the *Financial Times* by Sarah Richards, “A Game of Concentration”.
- August 2002: One-hour interview on August 22 as a guest on Public Interest with Kojo Nnamdi, (National Public Radio and WAMU-FM. Topic: The emerging field of neuro-ergonomics and its possible applications. <http://thekojoannamdishow.org/topic/science?page=63>

OTHER PROFESSIONAL ACTIVITIES

- April-May 2013: Visiting Professor, Two-week lecture course on Neuroergonomics, College of Brain and Cognitive Sciences, Beijing Normal University, Beijing, China.
- 2011-present: Scientific Adviser, Veolia Inc. and Volpe Transportation Institute (Project: Evaluation of Distraction in Commercial Rail Operations.).
- 2011-2014: Scientific Advisory Committee, College of Brain and Cognitive Sciences, Beijing Normal University, Beijing, China.
- 2011-2012: Consultant, Charles River Analytics Inc. (Project: Immersive Persistent World for Adaptive Cultural Training (IMPACT)).
- 2011-present: Member, Publications Committee, Human Factors and Ergonomics Society
- 2010-2012: Consultant, Aptima Inc. (Project: Tools for Rapid Assessment of Cognitive Readiness in Teams—TRACR-T).
- 2010-2012: Member, Center for Human Performance Research project team, Eurocontrol (Project: Multidimensional Framework for Advanced SESAR Automation—MUFASA).
- 2010-2012: Advisory Board, Aptima Inc.
- 2010-2012: Member, Center for Advanced Study, University of Oslo, Norway. (Project: Cognition in aging: Contributions of cognitive neuroscience and cognitive neurogenetics).
- 2010-2011: Consultant, Charles River Analytics Inc. (Project: Cognitive Readiness Agents for Neural Imaging and Understanding Models—CRANIUM).
- 2010-2011: Expert Member, European Space Foundation (ESF) Working Group (Project THESEUS: Towards Human Exploration of Space: A European Strategy, Subgroup on Human Machine Interaction).
- 2010-2011: Consultant, NASA and San Jose State University Foundation (Project: NextGen Integrated Workstation Human-Systems Requirements Development).
- Jan-Feb 2010: Advisor, Government Accountability Office (GAO) (Project: Assessment of FAA/NASA human factors R&D on NextGen).
- 2009-2010: Consultant, Agent Dynamics Inc. (Project: “ANTICO: Any Time Cognition for Command and Control”).
- 2008-2011: Consultant, Smart Information Flow Technologies, Inc. (Project: 3-Dimensional Model of Levels of Automation). Phase II SBIR, U.S. Army.
- 2008-2011: Consultant, Aptima, Inc. (Project: Airportal Functional Allocation Reasoning—AFAR). Phase I SBIR, NASA Ames Research Center.
- 2007-2009: Consultant, Perceptonic Solutions Inc. (Project: Technology for Control of Robotic Assets—TECRA). Phase I and II SBIR, U.S. Army RDECOM.
- 2007-2009: Fellows Selection Committee, Human Factors and Ergonomics Society.
- 2007-2008: Chair, Awards Committee, Human Factors and Ergonomics Society
- 2006-2007: Consultant, Alion Science and Technology Inc. (Project: “Manpower and Personnel Integration (MANPRINT) Tools Development”).
- 2005-2007: Member, Committee on Human Factors, National Research Council, National Academy of Sciences
- 2005-2006: Participating Scientist, Center for Educational Research and Innovation (CERI), Organization for Economic Cooperation and Development (OECD), Paris, France (Project: “Brain and Learning in Adulthood”).
- May-June 2005: Visiting Scholar, *Medici II* Conference on Positive Psychology (Project: “Psychological Capital”)
- 2005-2006: Consultant, Micro Analysis and Design, Inc. (Project: “Soldier Centered Design Tools”).
- 2003-2004: Consultant, Micro Analysis and Design, Inc. (Project: “Modeling Dynamic Task Scheduling”).
- 2002-2004: Consultant, Titan Corporation, Air Traffic Systems (Project: “Addressable Message Boards and Surface Safety”).
- January-July 2003: Visiting Scientist, Projects and Advanced Concepts Branch, NASA Langley Research Center, Hampton, VA.

2002-2003:	Consultant, US Department of Justice (Expert Witness, Human Factors in Air Traffic Control).
2001-2005:	Chair, Committee on Human Factors, National Research Council, National Academy of Sciences
June-Dec. 2001:	Consultant, Federal Aviation Administration (AAR-100) (White Paper on Analysis Framework for Human-System Issues Related to Surface Safety Technologies).
April-July 2001:	Consultant, Federal Aviation Administration (AAR-100) (Review of Human Factors Design Guidelines for Automation in ATC).
December 2000:	Consultant, Lockheed Martin Corporation, Rockville, MD. (Project: "Automation and Air Traffic Control").
2000-2001:	Consultant, Valspar Corporation, Rochester, PA. (Project: "Human Error and Quality in the Paints and Coatings Industry").
October 2000:	Plenary Address, International Conference on Engineering Psychology and Cognitive Ergonomics, Edinburgh, Scotland, UK.
September 2000:	Invited Exhibitor, Decade of Behavior Launch Event at the U.S. Congress, American Psychological Association, Washington D.C.
August 2000:	Plenary Address, International Ergonomics Association/Human Factors and Ergonomics Society Conference, San Diego, CA.
July 2000:	Invited Presenter, Workshop on Brain Development, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.
June-July 2000:	Consultant, Department of Psychology, Old Dominion University, Norfolk, VA. (Project: Physiological Measures in Adaptive Automation").
June 2000:	Chair, Technology Working Group, National Summit on Runway Safety, Federal Aviation Administration, Washington DC.
May 2000:	Capitol Hill Science Seminar Series Speaker, Science and Public Policy Seminars, Federation of Behavioral, Psychological, and Cognitive Sciences, Library of Congress, Washington DC.
2000-2001:	Member, Human Factors and Runway Safety R & D Panel, Federal Aviation Administration, Washington DC.
September 1999:	Member, Special Emphasis Panel, Center for Scientific Review, National Institutes of Health, Bethesda, MD.
July 1999:	Member, Science Advocacy Training Workshop, American Psychological Association, Science Directorate and Public Policy Office, Washington DC.
1999-2000:	Member, Committee on Human Factors, National Research Council, National Academy of Sciences, Washington DC.
December 1998:	Member, Special Emphasis Panel, Center for Scientific Review, National Institutes of Health, Bethesda, MD.
1998-1999:	Co-Chair, Scientific Program Committee, Third International Symposium on Multidisciplinary Perspectives on Cognition, Education, and Mental Health, December 1999, Varanasi, India.
1998-1999:	Consultant, Department of Psychology, Old Dominion University, Norfolk, VA. (Project: Assessment of Hazardous States of Awareness).
1997-1998:	Scientific Program Committee, Third Automation Technology and Human Performance Conference, March 1998, Norfolk, VA.
1997-1998:	Human Factors Consultant, UserWorks Inc., Silver Spring, MD. (Project: Real-time Measurement of Workload for Adaptive Decision Aiding).
1996-1998:	Human Factors Consultant, Cognitive Technologies Inc., Arlington, VA. (Project: Interactions of Training and Decision Support).
1995-1996:	Human Factors Consultant and Expert Witness, Federal Trade Commission, Washington D.C.
October 1995:	Member, Site Visit Group, National Institute on Aging, National Institutes of Health.
September 1995:	Usability Engineering Consultant, America Online Inc., Vienna, VA.
March 1995:	Chair, Human Performance and Cognition Study Section (NASA SpaceLab Life Sciences Neurolab Program), National Institutes of Health.
1994-1998:	Member, Panel on Human Factors in Air-Traffic Control Automation, Commission on Behavioral and Social Sciences and Education, National Research Council, National Academy of Sciences, Washington DC.
1994-1996:	Co-Chair, Scientific Program Committee, Second Automation Technology and Human Performance Conference, April 1996, Orlando, FL.
1994-1995:	Co-Chair, Scientific Program Committee, Second International Symposium on Multidisciplinary Perspectives on Cognition and Education, December 1995, Varanasi, India.
March 1994:	Chair, Human Performance and Cognition Study Section (NASA SpaceLab Life Sciences Neurolab Program), National Institutes of Health, Bethesda, MD.
1993-1994:	Chair, Scientific Program Committee, First Automation Technology and Human Performance Conference, April 1994, Washington DC.
1993-1997:	Advisory Board, Center for Applied Cognitive Aging Research, Ann Arbor, MI.
July 1993:	Chair, Behavioral and Neurosciences Special Emphasis Panel (SBIR), National Institutes of Health, Bethesda, MD.
1992-1993:	Chair, Scientific Program Committee, International Symposium on Multidisciplinary Perspectives on

	Cognition, December 1993, Varanasi, India.
1992-1995:	Member, Human Development and Aging Study Section-2, National Institutes of Health, Bethesda, MD.
1990-1991:	Member, Basic Research Subcommittee of the Older Driver Task Force, Transportation Research Board, National Research Council, Washington DC.
May-July 1990:	Visiting Scientist, Human Factors Technology Group, Naval Air Development Center, Warminster, PA.
1989-1991:	Human Factors Consultant, Williams & Connolly, Inc., Washington DC.
May-July 1989:	Visiting Scientist, Human Factors Technology Group, Naval Air Development Center, Warminster, PA.
March 1989:	Human Factors Consultant, Buckingham, Doolittle & Burroughs, Inc., Akron, OH.
March 1989:	Invited Member, National Research Council, Commission on Engineering and Technical Systems, Marine Board Panel on Effects of Smaller Crews on Maritime Safety, Washington DC.
April 1988:	Human Factors Consultant, Roetzel & Andress, Inc., Akron, OH.
1987-1990:	Member, Joint NIAAA (USA)-NIMHANS (India) Research Project "Psychophysiological and Neuropsychological Correlates of Recovery from Alcoholism."
May 1987:	Member, National Research Council, Committee on Vision Workshop on "Smart Trains" and Human Vision, Washington DC.
1986-1991:	Member, Catholic University of America Research Fund Board.
1986-1987:	Co-Editor, Special Issue of <i>Human Factors</i> on "Vigilance: Basic and Applied Issues."
December 1986:	Member, Initial Review Group, Small Business Innovation Research, National Institute of Mental Health, Washington DC.
1985-1986:	Scientific Program Committee and Co-Organizer, Eighth International Conference on Event-Related Potentials of the Brain (EPIC VIII), Stanford University, Palo Alto. CA.
1985-1986:	Scientific Program Committee, Visual Performance Technical Group, Annual Conference of the Human Factors Society, Dayton, Ohio.
June 1985:	Adjunct Reviewer, Cognition, Emotion, and Personality Research Committee, National Institute of Mental Health, Chevy Chase, MD.
1984-1986:	Consultant, ARD Corporation, Columbia, MD. (Project: Polar Graphics Displays for Multivariate Information).
October 1984:	Member, Board of Scientific Counselors, Gerontology Research Center, National Institute on Aging, Baltimore, MD.
April 1984:	Adjunct Reviewer, Special Study Section, Division of Research Grants, National Institute of Occupational Safety and Health, Bethesda, MD.
March 1984:	Adjunct Reviewer, Special Study Section, Division of Research Grants, National Institutes of Health, Bethesda, MD.
1982-1987:	Faculty Advisor, Psi Chi, Catholic University of America Chapter.
1980-1982:	Consultant, Operating Systems Division, Logicon, Inc., Woodland Hills, CA. (Projects: Cognitive Models for Intelligence Analysis and for the Casual User Interface).

TEACHING EXPERIENCE

Courses Taught at The Catholic University of America

<u>Undergraduate</u>	<i>Applied Issues in Psychology; Biological Bases of Behavior; Brain and Behavior; Introduction to Psychology; Psychology, Work, and Law; Readings in Psychology.</i>
<u>Graduate</u>	<i>Cognitive Neuroscience; Human Factors; Independent Study in Psychology; Neuroergonomics: Brain and Behavior at Work; Seminar in Attention; Perspectives on Neuropsychology; Seminar in Human Performance in Systems; Readings in Psychology.</i>

Courses Taught at George Mason University

<u>Graduate</u>	<i>Advanced Topics in Cognitive Science; Cognitive Engineering; Cognitive Neuroscience; Directed Readings; Neuroscience Seminar, Neuroergonomics</i>
<u>Undergraduate</u>	<i>Special Topics in Psychology: Psychology of Work and Law</i>

Ph.D. Dissertations Directed at The Catholic University of America

1. Kevin Bennett 1984 *The effect of display design on the user's mental model of a perceptual database system*
2. Paul Nestor 1984 *The attentional cost of preserved mental operations in normal aging and in early Alzheimer's disease*
3. Gayle Wisdom 1987 *The effects of signal discriminability, event rate and time on vigilance*
4. Sue Anne Rice 1987 *Influence of case type on the diagnostic processes of experts and novices in medical decision making*
5. John Deaton 1988 *Cognitive and sensory vigilance as a function of age*
6. Toufik Bahri 1990 *Orienting of attention and vigilance*
7. Kiran Chadda 1991 *The effects of knowledge of results and aging on vigilance*
8. Mustapha Mouloua 1992 *The effects of event rate and spatial uncertainty on age differences in cognitive vigilance*
9. Charles Adams 1994 *Event-related brain potential signs of the biasing of attention*
10. Robert Molloy 1996 *Monitoring of automated systems: The role of display integration and redundant color coding*
11. Brian Hilburn 1996 *The impact of advanced decision aiding automation on mental workload and human-machine performance*
12. Sangeeta Panicker 1997 *Cholinergic substrate of visual selective attention*
13. David Hardy 1998 *Endogenous inhibition of exogenous covert orienting in younger and older adults*
14. James Levy 1998 *Visual selective attention as a clinical marker for cholinergic therapy in Alzheimer's disease*
15. Anthony Masalonis 2000 *Effects of situation-specific reliability on trust and usage of automated decision aids*
16. Jacqueline Duley 2001 *Effects of Cockpit Display of Traffic Information on visual attention and eye movements in the General Aviation cockpit*
17. Scott Galster 2004 *An examination of complex human-machine system performance under multiple levels and stages of automation*
18. Xiong Jiang 2005 *Motion and object-based priming of three-dimensional dynamic structure*
19. Camilla Knott 2005 *Age-related changes in visuospatial attention and eye movements in visual search*
20. Ericka Rovira 2006 *Human performance and workload in future Air Traffic Management: Decision support tools for controllers*
21. Kathleen McGarry 2007 *Effects of false alarms and misses on reliance, compliance, and attention when using an automated warning system*
22. Giselle Braganza 2007 *The relationship between visuospatial attention and spatial working memory in healthy aging and Alzheimer's disease*
23. Daniel Caggiano 2007 *"Bottom-up" versus "top-down" control over the scale of attentional focus*
24. Marla Zinni 2009 *Electrophysiological correlates of object-based selective attention*

Ph.D. Dissertations Directed at George Mason University

25. Peter Squire 2009 *The focus of visuospatial attention is controlled by separate processes*
26. Reshma Kumar 2010 *Role of visuospatial attention on encoding of information into working memory in young and older adults*
27. John Fedota 2011 *Stimulus and response-related conflict processing in the human brain*
28. Ewart de Visser 2012 *The world is not enough: Trust in cognitive agents*
29. Ellen Clarke 2012 *Examining the nature of the relationship between working memory and attention*

External Examiner for Ph.D. Dissertations at Other Institutions

1. James Leary 1983 *Reaction time and vigilance*. University of Adelaide, Australia
2. Andrea Todkill 1990 *Stimulus comparison strategies in vigilance-like tasks*. University of Queensland, Australia.
3. Alpana Paul 1992 *Cerebral lateralization and vigilance*. Banaras Hindu University, Varanasi, India
4. Annamaria Berardi 1994 *Varieties of attention in healthy aging and mild dementia*. University of Lausanne, Switzerland
5. Ulla Metzger 2001 *Automated decision aids in future air traffic management: Human performance and mental workload*. Technical University of Darmstadt, Germany
6. Sanjeev Sharma 2001 *Human operator needs for cockpit automation*. University of Newcastle, Australia
7. Francesco Di Nocera 2001 *Understanding and preventing errors: Human reliability in perception, attention, and action*. University of Rome, "La Sapienza," Rome, Italy
8. Melissa Slavin 2003 *Visual selective attention in Alzheimer's disease: Spatial selectivity, capacity limits, priming effects and efficiency of inhibition*. University of Melbourne, Australia
9. Ashley Nunes 2006 *Quantifying the degree to which expertise can offset age-related cognitive decline in air traffic control*. University of Illinois, Urbana Champaign.
10. Pratik Jha 2007 *Air traffic controller's performance in advanced air traffic management concepts*. State University of New York, Buffalo
11. Peter Spring 2011 *Levels of train automation: Classification and determining their impact on driver mental workload and vigilance task performance*. University of New South Wales, Australia
- 12.

Postdoctoral Fellows Mentored at The Catholic University of America

	<u>Dates</u>	<u>Current Position</u>
1. Paul Nestor	1984-1986	Professor, Dept. of Psychology, University of Massachusetts, Boston, MA
2. Pamela Greenwood	1986-1991	Associate Professor, George Mason University, Fairfax, VA
3. Toufik Bahri	1990-1991	(deceased)
4. Indramani Singh	1990-1994	Professor, Dept. of Psychology, Banaras Hindu University, Varanasi, India
5. Mustapha Mouloua	1992-1994	Professor, Dept. of Psychology, University of Central Florida, FL.
6. Charles Adams	1993-1994	Computer Scientist in industry
7. Evan Byrne	1993-1996	Investigator, National Transportation and Safety Board, Washington DC
8. Yang Jiang	1996-2000	Associate Professor, University of Kentucky, Louisville, KY
9. Alan Francis	1998-1999	Staff Scientist, Department of Psychiatry, Maryland Psychiatric Institute
10. Yue-Jia Luo	1998-2000	Dean, College of Brain and Cognitive Sciences, Beijing Normal University, China
11. Bernd Lorenz	2000-2002	Senior Scientist, Eurocontrol, Budapest, Hungary.
12. Shimin Fu	2002-2004	Associate Professor, Tsinghua University, Beijing, China
13. Hiroshi Furukawa	2002-2003	Associate Professor, University of Tsukuba, Japan

Postdoctoral Fellows Mentored at George Mason University

	<u>Dates</u>	<u>Current Position</u>
14. Shimin Fu	2004-2010	Professor, Tsinghua University, Beijing, China
15. Yan Wang	2007-2008	Assistant Professor, Chinese Academy of Sciences, Beijing, China
16. Tyler Shaw	2008-2010	Assistant Professor, George Mason University, Fairfax, VA
17. Ming-Kuan Lin	2009-2014	Research Fellow, Arch Lab, George Mason University, Fairfax, VA
18. Elisabeth Ploran	2010-2012	Assistant Professor, Hofstra University, New York, NY
19. Maren Strenziok	2010-present	Research Fellow, Arch Lab, George Mason University, Fairfax, VA
20. John Fedota	2011-2013	Research Fellow, National Institute for Drug Abuse, National Institutes of Health

PUBLICATIONS

Books

1. Davies, D. R. & Parasuraman, R. (1982). *The Psychology of Vigilance*. London: Academic Press.
2. Parasuraman, R. & Davies, D. R. (1984). *Varieties of Attention*. Orlando, Florida: Academic Press.
3. Johnson, R., Rohrbaugh, J. W., & Parasuraman, R. (1987). *Current Trends in Event-Related Potential Research*. Amsterdam: Elsevier Science.
4. Rohrbaugh, J. W., Parasuraman, R., & Johnson, R. (1990). *Event-Related Brain Potentials: Basic Issues and Applications*. New York: Oxford University Press.
5. Mouloua, M., & Parasuraman, R. (1994). *Human Performance in Automated Systems: Recent Research and Trends*. Hillsdale, NJ: Erlbaum Associates.
6. Parasuraman, R., & Mouloua, M. (1996). *Automation and Human Performance: Theory and Applications*. Mahwah, NJ: Erlbaum Associates.
7. Parasuraman, R. (1998). *The Attentive Brain*. Cambridge, MA: MIT Press. (Reprinted in paperback by MIT Press, 2000).
8. Singh, I. L., & Parasuraman, R. (1998). *Human Cognition: A Multidisciplinary Perspective*. New Delhi: Sage.
9. Wickens, C. D., Mavor, A., Parasuraman, R., & McGee, J. (1998). *The Future of Air Traffic Control: Human Operators and Automation*. Washington DC: National Academy Press.
10. Parasuraman, R., & Rizzo, M. (2007). *Neuroergonomics: The Brain at Work*. New York: Oxford University Press. (Reprinted in paperback by Oxford University Press, 2008). (Reprinted in Chinese by Dongnang University Press, Nanjing, ed. K. Zhang, 2012).
11. Greenwood, P. M., & Parasuraman, R. (2012). *Nurturing the Older Brain and Mind*. Cambridge, MA: MIT Press.
12. Wickens, C. D., Hollands, J. G., Banbury, S., & Parasuraman, R., (2012). *Engineering Psychology and Human Performance, 4th edition*. New York: Pearson.
13. Hoffman, R. R., Hancock, P. A., Szalma, J. R., Scerbo, M., & Parasuraman, R., (2014). *Handbook of Applied Perception*. New York: Cambridge University Press.

Special Issues of Journals

1. Warm, J. S. & Parasuraman, R. (Eds.). (1987). Vigilance: Basic and Applied Issues. Special issue of *Human Factors*, 29(6).
2. Parasuraman, R. (Ed.). (2003). Neuroergonomics. Special issues of *Theoretical Issues in Ergonomics Science*. 4(1) and 4 (2).
3. Parasuraman, R., Christensen, J., & Grafton, S. (Eds.) (2012). Neuroergonomics: The Human Brain in Action and at Work. Special issue of *NeuroImage*, 59(1).
4. Clark, V., & Parasuraman, R. (Eds.). (2013). Neuroenhancement. Special issue of *NeuroImage*, 85(3).

Book Chapters

1977

1. Davies, D. R. & Parasuraman, R. (1977). Cortical evoked potentials and vigilance: A decision theory analysis. In R. R. Mackie (Ed.) *Vigilance: Theory, Operational Performance, and Physiological Correlates*. (pp. 285-306). New York: Plenum.
2. Parasuraman, R. & Davies, D. R. (1977). A taxonomic analysis of vigilance. In R. R. Mackie (Ed.) *Vigilance: Theory, Operational Performance, and Physiological Correlates*. (pp. 559-574). New York: Plenum.

1983

3. Davies, D. R., Shackelton V. J., & Parasuraman, R. (1983). Monotony and boredom. In G.R.J. Hockey (Ed.) *Stress and Fatigue in Human Performance*. (pp. 1-32). London: Wiley.
4. Parasuraman, R. (1983). Vigilance, arousal, and the brain. In A. Gale & J. Edwards (Eds.) *Physiological Correlates of Human Behavior. Volume 2: Attention and Performance*. (pp. 35-55). London: Academic Press. (Reprinted in paperback by Academic Press, 1986).

1984

5. Bennett, K., Parasuraman, R., & Howard, J. H., Jr. (1984). Mental models in interface design: The role of graphics displays. In A. Mital (Ed.) *Trends in Ergonomics/Human Factors I*. (pp. 113-118). Amsterdam: North-Holland.
6. Davies, D. R., Parasuraman, R., & TOH, K. (1984). Time of day, memory load, and vigilance. In A. Mital (Ed.) *Trends in Ergonomics/Human Factors I*. (pp. 9-14). Amsterdam: North-Holland.
7. Parasuraman, R. (1984a). Sustained attention in detection and discrimination. In R. Parasuraman & D. R. Davies (Eds.) *Varieties of Attention*. (pp. 243-271). Orlando, Florida: Academic Press.
8. Parasuraman, R. (1984b). The psychobiology of sustained attention. In J. S. Warm (Ed.) *Sustained Attention in Human Performance*. (pp. 61-101). London: Wiley.

1985

9. Parasuraman, R. (1985a). Detection and identification of abnormalities in chest x-rays: Effects of reader skill, disease prevalence, and reporting standards. In R. E. Eberts & C. G. Eberts (Eds.) *Trends in Ergonomics/Human Factors II*. (pp. 59-66). Amsterdam: North-Holland.
10. Parasuraman, R. (1985b). Sustained attention: A multifactorial approach. In M. I. Posner & O. S. Marin (Eds.) *Attention and Performance XI*. (pp. 493-511). Hillsdale, New Jersey: Erlbaum Associates.
11. Wisdom, G. & Parasuraman, R. (1985). Effects of cognitive factors on subjective fatigue and performance. In R. E. Eberts & C. G. Eberts (Eds.) *Trends in Ergonomics/Human Factors II*. (pp. 133-138). Amsterdam: North-Holland.

1986

12. Parasuraman, R. (1986). Vigilance, monitoring, and search. In K. Boff, L. Kaufman, & J. Thomas (Eds.) *Handbook of Perception. Volume 2. Cognitive Processes and Performance*. (pp. 43.1-43.39). New York: Wiley. (Adapted and reprinted in K. R. Boff & J. E. Lincoln (Eds.) (1988), *Engineering Data Compendium: Human Perception and Performance*. (pp. 1501-1545). Wright-Patterson AFB, Ohio: AAMRL.)
13. Parasuraman, R., & Nestor, P. (1986). Energetics of attention and Alzheimer's disease. In G. R. J. Hockey, A. Gaillard, & M. G. H. Coles (Eds.) *Energetics and Human Information Processing*. (pp. 397-407). The Netherlands: Martinus Nijhoff.

1987

14. Parasuraman, R., & Bowers, J.C. (1987). Attention and vigilance in human-computer interaction. In A. Gale & B.

Christie (Eds.) *Psychophysiology of the Electronic Workplace*. (pp. 163-194). London: Wiley.

15. Parasuraman, R., Warm, J., & Dember, W. N. (1987). Vigilance: Taxonomy and utility. In L. S. Mark, J. S. Warm, & R. L. Huston (Eds.) *Ergonomics and Human Factors: Recent Research*. (pp. 11-32). New York: Springer-Verlag.

16. Scerbo, M. W., Warm, J. S., Doettling, V., Parasuraman, R., & Fisk, A. D. (1987). Event asynchrony and task demands in sustained attention. In L. S. Mark, J. S. Warm, & R. L. Huston (Eds.) *Ergonomics and Human Factors: Recent Research*. (pp. 33-39) New York: Springer-Verlag.

1988

17. Parasuraman, R., Warm, J. S., Dember, W. N., & Davies, D. R. (1988). Tests of a vigilance taxonomy. In H. E. Ross (Ed.) *Proceedings of the 4th Conference of the International Society for Psychophysics*. (pp. 57-62). Stirling, Scotland: International Society for Psychophysics.

1990

18. Parasuraman, R. (1990). Event-related brain potentials and human factors research. In J. W. Rohrbaugh, R. Parasuraman, & R. Johnson (Eds.) *Event-Related Brain Potentials: Basic and Applied Issues*. (pp. 279-300). New York: Oxford University Press.

1992

19. Parasuraman, S., Singh, I. L., Molloy, R., & Parasuraman, R. (1992). Automation-related complacency: A source of vulnerability in contemporary organizations. In R. Aiken (Ed.) *Education and Society: Information Processing 92, Volume II*. (pp. 426-432). Amsterdam: Elsevier Science.

1993

20. Parasuraman, R. (1993). Effects of adaptive function allocation on human performance. In D. J. Garland & J. A. Wise (Eds.) *Human Factors and Advanced Aviation Technologies*. (pp. 147-157). Daytona Beach: Embry-Riddle Aeronautical University Press.

21. Parasuraman, R., & Nestor, P. G. (1993a). Attention and driving: Assessment in elderly individuals with dementia. In S. M. Retchin (Ed.) *Medical Considerations in the Older Driver. (Clinics in Geriatric Medicine Volume 9, No. 2)*. (pp. 377-387). Philadelphia: W.B. Saunders.

22. Parasuraman, R., & Nestor, P. G. (1993b). Preserved cognitive operations in early Alzheimer's disease. In J. Cerella, W. J. Hoyer, J. Rybash, & M. L. Commons (Eds.) *Adult Information Processing: Limits on Loss*. (pp. 77-111). Orlando, FL: Academic Press.

1994

23. Hilburn, B., Mouloua, M., & Parasuraman, R. (1994). Adaptive training in automated systems. In M. Mouloua & R. Parasuraman (Eds.) *Human Performance in Automated Systems: Recent Research and Trends*. (pp. 89-92). Hillsdale, NJ: Erlbaum.

24. Molloy, R., & Parasuraman, R. (1994). Automation-induced monitoring inefficiency: The role of display integration and redundant color coding. In M. Mouloua & R. Parasuraman (Eds.) *Human Performance in Automated Systems: Recent Research and Trends*. (pp. 224-228). Hillsdale, NJ: Erlbaum.

25. Parasuraman, R., Mouloua, M., & Molloy, R. (1994). Monitoring automation failures in human-machine systems. In M. Mouloua & R. Parasuraman (Eds.) *Human Performance in Automated Systems: Recent Research and Trends*. (pp. 45-49). Hillsdale, NJ: Erlbaum.

1995

26. Dember, W.N., Warm, J.S., & Parasuraman, R. (1995). Olfactory stimulation and sustained attention. In A. Gilbert (Ed.) *Compendium of Olfactory Research*. (pp. 87-93). Dubuque, IA: Kendall-Hunt.

27. Grady, C. L., & Parasuraman, R. (1995). Functional compensation in Alzheimer's disease. In R. Dixon & L. Bäckman (Eds.) *Psychological Compensation: Managing Losses and Promoting Gains*. (pp. 231-248). New York: Lawrence Erlbaum

Associates.

28. Hilburn, B., Parasuraman, R., & Mouloua, M. (1995). Effects of short- and long-cycle adaptive function allocation on performance of flight-related tasks. In N. Johnston, R. Fuller, & N. McDonald (Eds.) *Aviation psychology: Training and selection*. (pp. 347-353). Aldershot: Ashgate.

1996

29. Hancock, P. A., Parasuraman, R., & Byrne, E. A. (1996). Driver-centered issues in advanced automation in motor vehicles. In R. Parasuraman & M. Mouloua (Eds.) *Automation and Human Performance*. (pp. 337-364). Mahwah, NJ: Erlbaum Associates.

30. Parasuraman, R. & Greenwood, P.M. (1996). Functional brain imaging and selective attention in Alzheimer's disease. In *Dementia and Cognitive Impairments. (Facts and Research in Gerontology)*. (pp. 58-75). New York: Springer.

31. Parasuraman, R., Mouloua, M., Molloy, R., & Hilburn, B. (1996). Monitoring automated systems. In R. Parasuraman & M. Mouloua (Eds.) *Automation and Human Performance: Theory and Applications*. (pp. 91-115). Mahwah, NJ: Erlbaum Associates.

1997

32. Duley, J., R. Molloy, & Parasuraman, R. (1997). Display configuration in adaptive automation: integration and dynamic presentation. In M. Mouloua and J. Koonce (Eds.) *Human-Automation Interaction: Research and Practice*. (pp. 109-116). Mahwah, NJ, Erlbaum Associates.

33. Greenwood, P. & Parasuraman, R. (1997). Attentional functioning in aging and Alzheimer's disease: Behavior and neural systems. In J. Burack & J. Enns (Ed.) *Development, Attention, and Psychopathology*. (pp. 288-317). New York: Guilford Press.

34. Hilburn, B., Jorna, P. G., Byrne, E. A., & Parasuraman, R. (1997). The effect of adaptive air traffic control (ATC) decision aiding on controller mental workload. In M. Mouloua and J. Koonce (Eds.) *Human-Automation Interaction: Research and Practice*. (pp. 84-91). Mahwah, NJ, Erlbaum Associates.

35. Molloy, R. J., Byrne, E. A., Masalonis, A. J., & Parasuraman, R. (1997). Laboratory flight simulator for automation and display design research. In M. Mouloua and J. Koonce (Eds.) *Human-Automation Interaction: Research and Practice*. (pp. 151-155). Mahwah, NJ, Erlbaum Associates.

36. Parasuraman, R. (1997). Human use and abuse of automation. In M. Mouloua and J. Koonce (Eds.) *Human-Automation Interaction: Research and Practice*. (pp. 42-47). Mahwah, NJ, Erlbaum Associates.

1998

37. Deaton, R., & Parasuraman, R. (1998). Age differences in sensory and cognitive vigilance using tactical symbolic displays. In I. L. Singh & R. Parasuraman (Eds.) *Human Cognition: A Multidisciplinary Perspective*. (pp. 165-183). New Delhi: Sage.

38. Panicker, S., & Parasuraman, R. (1998). The neurochemical basis of attention. In I. L. Singh & R. Parasuraman (Eds.) *Human Cognition: A Multidisciplinary Perspective*. (pp. 79-98). New Delhi: Sage.

39. Parasuraman, R. (1998). The attentive brain in aging and Alzheimer's disease. In R. Hoffman, J. S. Warm, and M. Sherrick (Eds.) *Viewing Psychology as a Whole: The Integrative Science of William N. Dember*. (pp. 167-187). Washington DC: American Psychological Association.

40. Parasuraman, R. (1998). The attentive brain: Issues and prospects. In R. Parasuraman (Ed.) *The Attentive Brain*. (pp. 3-15). Cambridge, MA: MIT Press.

41. Parasuraman, R., & Greenwood, P. M. (1998). Attention and brain function in aging and Alzheimer's disease. In I. L. Singh & R. Parasuraman (Eds.) *Human Cognition: A Multidisciplinary Perspective*. (pp. 126-143). New Delhi: Sage.

42. Parasuraman, R., & Greenwood, P.M. (1998). Selective attention in aging and dementia. In R. Parasuraman (Ed.) *The Attentive Brain*. (pp. 461-487). Cambridge, MA: MIT Press.

43. Parasuraman, R., Warm, J.S., & See, J. (1998). Brain systems of vigilance. In R. Parasuraman (Ed.) *The Attentive Brain*. (pp. 221-256). Cambridge, MA: MIT Press.
44. Singh, I. L., Molloy, R., Mouloua, M., Deaton, J., & Parasuraman, R. (1998). Cognitive ergonomics of cockpit automation. In I. L. Singh & R. Parasuraman (Eds.) *Human Cognition: A Multidisciplinary Perspective*. (pp. 242-253). New Delhi: Sage.
45. Singh, I. L., Parasuraman, R., and Matthews, G. (1998). Diversity in cognitive theory. In I. L. Singh & R. Parasuraman (Eds.) *Human Cognition: A Multidisciplinary Perspective*. (pp. 21-35). New Delhi: Sage.

1999

46. Duley, J. A., & Parasuraman, R. (1999). Adaptive information management in future air traffic control. In M. W. Scerbo & M. Mouloua (Eds.) *Automation Technology and Human Performance: Current Research and Trends*. (pp. 86-90). Mahwah, NJ: Erlbaum.
47. Galster, S., Duley, J., Masalonis, A., & Parasuraman, R. (1999). Effects of aircraft self separation on conflict detection and workload in Free Flight. In M. W. Scerbo & M. Mouloua (Eds.) *Automation Technology and Human Performance: Current Research and Trends*. (pp. 96-101). Mahwah, NJ: Erlbaum.
48. Parasuraman, R., & Hancock, P. A. (1999). Designing automated warning systems: A signal detection and Bayesian analysis. In M. W. Scerbo & M. Mouloua (Eds.) *Automation Technology and Human Performance: Current Research and Trends*. (pp. 63-67). Mahwah, NJ: Erlbaum.
49. Parasuraman, R., Mouloua, M., & Hilburn, B. (1999). Adaptive aiding and adaptive task allocation enhance human-machine interaction. In M. W. Scerbo & M. Mouloua (Eds.) *Automation Technology and Human Performance: Current Research and Trends*. (pp. 119-123). Mahwah, NJ: Erlbaum.

2001

50. Parasuraman, R. (2001). Application of human performance data and quantitative models to the design of automation. In D. Harris (Ed.) *Engineering Psychology and Cognitive Ergonomics. Volume Five: Aerospace and Transportation Systems*. (pp. 3-13). Aldershot, UK: Ashgate.
51. Parasuraman, R., & Hancock, P. A. (2001). Adaptive control of workload. In P. A. Hancock & P. E. Desmond (Eds.) *Stress, Workload, and Fatigue*. (pp. 305-320). Mahwah, NJ: Erlbaum.
52. Parasuraman, R., Hilburn, B., & Hoekstra, J. (2001). Free Flight. In W. Karwowski (Ed.) *International Encyclopedia of Ergonomics and Human Factors*. (pp. 1005-1008). New York: Taylor and Francis.

2002

53. Lorenz, B., Di Nocera, F., Parasuraman, R. (2002). Varying types and levels of automation in the support of dynamic fault management: An analysis of performance costs and benefits. In D. de Waard, K.A. Brookhuis, C.M. Weikert, & A. Toffetti (Eds.), *Human Factors in Transportation, Communication, Health, and the Workplace* (pp. 517-524). Maastricht, the Netherlands: Shaker Publishing.
54. Parasuraman, R., & Caggiano, D. (2002). Mental workload. In V. S. Ramachandran (Ed.) *Encyclopedia of the Human Brain. Volume 3*. (pp. 17-27). San Diego: Academic Press.

2003

55. Di Nocera, F., Lorenz, B., Tattersall, A., & Parasuraman, R. (2003). New possibilities for adaptive automation and work design. In G. R. J. Hockey, A. W. Gaillard, & O. Burov (Eds.) *Operator Functional State: The Assessment and Prediction of Human Performance Degradation in Complex Tasks*. (pp. 363-372). Amsterdam: IOS Press.
56. Hancock, P. A., & Parasuraman, R. (2003). Human factors and ergonomics. In L. Nadel (Ed.) *Handbook of Cognitive Science*. (pp. 410-418). San Diego: Academic Press.

57. Lorenz, B., & Parasuraman, R. (2003). Human operator functional states in automated systems: The role of compensatory control strategies. In G. R. J. Hockey, A. W. Gaillard, & O. Burov (Eds.) *Operator Functional State: The Assessment and Prediction of Human Performance Degradation in Complex Tasks*. (pp. 224-237). Amsterdam: IOS Press.
58. Metzger, U., & Parasuraman, R. (2003). Automated decision aids in high-risk environments: An example from the ATC domain. In D. de Waard, K. A. Brookhuis, S. Sommer, W. B. & Verwey, (Eds.), *Human Factors in Virtual Reality*, (pp. 255-272). Maastricht, Netherlands: Shaker.
59. Parasuraman, R. (2003). Adaptive automation matched to human mental workload. In G. R. J. Hockey, A. W. Gaillard, & O. Burov (Eds.) *Operator Functional State: The Assessment and Prediction of Human Performance Degradation in Complex Tasks*. (pp. 177-193). Amsterdam: IOS Press.
60. Parasuraman, R., & Byrne, E. A. (2003). Automation and human performance in aviation. In P. Tsang and M. Vidulich (Eds.) *Principles of Aviation Psychology*. (pp. 311-356). Mahwah, NJ: Erlbaum.

2004

61. Galster, S. M., & Parasuraman, R. (2004). Task dependencies in stage-based examinations of the effects of unreliable automation. In D. A. Vincenzi, M. Mouloua, & P. A. Hancock, *Human Performance, Situation Awareness, and Automation Volume II*. (pp. 23-27). Mahwah, NJ: Erlbaum.
62. Lorenz, B., Di Nocera, F., & Parasuraman, R. (2004). Examination of the proximity-compatibility principle in the design of displays in support of fault management. In D. de Waard, K. A. Brookhuis, & C. M. Weiker (Eds.) *Human Factors in Design*. (pp. 213-229). Maastricht, The Netherlands: Shaker Publishing.
63. Parasuraman, R. (2004). Attentional functioning in Alzheimer's disease. In R. G. Morris & J. T. Becker (Eds.) *Cognitive Neuropsychology of Alzheimer's Disease. 2nd edition*. (pp. 81-102). New York: Oxford University Press.
64. Parasuraman, R., & Greenwood, P. M. (2004a). Molecular genetics of visuospatial attention and working memory. In M. I. Posner (Ed.) *Cognitive Neuroscience of Attention* (pp. 245-259). New York: Guilford.
65. Parasuraman, R., & Greenwood, P. M. (2004b). Visual attention, genetics, and Alzheimer's disease. In A. Cronin-Golomb & P. Hof (Eds.) *Vision in Alzheimer's disease. Interdisciplinary Topics in Gerontology*. (pp. 271-289). Basel: Karger.
66. Squire, P. N., Galster, S. M., & Parasuraman, R. (2004). The effects of levels of automation in the human control of multiple robots in the RoboFlag simulation environment. In D. A. Vincenzi, M. Mouloua, & P. A. Hancock, *Human Performance, Situation Awareness, and Automation Volume II* (pp. 48-53). Mahwah, NJ: Erlbaum.

2005

67. Di Nocera, F., Lorenz, B., & Parasuraman, R. (2005). Consequences of shifting from one level of automation to another: main effects and their stability. In D. de Waard, K.A. Brookhuis, R. van Egmond, and Th. Boersema (Eds.) (2005), *Human Factors in Design, Safety, and Management* (pp. 363 - 376). Maastricht, the Netherlands: Shaker Publishing.
68. Parasuraman, R., & Caggiano, D. (2005). Neural and genetic assays of mental workload. In D. McBride & D. Schmorow, *Quantifying Human Information Processing*. (pp. 123-155). Lanham, MD: Rowman and Littlefield.

2006

69. Parasuraman, R., & Miller, C. (2006). Delegation interfaces for human supervision of multiple unmanned vehicles: Theory, experiments, and practical applications. In N. Cooke, H. L. Pringle, H. K. Pedersen, & O. Connor (Eds.). *Human Factors of Remotely Operated Vehicles. Advances in Human Performance and Cognitive Engineering*. Volume 7. (pp. 251-266). Oxford, UK: Elsevier.

2007

70. Fu, R., & Parasuraman, R. (2007). Event-related brain potentials in neuroergonomics. In R. Parasuraman, & M. Rizzo (Eds.) *Neuroergonomics: The Brain at Work*. (pp. 32-50). New York: Oxford University Press.
71. Kramer, A., & Parasuraman, R. (2007). Neuroergonomics—application of neuroscience to human factors. In J. Cacioppo, L. Tassinary, L., & G. Berntson, (Eds.) *Handbook of Psychophysiology, 3rd ed.* (pp. 704-722). New York: Cambridge University Press.

72. Lorenz, B., & Parasuraman, R. (2007). Automated and interactive real-time systems. In F. Durso, R. Nickerson, S. Dumais, S. Lewandowsky, & T. Perfect (Eds.) *Handbook of Applied Cognition*. (pp. 415-441). New York: Wiley.
73. Parasuraman, R., & Greenwood, P. M. (2007). Individual differences in attention and working memory: A molecular genetic approach. In A. Kramer, D. Wiegmann, & A. Kirlik (Eds.) *Attention: From Theory to Practice*. (pp. 59-72). New York: Oxford University Press.
74. Parasuraman, R., & Rizzo, M. (2007). Introduction to neuroergonomics. In R. Parasuraman, & M. Rizzo (Eds.) *Neuroergonomics: The Brain at Work*. (pp. 1-12). New York: Oxford University Press.
75. Parasuraman, R., & Tippet, R. (2007). Brain, cognition, and learning in adulthood. In *Understanding the Brain: The Birth of a Learning Science*. (pp. 211-237). Paris: Organization for Economic Cooperation and Development.
76. Rizzo, M., & Parasuraman, R. (2007). Future prospects for neuroergonomics. In R. Parasuraman, & M. Rizzo (Eds.) *Neuroergonomics: The Brain at Work*. (pp. 381-388). New York: Oxford University Press.
77. Warm, J. S., & Parasuraman, R. (2007). Cerebral hemodynamics and vigilance. In R. Parasuraman & M. Rizzo (Eds.) *Neuroergonomics: The Brain at Work*. (pp. 146-158). New York: Oxford University Press.

2008

78. de Visser, E., Horvath, D., & Parasuraman, R. (2008). Adaptive automation enhances human supervision of multiple uninhabited vehicles. In D. de Waard, F. O. Flemisch, B. Lorenz, H. Oberheid, & K. Brookhuis (Eds.) *Human Factors for Assistance and Automation*. (pp. 285-300). Maastricht, The Netherlands: Shaker Publishing.
79. Parasuraman, R., & Hancock, P. A. (2008). Mitigating adverse effects of workload, stress, and fatigue with adaptive automation. In P. A. Hancock & J. Szalma (Eds.) *Performance Under Stress*. (pp. 45-57). Burlington, VT: Ashgate.

2010

80. Cosenzo, K., Parasuraman, R., & de Visser, E. (2010). Automation strategies for facilitating human interaction with military uninhabited vehicles. In M. Barnes & F. Jenstch (Eds.) *Human-Robot Interactions in Future Military Operations*. (pp. 103-123). Farham, Surrey, UK: Ashgate.
81. de Visser, E., & Parasuraman, R. (2010). A neuroergonomic approach to human-computer etiquette and trust. In W. Karwowski & G. Salvendy (Eds.) *Applied Human Factors and Ergonomics*. Boca-Raton: Taylor & Francis.
82. Funke, M. E., Warm, J. S., Matthews, G., Finomore, Jr, V., Vidulich, M., Knott, B. A., Helton, W. S., Shaw, T. H., & Parasuraman, R. (2010). Static and dynamic discriminations in vigilance: Effects on cerebral hemodynamics and workload. In W. Karwowski & G. Salvendy (Eds.) *Applied Human Factors and Ergonomics*. Boca-Raton: Taylor & Francis.
83. Gartenberg, D., & Parasuraman, R. (2010). Understanding brain arousal and sleep quality using a neuroergonomic Smart Phone application. In W. Karwowski & G. Salvendy (Eds.) *Applied Human Factors and Ergonomics*. Boca-Raton: Taylor & Francis.
84. Parasuraman, R. (2010). Neurogenetics of working memory and decision making under time pressure. In W. Karwowski & G. Salvendy (Eds.) *Applied Human Factors and Ergonomics*. Boca-Raton: Taylor & Francis.
85. Shaw, T. H., Parasuraman, R., Guagliardo, L., & de Visser, E. (2010). Towards adaptive automation: A neuroergonomic approach to measuring workload during a command and control task. In W. Karwowski & G. Salvendy (Eds.) *Applied Human Factors and Ergonomics*. Boca-Raton: Taylor & Francis.

2011

86. de Visser, E., & Parasuraman, R. (2011). The social brain: Behavioral, computational, and neuroergonomic perspectives. In C. Hayes & C. Miller (Eds.), *Human-Computer Etiquette: Understanding the Impact of Human Culture and Expectations on the Use and Effectiveness of Computers and Technology*. (pp. 263-288). New York: Taylor & Francis.

2013

87. Johnson, A., Jolij, J., Parasuraman, R., & Toffanin, P. (2013). The working brain. In A. Johnson & R. Proctor (Eds.) *Neuroergonomics: A Cognitive Neuroscience Approach to Human Factors and Ergonomics*. London: Palgrave and MacMillan.
88. Parasuraman, R. (2013). Neuroergonomics: Brain-inspired cognitive engineering. In J. D. Lee & A. Kirlik (Eds.) *The Oxford Handbook of Cognitive Engineering. Volume 1: Foundations, Perspectives and Cognitive Issues*. New York: Oxford University Press.
89. Parasuraman, R. (2013). Neuroergonomics of individual differences in cognition: Molecular genetic studies. In A. Johnson & R. Proctor (Eds.) *Neuroergonomics: A Cognitive Neuroscience Approach to Human Factors and Ergonomics*. London: Palgrave and MacMillan. (pp. 2342-2349). London: Ashgate Press.

2014

90. Parasuraman, R. Greenwood, P., Scheldrup, M., Falcone, B., Kidwell, B., & McKendrick, R. (2014). Neuroergonomics of skill acquisition: Genetic and non-invasive brain stimulation studies. In T. Ahram, W. Karwowski, & T. Marek (Eds.), *Proceedings of the 5th International Conference on Applied Human Factors and Ergonomics*.

In Press

91. Rizzo, M., & Parasuraman, R. (in press). Applied perception and neuroergonomics. In Hoffman, R. R., Hancock, P. A., Parasuraman, R., Szalma, J. R., & Scerbo, M., *Handbook of Applied Perception*. New York: Cambridge University Press.
92. Parasuraman, R., & Mehta, R. (in press). Neuroergonomic methods for the evaluation of cognitive and physical work. In J. Wilson & S. Sharples (Eds.). *Evaluation of Human Work*. New York: CRC Press.
93. Parasuraman, R. (in press). Neuroergonomic perspectives on Human-Systems Integration: Mental workload, vigilance, adaptive automation, and training. In D. Boehm-Davis, F. Durso, and J. Lee (Eds.), *Handbook of Human Systems Integration*. Washington DC: American Psychological Association.

Refereed Journal Articles

1975

1. Parasuraman, R. (1975a). Response bias and physiological reactivity. *Journal of Psychology*, 91, 309-313.
2. Parasuraman, R. (1975b). Response latencies in visual monitoring. *Perceptual and Motor Skills*, 40, 636.
3. Parasuraman, R. & Davies, D. R. (1975). Response and evoked potential latencies associated with commission errors in visual monitoring. *Perception and Psychophysics*, 17, 465-468.

1976

4. Davies, D. R. & Parasuraman, R. (1976). Vigilanz, Antwortlatenzen, und kortikale evozierte Potentiale. *Probleme und Ergebnisse der Psychologie*, 59, 95-99.
5. Parasuraman, R. (1976). Consistency of individual differences in human vigilance performance: An abilities classification analysis. *Journal of Applied Psychology*, 61, 486-492.
6. Parasuraman, R. & Davies, D. R. (1976). Decision theory analysis of response latencies in vigilance. *Journal of Experimental Psychology: Human Perception and Performance*, 2, 569-582.

1978

7. Parasuraman, R. (1978). Auditory evoked potentials and divided attention. *Psychophysiology*, 15, 460-465.

1979

8. Parasuraman, R. (1979). Memory load and event rate control sensitivity decrements in sustained attention. *Science*, 205, 924-927.

1980

9. Parasuraman, R. (1980). Effects of information processing demands on slow negative shift latencies and N100 amplitude. *Biological Psychology*, 11, 217-233.
10. Parasuraman, R. & Beatty, J. (1980). Brain events underlying detection and recognition of weak sensory signals. *Science*, 210, 80-83.

1982

11. Parasuraman, R., Richer, F., & Beatty, J. (1982). Detection and recognition: Concurrent processes in perception. *Perception and Psychophysics*, 31, 1-12.

1983

12. Nuechterlein, K., Parasuraman, R., & Jiang, Q. (1983). Visual sustained attention: Image degradation produces rapid sensitivity decrement over time. *Science*, 220, 327-329.

1984

13. Bennett, K., Parasuraman, R., Howard, J. H., Jr., & O'Toole, A. (1984). Auditory induction of discrete tones in signal detection tasks. *Perception and Psychophysics*, 35, 570-578.
14. Howard, J. H., Jr., O'Toole, A., Parasuraman, R., & Bennett, K. (1984). Pattern-directed attention in uncertain frequency detection. *Perception and Psychophysics*, 35, 256-264.

1987

15. Parasuraman, R. (1987). Human-computer monitoring. *Human Factors*, 29, 695-706.
16. Parasuraman, R. & Mouloua, M. (1987). Interaction of signal discriminability and task type in vigilance decrement.

Perception and Psychophysics, 41, 17-22.

17. Rohrbaugh, J. W., Stapleton, J. M., Parasuraman, R., Frowein, H., Eckhardt, M., & Linnoila, M. (1987). Alcohol intoxication in humans: Effects on vigilance performance. *Alcohol and Alcoholism, Supplement*, 1, 97-102.

18. Rohrbaugh, J. W., Stapleton, J. M., Parasuraman, R., Zubovic, E. A., Frowein, H., Varner, J. L., Adinoff, B., Lane, E. A., Eckhardt, M., & Linnoila, M. (1987). Dose-related effects of alcohol on visual sustained attention and event-related potentials. *Alcohol*, 4, 293-300.

1988

19. Rohrbaugh, J. W., Stapleton, J. M., Parasuraman, R., Frowein, H., Adinoff, B., Varner, J. L., Zubovic, E. A., Lane, E. A., Eckhardt, M., & Linnoila, M. (1988). Alcohol intoxication reduces visual sustained attention. *Psychopharmacology*, 96, 442-446.

1989

20. Nestor, P., Parasuraman, R., & Haxby, J. V. (1989). Attentional costs of mental operations in young and old adults. *Developmental Neuropsychology*, 5, 141-158.

21. Parasuraman, R., Nestor, P., & Greenwood, P. M. (1989). Sustained-attention capacity in young and older adults. *Psychology and Aging*, 4, 339-345.

22. Warm, J. S., Dember, W. N., & Parasuraman, R. (1990). Effects of fragrances on vigilance performance and stress. *Perfumer and Flavorist*, 15(1), 15, 17-18.

1991

23. Greenwood, P., & Parasuraman, R. (1991). Effects of aging on the speed and attentional cost of cognitive operations. *Developmental Neuropsychology*, 7, 421-434.

24. Nestor, P., Parasuraman, R., & Haxby, J. V. (1991). Speed of information processing and attention in early Alzheimer's dementia. *Developmental Neuropsychology*, 7, 243-256.

25. Nestor, P., Parasuraman, R., Haxby, J. V., & Grady, C. L. (1991). Divided attention and brain metabolic dysfunction in mild dementia of the Alzheimer type. *Neuropsychologia*, 29, 379-387.

26. Parasuraman, R., & Giambra, L. (1991). Skill development in vigilance: Effects of event rate and age. *Psychology and Aging*, 6, 155-169.

27. Parasuraman, R., Mutter, S., & Molloy, R. (1991). Sustained attention following mild closed-head injury. *Journal of Clinical and Experimental Neuropsychology*, 13, 789-811.

28. Parasuraman, R., & Nestor, P. G. (1991). Attention and driving skills in aging and Alzheimer's disease. *Human Factors*, 33, 539-557.

29. Warm, J. S., Dember, W. N., & Parasuraman, R. (1991). Effects of olfactory stimulation on performance and stress in a visual sustained attention task. *Journal of the Society of Cosmetic Chemistry*, 42, 199-210.

1992

30. Hancock, P. A., & Parasuraman, R. (1992). Human factors and safety issues in Intelligent Vehicle Highway Systems (IVHS). *Journal of Safety Research*, 23, 181-198.

31. Parasuraman, R., Greenwood, P. M., Haxby, J. V., & Grady, C. L. (1992). Visuospatial attention in dementia of the Alzheimer type. *Brain*, 115, 711-733.

1993

32. Deaton, J. E., & Parasuraman, R. (1993). Sensory and cognitive vigilance: Age, event rate, and subjective workload. *Human Performance*, 4, 71-97.

33. Greenwood, P. M., Parasuraman, R., & Haxby, J. V. (1993). Visuospatial attention across the adult life span. *Neuropsychologia*, 31, 471-485.

34. Hancock, P. A., Dewing, W., & Parasuraman, R. (1993). Human factors in intelligent travel systems. *Ergonomics in Design*, 1 (April), 12-39.
35. Haxby, J. V., Parasuraman, R., LaLonde, F., & Abboud, H. (1993). SuperLab: General-purpose Macintosh software for human experimental psychology and psychological testing. *Behavior Research Methods, Instruments, & Computers*, 25, 400-405.
36. Parasuraman, R., & Haxby, J. V. (1993). Attention and brain function in Alzheimer's disease: A review. *Neuropsychology*, 7, 242-272.
37. Parasuraman, R., Molloy, R., & Singh, I. L. (1993). Performance consequences of automation-induced "complacency." *International Journal of Aviation Psychology*, 3, 1-23.
38. Singh, I. L., Molloy, R., & Parasuraman, R. (1993a). Automation-induced "complacency": Development of the complacency-potential rating scale. *International Journal of Aviation Psychology*, 3, 111-121.
39. Singh, I. L., Molloy, R., & Parasuraman, R. (1993b). Individual differences in monitoring failures of automation. *Journal of General Psychology*, 120, 357-373.

1994

40. Greenwood, P. M., & Parasuraman, R. (1994). Attentional disengagement deficit in nondemented elderly over 75 years of age. *Aging and Cognition*, 1, 188-202.
41. Parasuraman, R., & Martin, A. (1994). Cognition in Alzheimer's disease: Disorders of attention and semantic knowledge. *Current Opinion in Neurobiology*, 4, 237-244.

1995

42. Mouloua, M., & Parasuraman, R. (1995). Aging and cognitive vigilance: Effects of spatial uncertainty and event rate. *Experimental Aging Research*, 21, 17-32.
43. Parasuraman, R., Greenwood, P.M., & Alexander, G. E. (1995). Selective impairment of spatial attention during visual search in Alzheimer's disease. *Neuroreport*, 6, 1861-1864.

1996

44. Byrne, E.A., & Parasuraman, R. (1996). Psychophysiology and adaptive automation. *Biological Psychology*, 42, 249-268.
45. Hilburn, B., Jorna, P. G. A. M., Parasuraman, R., & Byrne, E. A. (1996). Dynamic decision aiding in air-traffic control: A bio-behavioral analysis. *Vivek: A Quarterly in Artificial Intelligence*, 9, 30-38.
46. Molloy, R., & Parasuraman, R. (1996). Monitoring an automated system for a single failure: Vigilance and task complexity effects. *Human Factors*, 38, 311-322.
47. Parasuraman, R., Mouloua, M., & Molloy, R. (1996). Effects of adaptive task allocation on monitoring of automated systems. *Human Factors*, 38, 665-679.
(Reprinted in N. Cooke & E. Salas (Ed.) *Best of Human Factors: Thirty Classic Contributions to Human Factors*. Santa Monica, CA: Human Factors and Ergonomics Society, 2008).

1997

48. Clark, V. P., Parasuraman, R., Keil, K., Kulanski, R., Fannon, S., Maisog, J. M., Ungerleider, L. G., & Haxby, J. V. (1997). Selective attention to face identity and color studied with fMRI. *Human Brain Mapping*, 5, 293-297.
49. Greenwood, P.M., Parasuraman, R., & Alexander, G. E. (1997). Controlling the focus of spatial attention during visual search: Effects of advanced aging and Alzheimer's disease. *Neuropsychology*, 11, 3-12.
50. Hardy, D., & Parasuraman, R. (1997). Cognition and flight performance in older pilots. *Journal of Experimental Psychology: Applied*, 3, 313-348.
51. Parasuraman, R., Hancock, P.A., & Olofinboba, O. (1997). Alarm effectiveness in driver-centered collision-warning systems. *Ergonomics*, 40, 390-399.

52. Parasuraman, R., & Riley, V. (1997). Humans and automation: Use, misuse, disuse, abuse. *Human Factors*, 39, 230-253. (Reprinted in N. Cooke & E. Salas (Ed.) *Best of Human Factors: Thirty Classic Contributions to Human Factors*. Santa Monica, CA: Human Factors and Ergonomics Society, 2008).

53. Singh, I. L., Molloy, R., & Parasuraman, R. (1997). Automation-related monitoring inefficiency: The role of display location. *International Journal of Human-Computer Studies*, 46, 17-30.

1998

54. Singh, I. L., Hilburn, B., & Parasuraman, R. (1998). Effect of feedback on adaptive automation. *Journal of the Indian Academy of Applied Psychology*, 25, 157-165.

1999

55. Greenwood, P.M., & Parasuraman, R. (1999). Scale of attentional focus in visual search. *Perception and Psychophysics*, 61, 837-859.

56. Jiang, Y., Greenwood, P., & Parasuraman, R. (1999). Age-related reduction in 3-D motion priming. *Psychology and Aging*, 14, 619-626.

57. Masalonis, A. J., Duley, J., & Parasuraman, R. (1999). Effects of manual and autopilot control on mental workload and vigilance during general aviation simulated flight. *Transportation Human Factors*, 1, 187-200.

58. Parasuraman, R. (1999). The attentive brain in aging and dementia. *Brain and Cognition*, 39, 12-14.

59. Singh, I. L., Hilburn, B., & Parasuraman, R. (1999). Effect of non-adaptive training on adaptive automation. *Journal of Psychological Researches*, 42, 35-45.

2000

60. Greenwood, P. M., Sunderland, T., Friz, J. L., & Parasuraman, R. (2000). Genetics and visual attention: Selective deficits in healthy adult carriers of the e4 allele of the apolipoprotein E gene. *Proceedings of the National Academy of Sciences*, 97, 11661-11666.

61. Hancock, P. A., Masalonis, A. J., & Parasuraman, R. (2000). On the theory of fuzzy signal detection: Theoretical and practical considerations. *Theoretical Issues in Ergonomics Science*, 1, 207-230.

62. Jiang, Y., Haxby, J. V., Martin, A., Ungerleider, L. G., & Parasuraman, R. (2000). Complementary neural mechanisms for tracking items in human working memory. *Science*, 287, 643-646.

63. Levy, J., Parasuraman, R., Greenwood, P. G., Dukoff, R., & Sunderland, T. (2000). Acetylcholine affects the spatial distribution of attention: Evidence from Alzheimer's disease. *Neuropsychology*, 14, 288-298.

64. Parasuraman, R. (2000). Designing automation for human use: Empirical studies and quantitative models. *Ergonomics*, 43, 931-951.

65. Parasuraman, R., Greenwood, P. M., & Alexander, G. E. (2000). Alzheimer's disease reduces the dynamic range of spatial attention in visual search. *Neuropsychologia*, 38, 1126-1135.

66. Parasuraman, R., Masalonis, A. J., & Hancock, P. A. (2000). Fuzzy signal detection theory: Basic postulates and formulas for analyzing human and machine performance. *Human Factors*, 42, 636-659.

67. Parasuraman, R., Sheridan, T. B., & Wickens, C. D. (2000). A model for types and levels of human interaction with automation. *IEEE Transactions on Systems, Man, and Cybernetics. Part A: Systems and Humans*, 30, 286-297.

68. Sheridan, T. B., & Parasuraman, R. (2000). Human vs. automation in responding to failures: An expected-value analysis. *Human Factors*, 42, 403-407.

2001

69. Berardi, A. M., Parasuraman, R., & Haxby, J. V. (2001). Overall vigilance and sustained attention decrement in healthy aging. *Experimental Aging Research*, 27, 19-39.

70. Galster, S., Duley, J. A., Masalonis, A., & Parasuraman, R. (2001). Air traffic controller performance and workload

under mature Free Flight: Conflict detection and resolution of aircraft self-separation. *International Journal of Aviation Psychology*, 11, 71-93.

71. Luo, Y., Greenwood, P. M., & Parasuraman, R. (2001). Dynamics of the spatial scale of visual attention revealed by brain event-related potentials. *Cognitive Brain Research*, 12, 371-381.

72. Metzger, U., & Parasuraman, R. (2001). The role of the air traffic controller in future air traffic management: An empirical study of active control versus passive monitoring. *Human Factors*, 43, 519-528.

73. Parasuraman, R., & Martin, A. (2001). Interaction of semantic and perceptual processes in repetition blindness. *Visual Cognition*, 8, 103-118.

74. Singh, I. L., Deaton, J. E., & Parasuraman, R. (2001). Development of a scale to assess pilot attitudes towards cockpit automation. *Journal of the Indian Academy of Applied Psychology*, 27, 205-211.

75. Singh, I. L., Sharma, H. O., & Parasuraman, R. (2001). Effects of manual training and automation reliability on automation induced complacency in a flight simulation task. *Psychological Studies*, 46, 21-27.

2002

76. Hancock, P. A., Weaver, J. L., & Parasuraman, R. (2002). Sans subjectivity—ergonomics is engineering. *Ergonomics*, 45, 991-994.

77. Jiang, Y., Luo, Y., & Parasuraman, R. (2002a). Neural correlates of perceptual priming of visual motion. *Brain Research Bulletin*, 57, 211-219.

78. Jiang, Y., Luo, Y., & Parasuraman, R. (2002b). Two-dimensional visual motion priming is reduced in older adults. *Neuropsychology*, 16, 140-145.

79. Lorenz, B., Di Nocera, F., Roettger, S., and Parasuraman, R. (2002). Automated fault management in a simulated space flight micro-world. *Aviation, Space, & Environmental Medicine*, 73, 886-897.

80. Luo, Y. J., Jiang, Y., Tang, Y. Y., & Parasuraman, R. (2002). Neural mechanisms of unconscious visual motion priming. *Chinese Science Bulletin*, 47, 193-197.

81. Parasuraman, R., Greenwood, P., & Sunderland, T. (2002). The apolipoprotein E gene, attention, and brain function. *Neuropsychology*, 16, 254-274.

2003

82. Greenwood, P., & Parasuraman, R. (2003). Normal genetic variation, cognition, and aging. *Behavioral and Cognitive Neuroscience Reviews*, 2, 278-306.

83. Grier, R. A., Warm, J. S., Dember, W. N., Matthews, G., Galinsky, T. L., Szalma, J. L., & Parasuraman, R. (2003). The vigilance decrement reflects limitations in effortful attention, not mindlessness. *Human Factors*, 45, 349-359.

84. Hitchcock, E. M., Warm, J. S., Matthews, G., Dember, W. N., Sehear, P. K., Tripp, L., Mayleben, D., Rosa, R. R., & Parasuraman, R. (2003). Automation cueing modulates cerebral blood flow and vigilance in a simulated air traffic control task. *Theoretical Issues in Ergonomics Science*, 4, 89-112.

85. Masalonis, A. J., & Parasuraman, R. (2003). Fuzzy signal detection theory: Analysis of human and machine performance in air traffic control, and analytic considerations. *Ergonomics*, 46, 1045-1074.

86. Parasuraman, R. (2003). Neuroergonomics: Research and practice. *Theoretical Issues in Ergonomics Science*, 4, 5-20.

2004

87. Caggiano, D., & Parasuraman, R. (2004). The role of memory representation in the vigilance decrement. *Psychonomic Bulletin and Review*, 11(5), 932-937.

88. Greenwood, P., & Parasuraman, R. (2004). The scaling of spatial attention in visual search and its modification in healthy aging. *Perception and Psychophysics*, 66, 3-22.

89. Parasuraman, R., & Miller, C. (2004). Trust and etiquette in high-criticality automated systems. *Communications of the*

Association for Computing Machinery, 47(4), 51-55.

2005

90. Berardi, A. M., Parasuraman, R., & Haxby, J. V. (2005). Sustained attention in mild Alzheimer's disease. *Developmental Neuropsychology*, 28, 507-537.
91. Helton, W. S., Hollander, T. D., Warm, J. S., Matthews, G., Dember, W. N., Wallart, M., Beauchamp, G., Parasuraman, R., & Hancock, P. A. (2005). Signal regularity and the mindlessness model of vigilance. *British Journal of Psychology*, 96, 249-261.
92. Fu, S., Caggiano, D. M., Greenwood, P. M., & Parasuraman, R. (2005a). Event-related potentials reveal dissociable mechanisms for orienting and focusing visuospatial attention. *Cognitive Brain Research*, 23, 341-353.
93. Fu, S., Greenwood, P. M., & Parasuraman, R. (2005b). Brain mechanisms of involuntary visuospatial attention: An event-related potential study. *Human Brain Mapping*, 25, 378-390.
94. Greenwood, P. M., Fossella, J., & Parasuraman, R. (2005a). Specificity of the effect of a nicotinic receptor polymorphism on individual differences in visuospatial attention. *Journal of Cognitive Neuroscience*, 17, 1611-1620.
95. Greenwood, P., Lambert, C., Sunderland, T., & Parasuraman, R. (2005b). Effects of Apolipoprotein E genotype on spatial attention, working memory, and their interaction in healthy, middle-aged adults: Results from the National Institute of Mental Health's BIOCARD Study. *Neuropsychology*, 19, 199-211.
96. Greenwood, P. M., Sunderland, T., Putnam, K., Levy, J., & Parasuraman, R. (2005c). Scaling of visuospatial attention undergoes differential longitudinal change as a function of APOE genotype prior to old age: Results from the National Institute of Mental Health's BIOCARD study. *Neuropsychology*, 19, 830-840.
97. Metzger, U., & Parasuraman, R. (2005). Automation in future air traffic management: Effects of decision aid reliability on controller performance and mental workload. *Human Factors*, 47, 35-49.
98. Parasuraman, R., Galster, S., Squire, P., Furukawa, H., & Miller, C. (2005). A flexible delegation interface enhances system performance in human supervision of multiple autonomous robots: Empirical studies with RoboFlag. *IEEE Transactions on Systems, Man, and Cybernetics. Part A: Systems and Humans*, 35, 481-493.
99. Parasuraman, R., Greenwood, P. M., Kumar, R., & Fossella, J. (2005). Beyond heritability: Neurotransmitter genes differentially modulate visuospatial attention and working memory. *Psychological Science*, 16(3), 200-207.
100. Sheridan, T., & Parasuraman, R. (2005). Human-automation interaction. *Reviews of Human Factors and Ergonomics*, 1, 89-129.

2006

101. Caggiano, D., Jiang, Y., & Parasuraman, R. (2006). Aging and repetition priming for targets and distracters in a working memory task. *Aging, Neuropsychology, and Cognition*, 13, 1-22.
102. Espeseth, T., Greenwood, P. M., Reinvang, I., Fjell, A. M., Walhovd, K. B., Westlye, E., Lundervold, A., Rootvelt, H., & Parasuraman, R. (2006). Interactive effects of APOE and CHRNA4 on attention and white matter volume in healthy middle-aged and older adults. *Cognitive, Affective, and Behavioral Neuroscience*, 6(1), 31-43.
103. Metzger, U., & Parasuraman, R. (2006). Effects of automated conflict cueing and traffic density on air traffic controller performance and visual attention in a datalink environment. *International Journal of Aviation Psychology*, 16, 343-362.

2007

104. Helton, W. S., Hollander, T. H., Warm, J. S., Tripp, L. D., Parsons, K., Matthews, G., Dember, W. N., Parasuraman, R., & Hancock, P. A. (2007). The abbreviated vigilance task and cerebral hemodynamics. *Journal of Clinical and Experimental Neuropsychology*, 29, 545-552.
105. Miller, C., & Parasuraman, R. (2007). Designing for flexible interaction between humans and automation: Delegation interfaces for supervisory control. *Human Factors*, 49, 57-75.

106. Parasuraman, R., Barnes, M., & Cosenzo, K. (2007). Adaptive automation for human-robot teaming in future command and control systems. *International Journal of Command and Control*, 1(2), 43-68.
107. Parasuraman, R., & Espeseth, T. (2007). Genetic and neuroimaging studies of cholinergic and neurotrophic modulation of visual attention. *Progress in Natural Science*, 17, 7-18.
108. Rovira, E., McGarry, K., & Parasuraman, R. (2007). Effects of imperfect automation on decision making in a simulated command and control task. *Human Factors*, 49, 76-87.

2008

109. Fu, S., Zinni, M., Squire, P. N., Kumar, R., Caggiano, D. M., & Parasuraman, R. (2008). When and where perceptual load interacts with voluntary visuospatial attention: An event-related potential and dipole modeling study. *NeuroImage*, 39, 1345-1355.
110. Parasuraman, R., Sheridan, T. B., & Wickens, C. D. (2008). Situation awareness, mental workload, and trust in automation: Viable, empirically supported cognitive engineering constructs. *Journal of Cognitive Engineering and Decision Making*, 2, 141-161.
111. Parasuraman, R., & Wickens, C. D. (2008). Humans: Still vital after all these years of automation. *Human Factors*, 50, 511-520.
112. Parasuraman, R., & Wilson, G. F. (2008). Putting the brain to work: Neuroergonomics past, present, and future. *Human Factors*, 50, 468-474.
113. Sanquist, T. F., Minsk, B., & Parasuraman, R. (2008). Cognitive engineering in radiation screening for homeland security. *Journal of Cognitive Engineering and Decision Making*, 2, 204-219.
114. Sanquist, T. F., Doctor, P., & Parasuraman, R. (2008). A threat display concept for radiation detection in homeland security cargo screening. *IEEE Transactions on Systems, Man, and Cybernetics. Part C. Applications*, 38, 856-860.
115. Warm, J. S., Parasuraman, R., & Matthews, G. (2008). Vigilance requires hard mental work and is stressful. *Human Factors*, 50, 433-441.

2009

116. Fu, S., Huang, Y., Luo, Y., Wang, Y., Fedota, J., Greenwood, P. M., & Parasuraman, R. (2009). Perceptual load interacts with involuntary attention at early processing stages: event-related potential studies. *NeuroImage*, 48, 191-199.
117. Greenwood, P. M., Lin, M.-K., Sundararajan, R., Fryxell, K. J., & Parasuraman, R. (2009). Synergistic effects of genetic variation in nicotinic and muscarinic receptors on visual attention but not working memory. *Proceedings of the National Academy of Sciences (USA)*, 106, 3633-3638.
118. Greenwood, P. M., Sundararajan, R., Lin, M.-K., Fryxell, K. J., & Parasuraman, R. (2009). Both a nicotinic single nucleotide polymorphism (SNP) and a noradrenergic SNP modulate working memory performance when attention is manipulated. *Journal of Cognitive Neuroscience*, 21, 2139-2153.
119. Jha, P. D., Bisantz, A. M., Drury, C. G., & Parasuraman, R. (2009). Air traffic controllers' performance in advanced air traffic management systems: Part II. Workload and trust. *The Journal of Air Traffic Control*, 51(2), 46-52.
120. Jiang, Y., Luo, Y., & Parasuraman, R. (2009). Neural correlates of age-related reduction in visual motion priming. *Aging, Neuropsychology, and Cognition*, 16, 164-182.
121. Negash, S., Greenwood, P. M., Sunderland, T., Parasuraman, R., Geda, Y., Knopman, D. S., Boeve, B., Ivnik, R., Petersen, R. C., & Smith, G. E. (2009). The influence of Apolipoprotein E genotype on spatial attention dissipates after age 80. *Neuropsychology*, 23, 81-89.
122. Ortigue, S., Thompson, J. C., Parasuraman, R., & Grafton, S. T. (2009). Spatio-temporal dynamics of human intention understanding in temporo-parietal cortex: A combined EEG/fMRI repetition suppression paradigm. *PLoS One*, 4(9), 1-10.
123. Parasuraman, R. (2009). Assaying individual differences in cognition with molecular genetics: theory and application. *Theoretical Issues in Ergonomics Science*, 10, 399-416.

124. Parasuraman, R., Cosenzo, K., & de Visser, E. (2009). Adaptive automation for human supervision of multiple uninhabited vehicles: Effects on change detection, situation awareness, and mental workload. *Military Psychology*, 21, 270-297.
 125. Parasuraman, R., De Visser, E., Clarke, E., McGarry, W. R., Hussey, E., Shaw, T., & Thompson, J. (2009). Detecting threat-related intentional actions of others: Effects of image quality, response mode, and target cueing on vigilance. *Journal of Experimental Psychology: Applied*, 15(4), 275-290.
 126. Shaw, T. H., Warm, J. S., Finomore, V., Tripp, L., Matthews, G., Weiler, E., & Parasuraman, R. (2009). Effects of sensory modality on cerebral blood flow velocity during vigilance. *Neuroscience Letters*, 461(3), 207-211.
 127. Warm, J. S., Matthews, G., & Parasuraman, R. (2009). Cerebral hemodynamics and vigilance. *Military Psychology*, 21 (Suppl. 1), S75-S100.
- 2010
128. Fedota, J., & Parasuraman, R. (2010). Neuroergonomics and human error. *Theoretical Issues in Ergonomics Science*, 11(5), 402-421.
 129. Fu, S., Fedota, J., Greenwood, P. M., & Parasuraman, R. (2010). Early interaction between perceptual load and involuntary attention: an event-related potential study. *Neuroscience Letters*, 468, 68-71.
 130. Fu, S., Fedota, J., Greenwood, P. M., & Parasuraman, R. (2010). Dissociation of visual C1 and P1 components as a function of attentional load: An event-related potential study. *Biological Psychology*, 85(1), 171-178.
 131. Greenwood, P. M., & Parasuraman, R. (2010). Neuronal and cognitive plasticity: A neurocognitive framework for ameliorating cognitive aging. *Frontiers in Aging Neuroscience*, 2, 10.3389/fnagi.2010.00150.
 132. Helton, W., Warm, J., Tripp, L., Matthews, G., Hancock, P. A., & Parasuraman, R. (2010). Cerebral lateralization of vigilance: A function of task difficulty. *Neuropsychologia*, 48(6), 1683-1688.
 133. Parasuraman, R., & Manzey, D. (2010). Complacency and bias in human use of automation: An attentional integration. *Human Factors*, 52(3), 381-410.
 134. Reinvang, I., Deary, I. J., Fjell, A. M., Steen, V. M., Espeseth, T., & Parasuraman, R. (2010). Neurogenetic effects on cognition in aging brains: A window of opportunity for intervention? *Frontiers in Aging Neuroscience*, 2, doi: 10.3389/fnagi.2010.00143.
 135. Rovira, E., & Parasuraman, R. (2010). Transitioning to future air traffic management: Effects of imperfect conflict-probe automation on controller attention and performance. *Human Factors*, 52(3), 412-425.
 136. Safford, A.S., Hussey, E.A., Parasuraman, R., & Thompson, J.C. (2010). Object-based attentional modulation of biological motion processing: Spatiotemporal dynamics using fMRI and EEG. *Journal of Neuroscience*, 30(27), 9064-9073.
 137. Squire, P. N., Barrow, J. H., Smith, C. F., Durkee, K., Moore, J. C., & Parasuraman, R. (2010). Runway Incursion Monitoring, Detection and Alerting System (RIMDAS): A proposed system design for reducing runway incursions. *Ergonomics in Design*, 18(2), 13-17.
 138. Squire, P. N., & Parasuraman, R. (2010). Effects of automation and task load on task switching during human supervision of multiple semiautonomous robots in a dynamic environment. *Ergonomics*, 53(8), 951-961.
- 2011
139. De Visser, E., & Parasuraman, R. (2011). Adaptive aiding of human-robot teaming: Effects of imperfect automation on performance, trust, and workload. *Journal of Cognitive Engineering and Decision Making*, 5, 209-231.
 140. Hancock, P. A., Billings, D. R., Schaefer, K. E., Chen, J. Y.C., de Visser, E., & Parasuraman, R. (2011). A meta-analysis of factors affecting trust in human-robot interaction. *Human Factors*, 53, 517-727.
 141. Jha, P., Bisantz, A., Parasuraman, R., & Drury, C. (2011). Air traffic controllers performance in advanced air traffic management system: Part I – Performance results. *International Journal of Aviation Psychology*, 21, 283-305.

142. Parasuraman, R. (2011). Neuroergonomics: Brain, cognition, and performance at work. *Current Directions in Psychological Science*, 20, 181-186.

2012

143. Falcone, B., Coffman, B. A., Clark, V. P., & Parasuraman, R. (2012). Transcranial direct current stimulation enhances perceptual sensitivity and 24-hour retention in a complex threat detection task. *PLoS One*, 7(4), e34993. doi: 10.1371/journal.pone.0034993.

144. Fedota, J., McDonald, C., Roberts, D. M., & Parasuraman, R. (2012). Contextual task difficulty modulates stimulus discrimination: Electrophysiological evidence for interaction between sensory and executive processes. *Psychophysiology*, 49, 1384-1393.

145. Fu, S., Fedota, J., Greenwood, P. M., & Parasuraman, R. (2012). Attentional load is not a critical factor for eliciting C1 attentional effect – A reply to Rauss, Pourtois, Vuilleumier, and Schwartz. *Biological Psychology*, dx.doi.org/10.1016/j.biopsycho.2012.03.012.

146. Fu, S., Feng, C., Guo, S., Luo, Y., & Parasuraman, R. (2012). Neural adaptation provides evidence for categorical differences in processing of faces and Chinese characters: An ERP study of the N170. *PLoS One*, 7(7): e41103. doi:10.1371/journal.pone.0041103.

147. Greenwood, P. M., Parasuraman, R., & Espeseth, T. (2012). A cognitive phenotype for the nicotinic receptor gene *CHRNA4* rs1044396. *Neuroscience and Biobehavioral Reviews*, 36, 1331-1341.

148. Krueger, F., Parasuraman, R., Iyengar, V., Thornburg, M., Weel, J., Lin, M., Clarke, E., McCabe, K., & Lipsky, R. (2012). Oxytocin receptor genetic variation promotes trust behavior. *Frontiers in Human Neuroscience*, 6, doi: 10.3389/fnhum.2012.00004.

149. Parasuraman, R., Baldwin, C. L., Knott, B., Warm, J. S., Finomore, V., Boehm-Davis, D., & Galster, S. M. (2012). Neuroergonomics, technology, and cognition. *Work: A Journal of Prevention, Assessment and Rehabilitation*, 41, 5167-5171.

150. Parasuraman, R., Christensen, J. & Grafton, S. (2012). Neuroergonomics: The brain in action and at work. *NeuroImage*, 59, 1-3.

151. Parasuraman, R., de Visser, E., Lin, M.-K., & Greenwood, P. M. (2012). DBH genotype identifies individuals less susceptible to bias in computer-assisted decision making. *PLoS One*, 7(6). e39675. doi:10.1371/journal.pone.0039675.

152. Parasuraman, R., & Jiang, Y. (2012). Individual differences in cognition, affect, and performance: Behavioral, neuroimaging, and molecular genetic approaches. *NeuroImage*, 59, 70-82.

153. Saqer, H., Visser, E., Strohl, J., & Parasuraman, R. (2012). Distractions N' Driving: Video game simulation educates young drivers on the dangers of texting while driving. *Work: A Journal of Prevention, Assessment and Rehabilitation*, 41, 5877-5879.

154. Thompson, J., & Parasuraman, R. (2012). Attention, biological motion, and action recognition. *NeuroImage*, 59, 4-13.

155. Wang, Y., Fu, S., Greenwood, P., Luo, Y., & Parasuraman, R. (2012). Perceptual load, voluntary attention, and aging: an event related potential study. *International Journal of Psychophysiology*, 84, 17-25.

2013

156. Ayaz, H., Parasuraman, R., McKendrick, R. A., Izzetoglu, K., Shewokis, P., & Onaral, B. (2013). Continuous monitoring of brain dynamics during cognitive skill acquisition with functional Near Infrared Spectroscopy: Empirical examples and a technological development. *Frontiers in Human Neuroscience*, 7, doi: 10.3389/fnhum.2013.00871.

157. Funke M. E, Shaw, T. H., Dillard, M., Funke, G. J., Warm, J. S., & Parasuraman, R. (2013). Event-related cerebral hemodynamics reveal target-specific resource allocation for both "go" and "no-go" response-based vigilance tasks. *Brain and Cognition*, 82(3), 265-273. dx.doi.org/10.1016/j.bandc.2013.05.003.

158. Gartenberg, D., Thornton, R., Mortazavi, M., Pfannenstiel, D., Taylor, D., & Parasuraman, R. (2013). Collecting health-related data on the smart phone: Mental models, cost of collection, and perceived benefit of feedback. *Personal and Ubiquitous Computing*, 17, 561-570. doi: 10.1007/s00779-012-0508-3.

159. Hancock, P. A., Jagacinski, R., Parasuraman, R., Wickens, C., Wilson, G., & Kaber, D. (2013). Human-automation interaction research: Past, present and future. *Ergonomics in Design*, 9(2), 9-14.
 160. Krueger, F., Parasuraman, R., Moody, L., Twieg, P., de Visser, E., McCabe, K., O'Hara, M., & Lee, M. (2013). Oxytocin selectively increases empathy for victims but not the desire to punish offenders of criminal offenses. *Social, Cognitive, and Affective Neuroscience*, 8, 494-498. doi:10.1093/scan/nss026
 161. Mehta, R., & Parasuraman, R. (2013). Neuroergonomics applications in physical and cognitive work: A review and discussion. *Frontiers in Human Neuroscience*, 7, doi: 10.3389/fnhum.2013.00889
 162. Parasuraman, R., & Galster, S. (2013). Sensing, assessing, and augmenting threat detection: behavioral, neuroimaging, and brain stimulation evidence for the critical role of attention. *Frontiers in Human Neuroscience*, 7, doi: 10.3389/fnhum.2013.00273.
 163. Strenziok, M., Greenwood, P. M., Santa Cruz, S., Thompson, J., & Parasuraman, R. (2013). Differential contributions of dorso-ventral and rostro-caudal prefrontal white matter tracts to cognitive control in healthy older adults. *PLoS One*, 8(12), : e81410. doi:10.1371/journal.pone.0081410.
- 2014
164. Ahmed, N., de Visser, E., Shaw, T., Mohamed-Ameen, A., Campbell, M. A., & Parasuraman, R. (2014). Predicting human-automation performance in networked systems using statistical models: The role of working memory capacity. *Ergonomics*, 53, 295-318. <http://dx.doi.org/10.1080/00140139.2013.855823>.
 165. Clark, V., & Parasuraman, R. (2014). Enhancing brain and mind in health and in disease. *NeuroImage*, 85, 889-894.
 166. Coffman, B. A., Clark, V. P., & Parasuraman, R. (2014). Battery powered thought: Enhancement of attention, learning, and memory in healthy adults using transcranial Direct Current Stimulation. *NeuroImage*, 85, 895-908. dx.doi.org/10.1016/j.neuroimage.2013.07.083.
 167. Greenwood, P. M., Espeseth, T., Lin, M., Reinvang, I., & Parasuraman, R. (2014). Longitudinal change in working memory as a function of APOE genotype in midlife and old age. *Scandinavian Journal of Psychology*, 55, 268-277.
 168. Greenwood, P. M., Lin, M-K., Fryxell, K., & Parasuraman, R. (2014). Healthy aging alters the cognitive effects of two genes in the dopaminergic pathway. *Psychology and Aging*, 29, 363-373.
 169. Jiang, X., Jiang, Y., & Parasuraman, R. (2014). What you see depends on what you saw, and what else you saw: the interactions between motion priming and object priming. *Vision Research*.
 170. McKendrick, R., Ayaz, H., Olmstead, R., & Parasuraman, R. (2014). Enhancing dual-task performance with verbal and spatial working memory training: Continuous monitoring of cerebral hemodynamics with NIRS. *NeuroImage*, 85, 1014-1026. dx.doi.org/10.1016/j.neuroimage.2013.05.103.
 171. McKendrick, R., Shaw, T., de Visser, E., Saqer, H., Kidwell, B., & Parasuraman, R. (2014). Team performance in networked supervisory control of unmanned air vehicles: Effects of automation, working memory and communication content. *Human Factors*, 56, 463-475. doi: 10.1177/0018720813496269.
 172. Mehta, R., & Parasuraman, R. (2014). Effects of mental fatigue on development of physical fatigue: A neuroergonomics approach. *Human Factors*, 56, 645-656.
 173. Nelson, J. T., McKinley, R. A., Golob, E. J., Warm, J. S., & Parasuraman, R. (2014). Enhancing vigilance in operators with prefrontal cortex transcranial direct stimulation. *NeuroImage*, 85, 907-917. dx.doi.org/10.1016/j.neuroimage.2012.11.061.
 174. Parasuraman, R., & McKinley, A. R. (2014). Using non-invasive brain stimulation to accelerate learning and enhance human performance. *Human Factors*, 56, 816-824.
 175. Parasuraman, R., Kidwell, B., Olmstead, R., Lin, M-K., Jankord, R., & Greenwood, P. (2014). Interactive effects of the COMT gene and training on individual differences in supervisory control of unmanned vehicles. *Human Factors*, 56, 760-771.
 176. Ploran, E. J., Bevitt, J., Oshiro, J., Parasuraman, R., & Thompson, J. C. (2014). Self-motivated visual scanning predicts flexible navigation in a virtual environment. *Frontiers in Human Neuroscience*, 7, doi: 10.3389/fnhum.2013.00892.

177. Roberts, D. M., Fedota, J. R., Buzzell, G. A., Parasuraman, R., & McDonald, C. G. (2014). Prestimulus oscillations in the Alpha band of the EEG are modulated by the difficulty of feature discrimination and predict activation of a sensory discrimination process. *Journal of Cognitive Neuroscience*, 26, 1615-1628.
178. Saqer, S., & Parasuraman, R. (2014). Individual performance markers and working memory predict supervisory control proficiency and effective use of adaptive automation. *International Journal of Human Factors and Ergonomics*, 3, 15-31.
179. Scheldrup, M., Greenwood, P. M., McKendrick, R., Strohl, J., Bikson, M., Alam, M., McKinley, R. A., & Parasuraman, R. (2014). Transcranial direct current stimulation facilitates cognitive multi-task performance differentially depending on anode location and subtask. *Frontiers in Human Neuroscience*.
180. Strenziok, M., Parasuraman, R., Clarke, E., Cisler, D., Thompson, J. C., & Greenwood, P. M. (2014). Neurocognitive enhancement in older adults: Comparison of three cognitive training tasks to test a hypothesis of training transfer in brain connectivity. *NeuroImage*, 85, 1027-1039. [dx.doi.org/10.1016/j.neuroimage.2013.07.069](https://doi.org/10.1016/j.neuroimage.2013.07.069).

In Press

181. Dillard, M. B., Warm, J. S., Funke, G. J., Funke, M. E., Finomore, V. S., Matthews, G., Shaw, T. H., & Parasuraman, R. The Sustained Attention to Response Task (SART) does not promote mindlessness during vigilance performance. *Human Factors*.

Submitted

- Baldwin, C. L., May, F., & Parasuraman, R. Auditory forward collision warnings reduce crashes associated with task-induced fatigue in young and older drivers. Submitted to *International Journal of Human Factors and Ergonomics*.
- Blumberg, E., Peterson, M. S., & Parasuraman, R. Enhancing multiple object tracking performance with noninvasive brain stimulation: A causal role for the anterior intraparietal sulcus. Submitted to *Attention, Perception, and Psychophysics*.
- Blumberg, E., Foroughi, C., Peterson, M. S., Boehm-Davis, & Parasuraman, R. Reducing the disruptive effects of interruptions with noninvasive brain stimulation. Submitted to *Human Factors*.
- Ploran, E., Rovira, E., Thompson, J. C., & Parasuraman, R. Underlying spatial skills to support navigation through large, unconstrained environments. Submitted to *Applied Cognitive Psychology*.
- McKendrick, R., & Parasuraman, R. Variable priority training combats intuitive “cognitive laziness.” Submitted to *Acta Psychologica*.
- Jiang, X., Jiang, Y., & Parasuraman, R. Visual priming of motion-defined 3D objects. Submitted to *PLoS One*.
- Monge, Z. A., Greenwood, P. M., Parasuraman, R., & Maren Strenziok, M. Individual differences in reasoning and visuospatial attention are associated with prefrontal and parietal white matter tracts in healthy aging. Submitted to *Neuropsychology*.

Other Articles

1. Parasuraman, R. (1998). Probing the attentive brain at work and in disease. *Psychological Science Agenda*, (November/December), 6-8. Washington DC: American Psychological Association.
2. Parasuraman, R., Duley, J. A., & Smoker, A. (1998). Automation tools for future air traffic control. *The Controller: Journal of Air Traffic Control*, 37, 7-11.
3. Parasuraman, R. (2003). Human factors and homeland security. *Human Factors and Ergonomics Society Bulletin*, 46 (No. 5, May), 1, 6.
4. Parasuraman, R., Hancock, P. A., Radwin, R., & Marras, W. (2003). Defending the independence of HF/E science. *Human Factors and Ergonomics Society Bulletin*, 46 (No. 11, November), 1, 5.
5. Parasuraman, R., & Hancock, P. A. (2004). Neuroergonomics: Harnessing the power of brain science for HF/E. *Human Factors and Ergonomics Society Bulletin*, 47 (No. 12, December), 1, 4-5.

6. Parasuraman, R. (2006). Peter Hancock: The humane factors of being first—and *last*. In J. Stuster (Ed.) *Human Factors and Ergonomics Society: Stories from the First 50 Years*. (pp. 73-74). Santa Monica, CA: Human Factors and Ergonomics Society.
7. Parasuraman, R. (2007). Neuroergonomics of visual cognition: Research and applications. *Human Factors and Ergonomics Society Bulletin*, 50 (No. 57, July), 4.

Book Reviews

1. Parasuraman, R. (1990). Review of P.A. Hancock, & N. Meshkati (Eds.) "Human Mental Workload." *Bulletin of the Human Factors Society*, 33(8), 11.
2. Parasuraman, R. (1995). Review of P. Satchell, "Cockpit Monitoring and Alerting Systems." *International Journal of Aviation Psychology*, 5, 387-393.
3. Parasuraman, R. (2000). Attention as selection. Review of H. Pashler (Ed.), "Attention." *American Journal of Psychology*, 113, 135-142.
4. Parasuraman, R. (2002). Review of T. Samad & J. Weyrauch (Eds.). "Automation, Control, and Complexity: An Integrated Approach." *Ergonomics in Design*, 10(3), 27.

Technical Reports (Partial List)

1. Parasuraman, R., Bahri, T., Deaton, J. E., Morrison, J. G., & Barnes, M. (1990). *Theory and design of adaptive automation in aviation systems*. (Technical Report, Code 6021). Warminster, PA: Naval Air Development Center.
2. Cohen, M. S., Parasuraman, R., Serfaty, D., & Andes, R. C. (1997). *Trust in decision aids: A model and a training strategy*. (Technical Report USAATCOM TR 97-D-4). Arlington, VA: Cognitive Technologies Inc.
3. Masalonis, A. J., & Parasuraman, R. (2001). *Outcome membership functions in fuzzy signal detection theory*. (Technical Report CSL-01-1). Washington DC: Cognitive Science Laboratory, The Catholic University of America.
4. Scerbo, M. S., Freeman, F. G., Mikulka, P. J., Parasuraman, R., Di Nocera, F., & Prinzel, L. J. (2001). *The efficacy of psychophysiological measures for implementing adaptive technology*. (Technical Paper NASA/TP-2001-211018). Hampton, VA: NASA Langley Research Center.
5. Parasuraman, R., Hansman, J., & Bussolari, S. (2002). *Framework for evaluation of human-system issues with ASDE-X and related surface safety systems*. (White Paper for AAR-100). Washington DC: Federal Aviation Administration.
6. Prinzel, L.J., Parasuraman, R., Freeman, F. J., Scerbo, M. W., Mikulka, P. J., & Pope, A. T. (2003). *Three experiments examining the use of electroencephalogram, event-related potentials, and heart-rate variability for real time human-centered adaptive automation design*. (Technical Paper NASA/TP-2003-212442). Hampton, VA: NASA Langley Research Center.
7. Parasuraman, R., & Rovira, E. (2005). *Workload modeling and workload management: Recent theoretical developments*. (Technical Report ARL-CR-0562, Human Research and Engineering Directorate). Aberdeen, MD: Army Research Laboratory.
8. Cosenzo, K. A., Parasuraman, R., Novak, A., & Barnes, M. (2006). Implementation of automation for control of robotic systems. (Technical Report ARL-TR-3808, Human Research and Engineering Directorate). Aberdeen, MD: Army Research Laboratory.
9. Parasuraman, R. (2007). Human-automation integration. Chapter 7 of *Uninhabited Military Vehicles (UMVs): Human Factors Issues in Augmenting the Force*. (Technical Report RTO-TR-HFM-078). Brussels: North Atlantic Treaty Organization.
10. Parasuraman, R., & Baldwin, C. L. (2007). Manpower and personnel integration (MANPRINT) tools development. (Technical Report, Cognitive Science Laboratory, for Army Research Laboratory). Aberdeen, MD: Army Research Laboratory.
11. Elsmore, G. E., & Parasuraman, R. (2014). Reducing major rule violations in commuter rail operations: Distraction and its mitigation with sustained attention training. (Technical Report). Washington DC: Federal Railroad Administration.

Presentations, Symposia, and Invited Addresses

1973

1. Parasuraman, R. (June, 1973). High-speed digital to analog conversion with multiplexing system. *Paper presented at the Symposium on Engineering in Medicine*, London, UK.

1976

2. Davies, D. R. & Parasuraman, R. (August, 1976). Cortical evoked potentials and vigilance: A decision theory analysis. *Paper presented at the NATO International Conference on Vigilance*, St. Vincent, Italy.
3. Parasuraman, R. & Davies, D. R. (August, 1976). A taxonomic analysis of vigilance performance. *Paper presented at the NATO International Conference on Vigilance*, St. Vincent, Italy.
4. Parasuraman, R. (December, 1976). Auditory evoked potentials in divided attention. *Paper presented at the Annual Meeting of the Psychophysiology Society*, London, UK.

1979

5. Parasuraman, R. & Beatty, J. (October, 1979). Event-related potentials in detection and recognition. *Paper presented at the Annual Meeting of the Society for Psychophysiological Research*, Cincinnati, OH.
6. Parasuraman, R. (November, 1979). Performance decrements in sustained attention: The effects of memory load and event rate. *Paper presented at the Annual Meeting of the Psychonomic Society*, Phoenix, AZ.

1980

7. Parasuraman, R. & Beatty, J. (January, 1980). Event-related brain potentials in detection and recognition. *Paper presented at the Annual Meeting of the American Association for the Advancement of Science*, San Francisco, CA.
8. Parasuraman, R. (January, 1980). Four perspectives on the neurophysiology of cognition. *Invited Panel, Winter Conference on Brain Research*, Keystone, CO.
9. Parasuraman, R. (February, 1980). Neurophysiology of attention, detection and recognition. *Invited Colloquium, Langley Porter Neuropsychiatric Institute*, University of San Francisco Medical School, San Francisco, CA.
10. Parasuraman, R. (May, 1980). The psychobiology of vigilance: An information-processing approach. *Invited Colloquium, Department of Psychology, University of Illinois*, Champaign, IL.
11. Parasuraman, R. (May, 1980). Brain potentials in detection and recognition. *Invited Colloquium, Department of Psychology, University of Illinois*, Champaign, IL.
12. Parasuraman, R. (October, 1980). Applications of signal detection theory in monitoring performance and medical diagnosis. *Symposium on Signal Detection, Annual Meeting of the Human Factors Society*, Los Angeles, CA.
13. Parasuraman, R. & Beatty, J. (October, 1980). Processing demands affect slow negative shift latencies and N100 amplitude in focused and divided attention. *Paper presented at the Annual Meeting of the Psychophysiology Society*, Vancouver, Canada.
14. Parasuraman, R. (November, 1980). Brain potentials in the detection and recognition of weak sensory signals. *Seminar, Cognitive and Developmental Group, Department of Psychology, University of California*, Los Angeles, CA.

1981

15. Parasuraman, R. (January, 1981). Event-related potentials, cognitive processes, and reading. *Invited Panel, Third Carmel Conference on Cognitive Psychophysiology: ERPs and Language*, Carmel, CA.
16. Parasuraman, R. (March, 1981). Sustained attention in discrimination and search: Theory and practice. *Invited Colloquium, Department of Psychology, University of California*, Los Angeles, CA.
17. Jiang, Q., Parasuraman, R., & Beatty, J. (April, 1981). Physiological assessment of operator workload during manual tracking: (i) Pupillary responses. *Paper presented at the Annual Manual Control Conference*, Los Angeles, CA.

18. Parasuraman, R. (May, 1981). Vigilance and monitoring performance: What we know and what we need to know. *Invited Seminar, Air Force Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Dayton, OH.*

19. Parasuraman, R. (May, 1981). Sustained attention: Theory and practice. *Invited Seminar, Bolt Beranek & Newman, Inc., Cambridge, MA.*

20. Parasuraman, R. (October, 1981). Psychophysical and brain potential studies of detection and recognition. *Symposium on Signal Detection and Recognition: Recent Psychophysical and Neurophysiological Developments, Annual Meeting of the Society for Psychophysiological Research, Washington DC.*

1982

21. Parasuraman, R. (January, 1982). Brain magnetic fields: Recent developments and controversies. *Invited Workshop, Winter Conference on Brain Research, Steamboat Springs, CO.*

22. Parasuraman, R. (February, 1982). Physiological and behavioral assessment of attention deficits. *Invited Colloquium, VA Medical Center, Department of Psychiatry, Stanford University, Palo Alto, CA.*

23. Parasuraman, R. (April, 1982). Brain events underlying perceptual detection and identification. *Invited Colloquium, Department of Psychology, The Catholic University of America, Washington DC.*

24. Parasuraman, R. (August, 1982). Observer performance in chest radiography. *Workshop on Signal Detection Theory: Recent Studies of Medical and Industrial Applications, International Congress of Applied Psychology, Edinburgh, Scotland.*

25. Parasuraman, R. (October, 1982). Perceptual detection and identification: Recent electrophysiological and behavioral studies. *Invited Lecture, International Conference on Cognitive Neuroscience, Kingston, Canada.*

1983

26. Parasuraman, R. (September, 1983). ERPs related to attention and stimulus selection. *Invited Panel, 7th International Conference on Event-Related Potentials of the Brain (EPIC VII), Florence, Italy.*

1984

27. Parasuraman, R. (March, 1984). Psychophysiology of signal detection and vigilance. *Invited Talk, Annual Meeting of the Washington Academy of Sciences, Washington DC.*

28. Bennett, K., Parasuraman, R., Howard, J. H., Jr., & O'Toole, A. (April, 1984). Auditory induction of tones in signal detection tasks. *Paper presented at the Annual Meeting of the Eastern Psychological Association, Baltimore, MD.*

29. Bennett, K., Howard, J. H., Jr., & Parasuraman, R. (April, 1984). Interface design and "mental models" of a perceptual database system. *Paper presented at the Annual Midcentral Ergonomics/Human Factors Conference, Cincinnati, OH.*

30. Howard, J. H., Jr., O'Toole, A., Parasuraman, R., & Bennett, K. (April, 1984). Pattern-directed attention in uncertain frequency detection. *Paper presented at the Annual Meeting of the Eastern Psychological Association, Baltimore, MD.*

31. Parasuraman, R. (April, 1984). Testing the capacity of sustained attention. *Invited Paper, Annual Midcentral Ergonomics/Human Factors Conference, Cincinnati, OH.*

32. Parasuraman, R. (July, 1984). Capacity limitations in sustained attention. *Invited Paper, 11th International Conference on Attention and Performance, Eugene, OR.*

33. Parasuraman, R. (September, 1984). Psychophysiology of vigilance and attention. *Invited Colloquium, Gerontology Research Center, National Institute of Aging, Baltimore, MD.*

34. Parasuraman, R. (October, 1984). Perceptual detection and identification: Studies with event-related brain potentials and applications in radiology. *Invited Colloquium, Department of Psychology, University of Cincinnati, Cincinnati, OH.*

35. Parasuraman, R. & Nestor, P. (December, 1984). Neuropsychology of attention: Basic findings and application to Alzheimer's disease. *Invited Lecture, Department of Clinical Neuropsychology, National Institute of Mental Health and Neurosciences, Bangalore, India.*

1985

36. Parasuraman, R. (January, 1985). User models in human-computer interaction. *Invited Lecture, Research and Development Group, PSI Ltd., Bangalore, India.*
37. Parasuraman, R. (February, 1985). User interfaces to tactical C2 systems. *Army Human Engineering Laboratory Workshop, Sandestin Beach, FL.*
38. Parasuraman, R. (June, 1985). Detection and identification of abnormalities in chest x-rays: Effects of reader skill, disease prevalence, and reporting criteria. *Paper presented at the Annual Meeting of the Midcentral Ergonomics/Human Factors Conference, Purdue University, West Lafayette, IN.*
39. Wisdom, G. & Parasuraman, R. (June, 1985). Effects of cognitive factors on subjective fatigue and performance. *Paper presented at the Annual Meeting of the Midcentral Ergonomics/Human Factors Conference, Purdue University, West Lafayette, IN.*
40. Parasuraman, R. (August, 1985). Energetics of attention and Alzheimer's disease. *Invited NATO Advanced Research Workshop on Stress and Adaptation to Task Demands: The Energetics of Human Information Processing, Les Arcs, France.*
41. Parasuraman, R. & Wisdom, G. (September, 1985). The use of signal detection theory in research on human-computer interaction. *Paper presented at the Annual Meeting of the Human Factors Society, Baltimore, MD.*
42. Parasuraman, R. (October, 1985). Event-related brain potentials and intermodal divided attention. *Paper presented at the Annual Meeting of the Human Factors Society, Baltimore, MD.*
43. Warren, C. A., Stern, J. A., Eddy, D. R., Horst, R. L., Kramer, A. F., Parasuraman, R., Sanquest, T. F., & Wilson, G. (October, 1985). The role of event-related potentials in human-machine applications. *Workshop, Annual Meeting of the Human Factors Society, Baltimore, MD.*
44. Parasuraman, R. (November, 1985). Does aging produce a decrement in sustained attention? *Paper presented at the Annual Meeting of the Gerontology Society of America, New Orleans.*

1986

45. Parasuraman, R. & Nestor, P. (January, 1986). Structural and functional brain changes in early Alzheimer's disease. *Invited Panel, Winter Conference on Brain Research, Keystone, CO.*
46. Parasuraman, R. (February, 1986). Evaluation of diagnostic performance in expert-interface systems. *Invited Colloquium, Human Factors Group, The MITRE Corporation, McLean, VA.*
47. Parasuraman, R. & Mouloua, M. (June, 1986). Capacity demand of successive- and simultaneous-discrimination tasks. *Paper presented at the Annual Midcentral Ergonomics/Human Factors Conference, Miami University, Oxford, OH.*
48. Scerbo, M., Doettlin, V., Warm, J. S., Parasuraman, R., & Fisk, A. D. (June, 1986). Event asynchrony and task demands in sustained attention. *Paper presented at the Annual Midcentral Ergonomics/Human Factors Conference, Miami University, Oxford, OH.*
49. Parasuraman, R. (June, 1986). Event-related brain potentials and human factors research. *Invited Tutorial, 8th International Conference on Event-Related Potentials of the Brain (EPIC VIII), Stanford University, Palo Alto, CA.*
50. Nestor, P., Parasuraman, R., & Haxby, J. V. (August, 1986). Attentional cost of cognitive abilities in aging and Alzheimer's disease. *Paper presented at the Annual Meeting of the American Psychological Association, Washington DC.*
51. Parasuraman, R. (September, 1986). Effects of practice on detection of abnormalities in chest x-rays. *Paper presented at the Annual Meeting of the Human Factors Society, Dayton, OH.*
52. Parasuraman, R. (September, 1986). Attention, brain metabolism, and Alzheimer's disease. *Interview and Panel Discussion, "The Later Years," WBAL-TV, Baltimore, MD.*
53. Stapleton, J. M., Rohrbaugh, J. W., Parasuraman, R., Frowein, H. W., Zubovic, E. A., Linnoila, M., & Eckhardt, M. J.

(November, 1986). Acute effects of ethanol on event-related potentials in a sustained attention task. *Paper presented at the Annual Meeting of the Society for Neuroscience*, Washington DC.

54. Parasuraman, R. (November, 1986). Neuropsychology of attention in aging and Alzheimer's dementia. *Invited Colloquium, Laboratory of Neurosciences, National Institute on Aging*, Bethesda, MD.

1987

55. Warm, J. S., Dember, W. N., & Parasuraman, R. (April, 1987). Tests of a vigilance taxonomy. I. *Paper presented at the Annual Meeting of the Southern Society for Philosophy and Psychology*, Atlanta, GA.

56. Warm, J. S., Parasuraman, R., & Dember, W. N. (April, 1987). Tests of a vigilance taxonomy. II. *Paper presented at the Annual Meeting of the Tri-State Human Factors Society, Miami University*, Oxford, OH.

57. Warm, J. S., Parasuraman, R., & Dember, W. N. (June, 1987). An information-processing taxonomy of vigilance. Paper presented at the Annual Midcentral Ergonomics/Human Factors Conference, Champaign, IL.

58. Parasuraman, R. (November, 1987). Aging and sustained attention. *Invited Paper, Conference on Aging and Attention, National Institute on Aging*, Bethesda, MD.

59. Nestor, P., Parasuraman, R., & Haxby, J. V. (November, 1987). Attention and learning in early Alzheimer's dementia. *Paper presented at the Annual Conference of the Gerontology Society of America*, Washington DC.

1988

60. Parasuraman, R. (February, 1988). Vigilance and monitoring in human-machine systems. *Invited Colloquium, School of Psychology, Georgia Institute of Technology*, Atlanta, GA.

61. Davis, J. M., Warm, J. S., Dember, W. N., & Parasuraman, R. (April, 1988). Cerebral asymmetry in successive and simultaneous vigilance tasks. *Paper presented at the Annual Conference of the Southern Society for Philosophy and Psychology*, Miami, FL.

62. Parasuraman, R. (June, 1988). Attention in aging and dementia. *Invited Colloquium, Laboratory of Clinical Studies, National Institute of Alcohol Abuse and Alcoholism*, Bethesda, MD.

63. Parasuraman, R., Warm, J. S., & Davies, D. R. (July, 1988). Tests of a vigilance taxonomy. *Symposium on the Psychophysics of Vigilance, 4th Annual Meeting of the International Society for Psychophysics*, Stirling, Scotland.

64. Deaton, J. E. & Parasuraman, R. (October, 1988). Effects of task demands and age on vigilance and subjective workload. *Paper presented at the Annual Meeting of the Human Factors Society*, Anaheim, CA.

1989

65. Parasuraman, R. (March, 1989). Vigilance and stress in automated work environments. *Invited Address, National Research Council, Commission on Engineering and Technical Systems, Marine Board Panel on Maritime Safety*, Washington DC.

66. Parasuraman, R. (May, 1989). Aging and human performance. *Keynote Address, Annual Meeting of the Tri-State Chapter of the Human Factors Society*, Cincinnati, OH.

67. Parasuraman, R. (July, 1989). Vigilance and monitoring in human-machine systems. *Invited Colloquium, Human Factors Branch, NASA Langley Research Center*, Langley, VA.

68. Parasuraman, R. (September, 1989). Executive control processes in adaptive automation. *Invited Paper, Review Meeting on Adaptive Function Allocation in Intelligent Cockpits, Naval Air Development Center*, Warminster, PA.

69. Parasuraman, R. (October, 1989). Behavioral consequences of adaptive automation. *Invited Paper, First Annual Aviation Safety/Automation Conference*, Virginia Beach, VA.

70. Bahri, T., & Parasuraman, R. (November, 1989). Covert shifts of attention enhance vigilance. *Paper presented at the*

Annual Conference of the Psychonomic Society, Atlanta, GA.

71. Giambra, L., & Parasuraman, R. (November, 1989). The effects of event rate and age on skill development in vigilance. *Paper presented at the Annual Conference of the Psychonomic Society, Atlanta, GA.*
72. Greenwood, P., Parasuraman, R., & Haxby, J. (November, 1989). Covert attention shifts and brain metabolism in Alzheimer's disease and normal aging. *Paper presented at the Annual Conference of the Society for Neuroscience, Phoenix, AZ.*
73. Haxby, J., & Parasuraman, R. (November, 1989). Shifting selective attention to visual features: Evidence for two underlying processes. *Paper presented at the Annual Conference of the Psychonomic Society, Atlanta, GA.*
74. Warm, J. S., Dember, W. N., & Parasuraman, R., Gluckman, J., Thiemann, J. A., Munteanu, M., & Warren, C. (November, 1989). The enhancement of sustained attention by olfactory stimulation. *Paper presented at the Annual Conference of the Psychonomic Society, Atlanta, GA.*
75. Parasuraman, R. (December, 1989). Psychophysiology of attention and olfaction. *Invited Colloquium, Department of Physiology, Toho University School of Medicine, Tokyo, Japan.*
76. Parasuraman, R. (December, 1989). Psychophysiology of odor. *Invited Colloquium, Shiseido Research Center, Shiseido Inc., Tokyo, Japan.*

1990

77. Parasuraman, R. (February, 1990). Effects of fragrances on sustained attention: Behavioral and neurophysiological studies. *Invited Colloquium, International Flavors & Fragrances, Inc., New York, NY.*
78. Parasuraman, R. (February, 1990). Attention in aging and Alzheimer's disease. *Invited Colloquium, National Institute on Aging, Bethesda, MD.*
79. Warm, J. S., Dember, W. N., Parasuraman, R., Winheusen, T., Simons, K. G., Thiemann, J. A., & Gluckman, J. P. (April, 1990). The enhancement of sustained attention through self-administered olfactory stimulation. *Paper presented at the Annual Meeting of the Southern Society for Philosophy and Psychology, Louisville, KY.*
80. Dember, W. N., Warm, J. S., & Parasuraman, R. (May, 1990). The effect of odor administration on performance and stress in a sustained attention task. *Invited Colloquium, Annual Scientific Seminar of the Society for Cosmetic Chemists, San Francisco, CA.*
81. Parasuraman, R. (August, 1990). Attention in normal aging and Alzheimer's disease. *Invited Colloquium, Annual Conference of the American Psychological Association, Boston, MA.*
82. Parasuraman, R. (August, 1990). Attention and driving in aging and Alzheimer's dementia. *Invited Colloquium, Department of Transportation, Washington DC.*
83. Hancock, P. A., Caird, J. K., & Parasuraman, R. (September, 1990). Predicting the effects of interacting stresses on operator performance during long-duration space operations. *Paper presented at the Space Programs and Technology Conference, American Institute for Aeronautics and Astronautics., San Antonio, TX.*

1991

84. Greenwood, P. M., Parasuraman, R., & Haxby, J. V. (February, 1991). Directed visual attention in moderate dementia of the Alzheimer type. *Paper presented at the Annual Meeting of the International Neuropsychology Society, San Antonio, Texas, February 1991.*
85. Parasuraman, R. (February, 1991). Effects of fragrances on sustained attention and visual evoked potentials. *Invited Colloquium, Annual Conference of the American Association for the Advancement of Science, Washington D.C.*
86. Parasuraman, R. (April, 1991). Adaptive automation and human performance. *Presented at the Annual 6.2 Review Meeting of the Office for Naval Technology Research, Naval Air Development Center, Warminster, PA.*
87. Parasuraman, R., Bahri, T., Molloy, R., & Singh, I. L. (April, 1991). Effects of shifts in the level of automation on operator performance. *Invited Colloquium, International Conference on Aviation Psychology, Columbus, OH.*
88. Parasuraman, R., & Greenwood, P. M. (April, 1991). Attention in Alzheimer's disease. *Invited Paper, Laboratory of*

Neurosciences, National Institute on Aging, Bethesda, MD.

89. Parasuraman, R. (May, 1991). Attention in Alzheimer's disease. *Invited Colloquium, Psychiatry Research Center, University of Maryland Medical School, Catonsville, MD.*
 90. Parasuraman, R. (September, 1991). Attention and driving performance in aging and Alzheimer's disease. *Invited Paper, International Conference on The Strategic Highway Research Program and Traffic Safety on Two Continents, Gothenburg, Sweden.*
 91. Adams, C. M., Parasuraman, R., & Rohrbaugh, J. W. (October, 1991). Electrophysiological correlates of inter- and intra-modality attention. *Paper presented at the Annual Meeting of the Society for Psychophysiological Research, Chicago, IL.*
 92. Haxby, J. V., Parasuraman, R., & Abboud, H. (November, 1991). SuperLab: Flexible Macintosh software for psychological research. *Paper presented at the Annual Meeting of the Society for Computers in Psychology, San Francisco, CA.*
 93. Nelson, T., Warm, J. S., Dember, W. N., & Parasuraman, R. (November, 1991). Vigilance for real and subjective contours. *Paper presented at the Annual Meeting of the Psychonomic Society, San Francisco, CA.*
 94. Parasuraman, R. (November, 1991). Effects of fragrances on attention and brain electrical activity. *Invited Lecture, Fragrance Research Fund Conference on Aromachology: The Impact of Science on the Future of Fragrance, New York, NY.*
 95. Mouloua, M., Greenwood, P., & Parasuraman, R. (November, 1991). Attentional changes across the adult life span. *Paper presented at the Virginia Developmental Psychology Forum, Washington D.C.*
 96. Haxby, J. V., Parasuraman, R., Gillette, J., & Raffaele, K. (November, 1991). Selective and divided attention to visual features are impaired in patients with early dementia of the Alzheimer type. *Paper presented at the Annual Meeting of the Society for Neuroscience, New Orleans, LA.*
- 1992
97. Parasuraman, R. (1992, January). Costs and benefits of adaptive function (pp. *view Meeting of the AFAIC Project, Naval Air Development Center, Warminster, PA.*
 98. Parasuraman, R. (1992, March). Does automation make pilots "complacent"? *Invited Address, Third Annual Human Error Conference, Institute for the Study of Human Capabilities, University of Indiana, Bloomington, IN.*
 99. Parasuraman, R. (1992, April). Brain systems of attention in aging and Alzheimer's disease. *President's Invited Address, Southern Society for Philosophy and Psychology, Memphis, TN.*
 100. Mayleben, D. W., Rosa, R., Warm, J. S., Dember, W. N., & Parasuraman, R. (1992, April). The effects of olfactory stimulation on human sleepiness and performance. *Paper presented at the Annual Meeting of the Southern Society for Philosophy and Psychology, Memphis, TN.*
 101. Nelson, W. T., Grubb, P. L., Warm, J. S., Dember, W. N., Mayleben, D. W., & Parasuraman, R. (1992, April). The effects of fragrance administration and attentiveness of vigilance performance. *Paper presented at the Annual Meeting of the Southern Society for Philosophy and Psychology, Memphis, TN.*
 102. Nelson, W. T., Warm, J. S., Dember, W. N., & Parasuraman, R. (1992, April). Perceived work load in monitoring real and subjective targets. *Paper presented at the Annual Meeting of the Southern Society for Philosophy and Psychology, Memphis, TN.*
 103. Greenwood, P. M., Parasuraman, R., & May, P. (1992, April). Visuospatial attention is altered in 75-85 year olds. *Paper presented at the Conference of the Cognitive Aging Society, Atlanta, GA.*
 104. Parasuraman, R. (1992, May). Effects of olfactory stimulation on attention and brain function. *Invited Lecture, Gillette Research Institute, Gaithersburg, MD.*
 105. Parasuraman, R. (1992, June). Automation and vigilance in the cockpit. *Invited Grand Rounds Lecture, Department of Anesthesiology, Georgetown University Medical Center, Washington DC.*
 106. Parasuraman, R. (1992, June). Adaptive function allocation: Effects on pilot performance. *Invited Paper, FAA/NASA Advanced Workshop on Artificial Intelligence and Human Factors in Air Traffic Control, and Aviation Maintenance. Daytona Beach, FL.*
 107. Parasuraman, S., Singh, I. L., Molloy, R., & Parasuraman, R. (1992, September). Automation-related complacency: A

source of vulnerability in contemporary organizations. *Paper presented at the 12th World Computer Congress, Information Processing 1992*, Madrid, Spain.

108. Parasuraman, R., Mouloua, M., & Molloy, R. (1992, October). Adaptive function allocation reduces automation-induced monitoring failures. *Paper presented at the Annual Meeting of the Human Factors Society*, Atlanta, GA.

109. Hilburn, B., Parasuraman, R., Molloy, M., & Singh, I. L. (1992, October). The effect of practice on the benefits and costs of adaptive automation systems. *Paper presented at the Annual Meeting of the Human Factors Society*, Atlanta, GA.

110. Molloy, R., & Parasuraman, R. (1992, October). Monitoring automation failures: Effects of automation reliability and task complexity. *Paper presented at the Annual Meeting of the Human Factors Society*, Atlanta, GA.

111. Singh, I. L., Molloy, R., Parasuraman, R., & Parasuraman, S. (1992, October). Development and validation of a scale of automation-induced "complacency." *Paper presented at the Annual Meeting of the Human Factors Society*, Atlanta, GA.

112. Parasuraman, R. (1992, October). Neuropsychological and environmental factors affecting vigilance. *Invited Presentation at the Annual Conference of the American Society of Anesthesiologists*, New Orleans, LA.

113. Greenwood, P., Parasuraman, R., Panicker, S., & Haxby, J. V. (1992, October). Effects of size of attentional focus on visual search in aged adults. *Paper presented at the Annual Society for Neuroscience Conference*, Anaheim, CA.

114. Adams, C. A., Parasuraman, R., & Rohrbaugh, J. W. (1992, October). Attentional facilitation of unattended stimuli as revealed by ERPs. *Paper presented at the Annual Conference of the Society for Psychophysiological Research*, Chicago, IL.

115. Berardi, A., Gaillard, F., Haxby, J. V., Greenwood, P., & Parasuraman, R. (1992, November). Sustained attention in dementia of the Alzheimer type (DAT). *Paper presented at the Annual Conference of the Gerontology Society of America*, Washington D.C.

116. Berardi, A., Parasuraman, R., Greenwood, P., Haxby, J. V., & Gaillard, F. (1992, November). Age-related differences in sustained attention for a high event-rate visual digit discrimination task. *Paper presented at the Annual Conference of the American Geriatrics Society*, Washington D.C.

117. Singh, I. L., Molloy, R., & Parasuraman, R. (1992, November). Central display location does not reduce inefficiency in monitoring for automation failure. *Paper presented at the Annual Psychonomic Society Conference*, St. Louis, MO.

1993

118. Parasuraman, R. (1993, February). Varieties of attention: From cognitive neuroscience to human factors. *Invited Colloquium, Department of Psychology, University of Maryland*, College Park, MD.

119. Mouloua, M., Molloy, R., & Parasuraman, R. (1993, February). Monitoring automation failures: Effects of task type on performance and subjective workload. *Paper presented at the First Mid-Atlantic Human Factors Conference*, Virginia Beach, VA.

120. Parasuraman, R. (1993, February). Attention and driving in young and old adults. *Paper presented at the First Mid-Atlantic Human Factors Conference*, Virginia Beach, VA.

121. Parasuraman, R. (1993, March). Brain mechanisms of attention in aging and Alzheimer's disease. *Invited Paper presented at the Gatlinburg Conference on Developmental Disabilities*, Gatlinburg, TN.

122. Parasuraman, R., Mouloua, M., Molloy, R., & Hilburn, B. (1993, April). Adaptive function allocation reduces performance costs of static automation. *Paper presented at the International Conference on Aviation Psychology*, Columbus, OH.

123. Hilburn, B., Molloy, M., Wong, R., & Parasuraman, R. (1993, April). Operator versus computer control of adaptive automation. *Paper presented at the International Conference on Aviation Psychology*, Columbus, OH.

124. Parasuraman, R. (1993, July). Effects of adaptive automation on human performance. *Invited Lecture, Human Engineering Research Group, Aberdeen Proving Ground*, Aberdeen, MD.

125. Parasuraman, R. (1993, September). Brain mechanisms of attention in aging and Alzheimer's disease. *First Distinguished Neuroscience Lecture, Academy of Neuroscience, University of North Carolina*, Charlotte, NC.

126. Adams, C.M., Parasuraman, R., & Rohrbaugh, J.W. (1993, September). ERPs provide evidence for a supramodal attention system. *Paper presented at the American Cognitive ERP Conference*, New York, NY.

127. May, P., Molloy, R., & Parasuraman, R. (1993, October). Effects of automation reliability and failure rate on monitoring performance in a multitask environment. *Paper presented at the Annual Meeting of the Human Factors Society*, Seattle, WA.
128. Mouloua, M., Molloy, R., & Parasuraman, R. (1993, October). Monitoring automation failures: Effects of single and multiadaptive function allocation. *Paper presented at the Annual Meeting of the Human Factors Society*, Seattle, WA.
129. Singh, I. L., Deaton, J. E., & Parasuraman, R. (1993, October). Development of a scale to measure pilot attitudes to cockpit automation. *Paper presented at the Annual Meeting of the Human Factors Society*, Seattle, WA.
130. Berardi, A., Gaillard, F., Parasuraman, R., Greenwood, P., Grady, C. L., & Haxby, J. V. (1993, November). Resting state brain glucose metabolic correlates of sustained attention capacity in healthy aging. *Paper presented at the Annual Society for Neuroscience Conference*, Washington DC.
131. Panicker, S., Greenwood, P. M., Parasuraman, R., & Haxby, J. V. (1993, November). Cued visual search in Alzheimer's disease. *Paper presented at the Annual Society for Neuroscience Conference*, Washington DC.
132. Parasuraman, R., & Haxby, J. V. (1993, November). Attention in early Alzheimer's disease: Dysfunction of corticocortical systems. *Paper presented at the Annual Society for Neuroscience Conference*, Washington DC.
133. Adams, C. A., Parasuraman, R., & Rohrbaugh, J. W. (1993, December). ERPs reveal evidence of attentional processing of irrelevant stimuli. *Paper presented at the International Conference on Multidisciplinary Perspectives on Cognition*, Varanasi, India.
134. Panicker, S., & Parasuraman, R. (1993, December). Cognitive neurochemistry of attention. *Paper presented at the International Conference on Multidisciplinary Perspectives on Cognition*, Varanasi, India.
135. Parasuraman, R. (1993, December). Attention and brain function in aging and Alzheimer's dementia. *Paper presented at the International Conference on Multidisciplinary Perspectives on Cognition*, Varanasi, India.

1994

136. Hilburn, B., Mouloua, M., & Parasuraman, R. (1994, April). Adaptive training in automated systems. *Paper presented at the First Automation Technology and Human Performance Conference*, Washington DC.
137. Molloy, R., & Parasuraman, R. (1994, April). Automation-induced monitoring inefficiency: The role of display integration and redundant color coding. *Paper presented at the First Automation Technology and Human Performance Conference*, Washington DC.
138. Parasuraman, R., Mouloua, M., & Molloy, R. (1994, April). Monitoring automation failures in human-machine systems. *Paper presented at the First Automation Technology and Human Performance Conference*, Washington DC.
139. Singh, I. L., Molloy, R., Parasuraman, R., & Westerman, S. (1994, April). Does location affect automation-induced complacency? *Paper presented at the First Automation Technology and Human Performance Conference*, Washington DC.
140. Wong, D., Molloy, R., & Parasuraman, R. (1994, April). Effects of partially automated functions on monitoring performance in a multi-task environment. *Paper presented at the First Automation Technology and Human Performance Conference*, Washington DC.
141. Hilburn, B., Parasuraman, R., & Mouloua, M. (1994, April). Effects of short- and long-cycle adaptive function allocation on performance of flight-related tasks. *Paper presented at the International Conference of the Western European Association for Aviation Psychology*, Dublin, Ireland.
142. Parasuraman, R. (1994, April). Brain systems of cognition in Alzheimer's disease: Attention and semantic memory. *Invited Colloquium, Memphis State University*, Memphis, TN.
143. Parasuraman, R. (1994, June). Adaptive automation and human performance. *Invited Colloquium, Software Psychology Society Meeting*, Washington DC.
144. Parasuraman, R. (1994, July). Brain mechanisms of attention in aging and Alzheimer's disease. *Invited Colloquium, Naval Aviation Medical Research Laboratory*, Pensacola, FL.
145. Adams, C. M., Parasuraman, R., & Rohrbaugh, J. W. (1994, October). Emotional biasing of attentional engagement. *Paper presented at the Annual Meeting of the Society for Psychophysiological Research*, Atlanta, GA.

146. Byrne, E.A., & Parasuraman, R. (1994, October). Role of psychophysiology in adaptive automation. *Paper presented at the Annual Meeting of the Society for Psychophysiological Research*, Atlanta, GA.
 147. Byrne, E.A., Chun, K., Hilburn, B., Molloy, R. & Parasuraman, R. (1994, October). Effect of tracking difficulty on secondary task performance, heart rate variability, and subjective perceptions. *Paper presented at the Annual Meeting of the Society for Psychophysiological Research*, Atlanta, GA.
 148. Adams, C.M., & Parasuraman, R. (1994, November). Attentional engagement and emotional valence. *Paper presented at the Annual Meeting of the Psychonomic Society*, St. Louis, MO.
 149. Martin, A., Haxby, J.V., LaLonde, F. M., Wiggs, C. L., Parasuraman, R., & Ungerleider, L.G. (1994, November). A distributed cortical network for object knowledge. *Paper presented at the Annual Meeting of the Society for Neuroscience*, Miami, FL.
 150. Panicker, S., Greenwood, P.M., & Parasuraman, R. (1994, November). Effects of age on the distribution of visuospatial attention. *Paper presented at the Annual Meeting of the Society for Neuroscience*, Miami, FL.
- 1995
151. Parasuraman, R. (1995, March). State of the art of human aging research on attention. *Paper presented at the NIA Workshop on Cognitive Neuroscience Approaches to Attention Deficits in Aging*, Bethesda, MD.
 152. Clark, V. P., Parasuraman, R., Keil, K., Maisog, J.M., Ungerleider, L.G., & Haxby, J.V. (1995, March). Attention to color and face identity studied with fMRI. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, San Francisco, CA.
 153. Hanowski, R.J., Bittner, A. C., Knipling, R.R., Byrne, E.A., & Parasuraman, R. (1995, March). Analysis of older driver safety intervention: A human factors taxonomic approach. *Paper presented at the Annual Meeting of ITS America*, Washington D.C.
 154. Byrne, R., Chun, K., & Parasuraman, R. (1995, April). Differential sensitivity of heart rate and heart rate variability as indices of mental workload in a multi-task environment. *Paper presented at the International Symposium on Aviation Psychology*, Columbus, OH.
 155. Hardy, D., Mouloua, M., Dwivedi, C., & Parasuraman, R. (1995, April). Monitoring of automation failures by young and older adults. *Paper presented at the International Symposium on Aviation Psychology*, Columbus, OH.
 154. Hilburn, B., Jorna, P.G.A.M., & Parasuraman, R. (1995, April). The effect of advanced ATC automation on mental workload and monitoring performance: An empirical investigation in Dutch airspace. *Paper presented at the International Symposium on Aviation Psychology*, Columbus, OH.
 156. Molloy, R., & Parasuraman, R. (1995, April). Monitoring performance with the EMACS display in an automated environment. *Paper presented at the International Symposium on Aviation Psychology*, Columbus, OH.
 157. Clark, V. P., Parasuraman, R., Keil, K., Maisog, J.M., Ungerleider, L.G., & Haxby, J.V. (1995, June). FMRI studies of attention to color and face identity. *Paper presented at the First International Conference on Human Brain Mapping*, Paris, France.
 158. Hardy, D., Greenwood, P.M., & Parasuraman, R. (1995, July). Effect of distractor level on disengagement of visuospatial attention in normal elderly. *Paper presented at the Annual Conference of the American Psychological Society*, New York, NY.
 159. Greenwood, P.M., Parasuraman, R., & Alexander, G. E. (1995, November). Effects of normal aging on the spatial distribution of visuospatial attention in visual search. *Paper presented at the Annual Conference of the Society for Neuroscience*, San Diego, CA.
 160. Hilburn, B., Jorna, P.G.A.M., & Parasuraman, R. (1995, December). Dynamic decision aiding in air-traffic control: A biobehavioral analysis. *Paper presented at the Second International Symposium on Cognition and Education*, Varanasi, India.
 161. Parasuraman, R. (1995, December). Brain systems of attention and semantic memory: Evidence from Alzheimer's disease. *Paper presented at the Second International Symposium on Cognition and Education*, Varanasi, India.
 162. Panicker, S., Byrne, E.A., & Parasuraman, R. (1995, December). Auditory P300 and heart-rate variability as indices of

mental workload in a multi-task environment. *Paper presented at the Second International Symposium on Cognition and Education*, Varanasi, India.

1996

163. Duley, J.A., Molloy, R., & Parasuraman, R. (1996, March). Display configuration in adaptive automation. *Paper presented at the Second Automation Technology and Human Performance Conference*, Cocoa Beach, FL.
164. Hilburn, B., Jorna, P.G.A.M., Byrne, E.A., & Parasuraman, R. (1996, March). The effect of adaptive air traffic control (ATC) decision aiding on controller mental workload. *Paper presented at the Second Automation Technology and Human Performance Conference*, Cocoa Beach, FL.
165. Molloy, R.M., Deaton, J.E., & Parasuraman, R. (1996, March). Monitoring for automation failures using the EICAS displays: Effects of adaptive allocation on automation. *Paper presented at the Second Automation Technology and Human Performance Conference*, Cocoa Beach, FL.
166. Molloy, R., Byrne, E.A., Masaloni, A., & Parasuraman, R. (1996, March). Laboratory flight simulator for automation and display design studies *Paper presented at the Second Automation Technology and Human Performance Conference*, Cocoa Beach, FL.
167. Parasuraman, R., & Riley, V. (1996, March). Automation and human performance: Use, misuse, disuse, abuse. *Paper presented at the Second Automation Technology and Human Performance Conference*, Cocoa Beach, FL.
168. Vincenzi, D. A., Mouloua, M., Molloy, R., & Parasuraman, R. (1996, March.) Effects of aging and workload on monitoring of automation failures. *Paper presented at the Second Automation Technology and Human Performance Conference*, Cocoa Beach, FL.
169. Greenwood, P.M., & Parasuraman, R. (1996, April). Control of the focus of visuospatial attention in healthy aging. *Paper presented at the Cognitive Aging Conference*, Atlanta, GA.
170. Johnson, S., Greenwood, P.M., Hicks, L., & Parasuraman, R. (1996, April). Age effects on intermodal spatial attention. *Paper presented at the Cognitive Aging Conference*, Atlanta, GA.
171. Vincenzi, D. A., Muldoon, R., Mouloua, M., Parasuraman, R., & Molloy, R. (1996, September) Effects of aging and workload on monitoring of automation failures. *Paper presented at the 40th Annual Meeting of the Human Factors and Ergonomics Society*, Philadelphia, PA.
172. Greenwood, P. M., & Parasuraman, R. (1996, November). Healthy aging slows dynamic adjustment of the scale of attentional focus. *Paper presented at the Annual Meeting of the Society for Neuroscience*, Washington DC.

1997

173. Lee, J., Parasuraman, R., & Bloomfield, J. (1997, January). Automation-induced complacency and transportation safety: A multi-modal perspective. *Workshop presented at the 76th Annual Meeting of the Transportation Research Board*, Washington DC.
174. Jiang, Y., Greenwood, P. M., & Parasuraman, R. (1997, March). Temporal dynamics of 3-D motion priming in young and old adults. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, Boston, MA.
175. Duley, J. A., Westerman, S., Molloy, R., & Parasuraman, R. (1997, April). Effects of display superimposition on monitoring of automation. *Paper presented at the 9th International Symposium on Aviation Psychology*, Columbus, OH.
176. Masaloni, A. J., Byrne, E. A., Duley, J. A., & Parasuraman, R. (1997, April). Instrument failure detection and workload in simulated general aviation flight during manual and automated lateral tracking. *Paper presented at the 9th International Symposium on Aviation Psychology*, Columbus, OH.
177. Parasuraman, R. (1997, April). Human use and abuse of automation. *Paper presented at the 9th International Symposium on Aviation Psychology*, Columbus, OH.
178. Duley, J. A., Galster, S. M., Masaloni, A. J., Hilburn, B. G., & Parasuraman, R. (1997, September). Analysis of

information requirements of en route controllers under different levels of free flight. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society*, Albuquerque, NM.

179. Masalonis, A. J., Le, M. A., Klinge, J. C., Galster, S. M., Duley, J. A., Hancock, P. A., Hilburn, B. G., & Parasuraman, R. (1997, September). Air traffic control workstation mock-up for free flight experimentation: Lab development and capabilities. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society*, Albuquerque, NM.

180. Lee, J., Parasuraman, R., & Bloomfield, J. (1997, September). A practical and theoretical assessment of "automation-induced complacency." *Workshop presented at the Annual Meeting of the Human Factors and Ergonomics Society*, Albuquerque, NM.

181. Parasuraman, R. (1997, September). Human-automation interaction: Designing for effective use of automation. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society*, Albuquerque, NM.

182. Duley, J. A., Galster, S. M., Masalonis, A. J., Hilburn, B. G., & Parasuraman, R. (1997, October). En route controller information requirements from current ATM to free flight. *Paper presented at the 10th CEAS Conference on Free Flight*, Amsterdam, Netherlands.

183. Hilburn, B. G., Bakker, M. W. P., Pekela, W. D., & Parasuraman, R. (1997, October). The effect of free flight on air traffic controller mental workload, monitoring and system performance. *Paper presented at the 10th CEAS Conference on Free Flight*, Amsterdam, Netherlands.

184. Hilburn, B. G., & Parasuraman, R. (1997, October). Free Flight: Military controllers as an appropriate population for evaluating advanced ATM concepts. *Paper presented at the 10th CEAS Conference on Free Flight*, Amsterdam, Netherlands.

185. Adams, C. M., Westdorf, A. F., & Parasuraman, R. (1997, October). Electrophysiological attention signals in three sense modalities: A topographical analysis using the Laplacian. *Paper presented at the Annual Meeting of the Society for Neuroscience*, New Orleans, LA.

186. Greenwood, P. M., Parasuraman, R., & Alexander, G. E. (1997, October). Changes in the ability to dynamically adjust the attentional focus from youth to old age to Alzheimer disease. *Paper presented at the Annual Meeting of the Society for Neuroscience*, New Orleans, LA.

187. Jiang, Y., Haxby, J. V., Maisog, J. M., & Parasuraman, R. (1997, October). Functional magnetic resonance imaging (fMRI) of face working memory using rapid and random stimulus presentation. *Paper presented at the Annual Meeting of the Society for Neuroscience*, New Orleans, LA.

188. Jiang, Y., Greenwood, P. M., Chavez, C., & Parasuraman, R. (1997, November). Effects of visual motion priming in young and older adults. *Paper presented at the Annual Meeting of the Psychonomic Society*, Philadelphia, PA.

1998

189. Levy, J., Parasuraman, R., Greenwood, P., Dukoff, R., Lasser, R., & Sunderland, T. (1998, February). The differential effects of cholinergic blockade and augmentation on visuospatial attention in Alzheimer's disease. *Paper presented at the Annual Meeting of the International Neuropsychological Society*, Honolulu, HI.

190. Parasuraman, R. (1998, March). The attentive brain in aging and dementia. *Invited Lecture, Conference on Cognition and the Aging Brain, Rotman Research Institute*, Toronto, Canada.

191. Duley, J. A., & Parasuraman, R. (1998, March). Adaptive information management in future air traffic control. *Paper presented at the 3rd Automation Technology and Human Performance Conference*, Norfolk, VA.

192. Galster, S. Duley, J., Masalonis, A., & Parasuraman, R. (1998, March). Effects of aircraft self separation on conflict detection and workload in Free Flight. *Paper presented at the 3rd Automation Technology and Human Performance Conference*, Norfolk, VA.

193. Parasuraman, R. (1998, March). Human-automation interaction: The professional user's perspective. *Panel presented at the 3rd Automation Technology and Human Performance Conference*, Norfolk, VA.

194. Parasuraman, R., & Hancock, P. A. (1998, March). Designing automated warning systems: A signal detection and Bayesian analysis. *Paper presented at the 3rd Automation Technology and Human Performance Conference*, Norfolk, VA.

195. Parasuraman, R., Mouloua, M., & Hilburn, B. (1998, March). Adaptive aiding and adaptive task allocation enhance human-machine interaction. *Paper presented at the 3rd Automation Technology and Human Performance Conference*, Norfolk, VA.

196. Jiang, Y., Parasuraman, R., Greenwood, P., & Chavez, C. (1998, April). Age-related reduction in 3-D visual motion priming. *Paper presented at the Cognitive Aging Conference*, Atlanta, GA.
 197. Greenwood, P. M., & Parasuraman, R. (1998, April). Aging delays the development but not increases the magnitude of precue precision in visual search. *Paper presented the Cognitive Aging Conference*, Atlanta, GA.
 198. Parasuraman, R., Duley, J.A., Galster, S., Masaloni, A., & Hilburn, B. (1998, May). Dynamic automation tools to support air traffic controllers under Free Flight. *Paper presented at the Conference on Human Computer Interaction in Aeronautics, HCI-Aero 98*, Montreal, Canada.
 199. Cohen, M. S., Parasuraman, R., & Freeman, J. T. (1998, June). Trust in decision aids: What is it and how can it be improved? *Paper presented at the 1998 Command and Control Research and Technology Symposium*. Monterey, CA.
 200. Alexander, G. E., Greenwood, P. M., Parasuraman, R., Mentis, M. J., Furey, M. L., Desmond, R. E., Szczepanik, J., Levine, B., Petrini, P., Schapiro, M. B., & Rapaport, S. (1998, June). Functional brain response in right prefrontal cortex with increased distraction during visual selective attention. *Paper presented at the 4th International Conference on Functional Mapping of the Human Brain*, Montreal, Canada.
 201. Jiang, Y., Haxby, J. V., Martin, A., Maisog, J., Ungerleider, L., & Parasuraman, R. (1998, June). Event-related fMRI reveals two human cortical mechanisms during a working memory task. *Paper presented at the 4th International Conference on Functional Mapping of the Human Brain*, Montreal, Canada.
 202. Duley, J. A., Galster, S. M., & Parasuraman, R. (1998, October). Information manager for determining data presentation preferences in future en route air traffic management. *Paper presented at the 42nd Annual Conference of the Human Factors and Ergonomics Society*, Chicago, IL.
 203. Masaloni, A., Duley, J. A., Galster, S., Castano, D., Metzger, U., & Parasuraman, R. (1998, October). Air traffic controller trust in a conflict probe during Free Flight. *Paper presented at the 42nd Annual Conference of the Human Factors and Ergonomics Society*, Chicago, IL.
 204. Parasuraman, R. (1998, October). Managing the future national airspace system: Free Flight or ground-based control with increased automation? *Panel presented at the 42nd Annual Conference of the Human Factors and Ergonomics Society*, Chicago, IL.
 205. Parasuraman, R. (1998, October). 50 years of vigilance research: From vigilance decrement to automation complacency. *Paper presented at the 42nd Annual Conference of the Human Factors and Ergonomics Society*, Chicago, IL.
 206. Parasuraman, R. (1998, October). What can functional brain imaging techniques tell us about vigilance? *Paper presented at the 42nd Annual Conference of the Human Factors and Ergonomics Society*, Chicago, IL.
 207. Alexander, G. E., Greenwood, P. M., Parasuraman, R., Mentis, M. J., Furey, M. L., Desmond, R. E., Petrini, P., Szczepanik, J., Levine, Connolly, C., B., Schapiro, M. B., & Rapaport, S. (1998, November). Effect of target relevant distractors on regional cerebral blood flow during visual selective attention. *Paper presented at the Annual Conference of the Society for Neuroscience*, Los Angeles, CA.
 208. Greenwood, P. M., Alexander, G. E., & Parasuraman, R. (1998, November). Visual search in healthy aging and Alzheimer disease. *Paper presented at the Annual Conference of the Society for Neuroscience*, Los Angeles, CA.
 209. Chavez, C., Greenwood, P. M., & Parasuraman, R. (1998, November). Benefits of location cue validity for luminance detection over the adult lifespan. *Paper presented at the Annual Conference of the Society for Neuroscience*, Los Angeles, CA.
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210. Alexander, G. E., Greenwood, P. M., Parasuraman, R., Mentis, M. J., Furey, M. L., Desmond, R. E., Petrini, P., Szczepanik, J., Levine, Connolly, C., B., Schapiro, M. B., & Rapaport, S. (1999, February). Alteration of regional cerebral blood flow (rCBF) with target relevant distractors during visual selective attention. *Paper presented at the 27th Annual Meeting of the International Neuropsychological Society*, Boston, MA.
 211. Parasuraman, R. (1999, March). Signal detection and Bayesian models for design of human-automation interaction. *Invited Colloquium, Institute for Information Sciences and Electronics, Center for TARA, University of Tsukuba*, Tsukuba, Japan.
 212. Parasuraman, R. (1999, March). Adaptive automation enhances system performance and regulates pilot and air traffic

controller workload. *Invited Colloquium, Institute for Information Sciences and Electronics, Center for TARA, University of Tsukuba, Tsukuba, Japan.*

213. Greenwood, P. M., Parasuraman, R., & Sunderland, T. (1999, April). Deficient shifting and scaling of visuospatial attention in elderly occurs only in the presence of APOE4. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society, Washington DC.*

214. Luo, Y., Jiang, Y., & Parasuraman, R. (1999, April). Event-related brain potentials reflect neural mechanisms of visual motion priming. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society, Washington DC.*

215. Castano, D., & Parasuraman, R. (1999, April). Manipulation of pilot intention information in air traffic control: A prelude to not-so-free flight. *Paper presented at the 10th International Symposium on Aviation Psychology, Columbus, OH.*

216. Metzger, U., & Parasuraman, R. (1999, April). Effects of a conflict probe and task load on mental workload and performance in a simulated ATC task. *Paper presented at the 10th International Symposium on Aviation Psychology, Columbus, OH.*

217. Parasuraman, R. (1999, May). Designing automation for effective use by human operators. *Invited Colloquium, U.S. Army Research Laboratory, Ft. Sill, Lawton, OK.*

218. Sunderland, T., Friz, J., Khin, N., Putnam, K., LaLonde, F., Pascu, A., Small, C., Greenwood, P., & Parasuraman, R. (1999, May). Biologic profile of people at risk for Alzheimer's disease. *Paper presented at the Society for Biological Psychiatry Annual Meeting, Boston, MA.*

219. Parasuraman, R., & Masalonis, A. J. (1999, June). Designing automated alerting systems: Analyses based on standard and fuzzy signal detection theory. *Paper presented at the Workshop on Managing Critical Event Systems: Attention Management—Interruptions and Alerts. Arlington, VA: Office of Naval Research.*

220. Luo, Y., Jiang, Y., & Parasuraman, R. (1999, July). Neural mechanisms of visual motion priming revealed by event-related brain potentials. *Paper presented at the Annual Human Brain Mapping Conference, Montreal, Canada.*

221. Masalonis, A. J., & Parasuraman, R. (1999, September). Trust as a construct for evaluation of automation aids: Past and future theory and research. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society, Houston, TX.*

222. Metzger, U., Duley, J. A., & Parasuraman, R. (1999, September). Effect of training on monitoring of an automated system. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society, Houston, TX.*

223. Metzger, U., & Parasuraman, R. (1999, September). Free Flight and the air traffic controller: Active control versus passive monitoring. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society, Houston, TX.*

224. Duley, J. A., Galster, S. M., Smoker, A., & Parasuraman, R. (1999, October). En route ATC information requirements for participation in future collaborative decision making. *Paper presented at the World Aviation Congress, San Francisco, CA.*

225. Greenwood, P. M., Alexander, G. E., & Parasuraman, R. (1999, October). Progression in early Alzheimer's disease increases costs but not benefits of cue validity in visuospatial attention. *Paper presented at the Annual Meeting of the Society for Neuroscience, Miami, FL.*

226. Jiang, Y., Parasuraman, R., & Haxby, J. V. (1999, October). Human cortical representation for motion-defined flat and curved surfaces in depth. *Paper presented at the Annual Meeting of the Society for Neuroscience, Miami, FL.*

227. Luo, Y., Greenwood, P. M., & Parasuraman, R. (1999, October). Electrophysiological correlates of the scaling of the focus of visuospatial attention. *Paper presented at the Annual Meeting of the Society for Neuroscience, Miami, FL.*

228. Parasuraman, R. (1999, December). The attentive brain in aging and dementia. *Paper presented at the Third International Symposium on Cognition, Education and Mental Health, Varanasi, India.*

229. Masalonis, A., & Parasuraman, R. (1999, December). Trust between humans and automation. *Paper presented at the Third International Symposium on Cognition, Education and Mental Health, Varanasi, India.*

2000

230. Parasuraman, R. (2000, April). Attention in aging and Alzheimer's disease: A cognitive neuroscience perspective.

Invited Colloquium, Workshop on Attention Deficit Hyperactivity Disorder, Johns Hopkins University, Baltimore, MD.

231. Luo, Y., Greenwood, P. M., & Parasuraman, R. (2000, April). Electrophysiological correlates of the scaling of the focus of attention. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.*
232. Jiang, Y., Haxby, J. V., Martin, A., Ungerleider, L. G., & Parasuraman, R. (2000, April). Complementary neural mechanisms for tracking items in human working memory. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.*
233. Lawsin, C., Greenwood, P., & Parasuraman, R. (2000, April). Search accuracy benefits from a larger attentional focus in young and old. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.*
234. Hitchcock, E., Matthews, G., Warm, J. S., Dember, W. N., Tripp, L., & Parasuraman, R. (2000, April). Effects of signal salience and cueing on subjective stress response during sustained attention. *Paper presented at the Annual Meeting of the Southern Society for Philosophy and Psychology, Atlanta, GA.*
235. Jiang, Y., Luo, Y., & Parasuraman, R. (2000, April). Age-related reduction in visual priming of 2-D motion direction. *Paper presented at the Cognitive Aging Conference, Atlanta, GA.*
236. Chavez, C., Greenwood, P., & Parasuraman, R. (2000, April). Aging and the spatial extent of attention. *Paper presented at the Cognitive Aging Conference, Atlanta, GA.*
237. Parasuraman, R. (2000, May). Pilots, air traffic controllers, and intelligent computers: Can they work and live together happily? *Invited Seminar, Capitol Hill Science and Public Policy Seminar, Federation of Behavioral, Psychological and Cognitive Sciences, Library of Congress, Washington DC.*
238. Parasuraman, R. (2000, June). Technology solutions to the runway incursion problem. *Invited Presentation, National Summit on Runway Safety, Federal Aviation Administration, Washington DC*
239. Luo, Y. J., Jiang, Y., Lawsin, C., & Parasuraman, R. (2000, July). Electrophysiological effect of visual motion priming in young and old. *Paper presented at the Annual Human Brain Mapping Conference.*
240. Parasuraman, R. (2000, July). Attention in aging and Alzheimer's Disease: A cognitive neuroscience perspective. *Invited Workshop on Brain Development and Function, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.*
241. Hitchcock, E. M., Warm, J. S., Dember, W. N., Matthews, G. M., Shear, P. K., Rosa, R., Tripp, L., Mayleben, D. W., & Parasuraman, R. (2000, August). Effects of signal salience and cueing on cerebral blood flow during sustained attention. *Paper presented at the International Ergonomics Association/Human Factors and Ergonomics Society Congress, San Diego, CA.*
242. Metzger, U., Duley, J. A., Abbas, R., & Parasuraman, R. (2000, August). Effects of variable-priority training on automation-related complacency: Performance and eye movements. *Paper presented at the International Ergonomics Association/Human Factors and Ergonomics Society Congress, San Diego, CA.*
243. Parasuraman, R. (2000, August). Designing automation for human use: Empirical studies and quantitative models. *Invited Plenary Address, International Ergonomics Association/Human Factors and Ergonomics Society Congress, San Diego, CA.*
244. Parasuraman, R. (2000, August). To automate or not to automate: Quantitative models of automation design in human-machine systems. *Panel presented at the International Ergonomics Association/Human Factors and Ergonomics Society Congress, San Diego, CA.*
245. Parasuraman, R., & Masalonis, A. J. (2000, August). Designing automated alerting systems: Standard and fuzzy signal detection theory and Bayesian analysis. *Paper presented at the International Ergonomics Association/Human Factors and Ergonomics Society Congress, San Diego, CA.*
246. Sheridan, T.B., & Parasuraman, R. (2000, August). Human versus automation in responding to failures: An expected-value analysis. *Paper presented at the International Ergonomics Association/Human Factors and Ergonomics Society Congress, San Diego, CA.*
247. Singh, I. L., Sharma, H. O., & Parasuraman, R. (2000, August). Effects of training and automation reliability on monitoring performance in a flight simulation task. *Paper presented at the International Ergonomics Association/Human Factors and Ergonomics Society Congress, San Diego, CA.*
248. Jiang, Y., Parasuraman, R., Kastner, S., & Haxby, J. (2000, October). Differential activity to surfaces defined by visual motion in human cortical areas. *Paper presented at the Annual Society for Neuroscience Conference, New Orleans, LA.*

249. Parasuraman, R. (2000, October). Application of human performance data and quantitative models to the design of automation. *Invited Plenary Address, Third International Conference on Engineering Psychology and Cognitive Ergonomics*, Edinburgh, U.K.
250. Di Nocera, F., & Parasuraman, R. (2000, October). Effects of "automation distance" on performance during simulated space telerobotic operations. *Paper presented at the Human Performance, Situation Awareness and Automation Conference*, Savannah, GA.
251. Metzger, U., & Parasuraman, R. (2000, October). Improving conflict detection performance under Free Flight with automated detection aids. *Paper presented at the Human Performance, Situation Awareness and Automation Conference*, Savannah, GA.
252. Parasuraman, R. (2000, October). Quantitative models of human-automation interaction, *Paper presented at the Human Performance, Situation Awareness and Automation Conference*, Savannah, GA.
253. Parasuraman, R. (2000, October). Adaptive automation: Can it work in real systems? *Panel presented at the Human Performance, Situation Awareness and Automation Conference*, Savannah, GA.

2001

254. Lorenz, B., Di Nocera, F., & Parasuraman, R. (2001, January). Human performance during simulated space operations under varied levels of system autonomy. *Paper presented at the Space Transportation Conference*, Galveston, TX.
255. Parasuraman, R. (2001, February). Cognitive tests of visual attention in early Alzheimer's disease. *Invited Panel, International Neuropsychological Society Conference*, Chicago, IL.
256. Duley, J. A., & Parasuraman, R. (2001, March). CDTI in a non-AGATE or non-integrated information display GA cockpit: Effects on visual attention. *Paper presented at the International Symposium on Aviation Psychology*, Columbus, OH.
257. Galster, S., & Parasuraman, R. (2001, March). Evaluation of countermeasures for performance decrements due to automated-related complacency in IFR-rated General Aviation pilots. *Paper presented at the International Symposium on Aviation Psychology*, Columbus, OH.
258. Lorenz, B., Di Nocera, F., & Parasuraman, R. (2001, March). Human interaction with an autonomous fault management system during simulated space operations. *Paper presented at the International Symposium on Aviation Psychology*, Columbus, OH.
259. Metzger, U., & Parasuraman, R. (2001, March). Conflict detection aids for air traffic controllers in Free Flight: Effects of reliable and failure modes on performance *Paper presented at the International Symposium on Aviation Psychology*, Columbus, OH.
260. Parasuraman, R. (2001, March). Pilots, air traffic controllers, and intelligent computers: Can they work and live together happily? *Paper presented at the International Symposium on Aviation Psychology*, Columbus, OH.
261. Greenwood, P. M., Caggiano, D., & Parasuraman, R. (2001, March). The fastest search is not accompanied by the fewest saccades either in young or in old. *Paper presented at the Cognitive Neuroscience Conference*, New York, NY.
262. Luo, Y. J., Jiang, Y., Caggiano, D., & Parasuraman, R. (2001, March). Perception of the direction of visual motion sweeps modulate both early and late ERP components. *Paper presented at the Cognitive Neuroscience Conference*, New York, NY.
263. Parasuraman, R. (2001, April). Attention, aging, and dementia: Extending and enhancing cognitive function in adulthood. *Invited Plenary Address, OECD/CERI Symposium on Brain Mechanisms and Learning in Aging*, Tokyo, Japan.
264. Parasuraman, R. (2001, May). Neuroergonomics: Basic studies and application to adaptive automation. *Invited Colloquium, Student Chapter of the Human Factors and Ergonomics Society, University of Central Florida*, Orlando, FL.
265. Luo, Y. J., Jiang, Y., Caggiano, D. & Parasuraman, R. (2001, June) Event-related brain potentials are correlated with perception of visual motion sweeps. *Paper presented at the Human Brain Mapping Conference*, London, U.K.

266. Parasuraman, R. (2001, September). Varieties of attention: Behavior and brain systems. *Invited paper presented at the European Brain and Pharmacology Society Conference*, Marseilles, France.
267. Galster, S. M., Bolia, R. S., Roe, M. M., & Parasuraman, R. (2001, October). Effects of automated cueing on decision implementation in a visual search task. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society*, Minneapolis, MN.
268. Lorenz, B., Di Nocera, F., Rottger, S., & Parasuraman, R. (2001, October). The effects of automation on the out-of-the-loop unfamiliarity in a complex dynamic fault management task during simulated spaceflight operations. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society*, Minneapolis, MN.
269. Metzger, U., & Parasuraman, R. (2001, October). Automation-related "complacency": Theory, empirical data, and design implications. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society*, Minneapolis, MN.
270. Parasuraman, R. (2001, October). Adaptive automation: From theory to practice. *Symposium presented at the Annual Meeting of the Human Factors and Ergonomics Society*, Minneapolis, MN.
271. Parasuraman, R. (2001, October). Controller performance with automation support under Free Flight: Experimental and computational studies. *Paper presented at the Panel on Human Factors Challenges in Future Air Traffic Management, Annual Meeting of the Human Factors and Ergonomics Society*, Minneapolis, MN.
272. Caggiano, D. M., Greenwood, P. M., & Parasuraman, R. (2001, November). Eye movements, attentional scale, and search speed in young and elderly. *Paper presented at the Annual Meeting of the Society for Neuroscience*, San Diego, CA.
273. Jiang, X., Jiang, Y., & Parasuraman, R. (2001, November). Shape and motion priming of 3-D rotating objects. *Paper presented at the Annual Meeting of the Society for Neuroscience*, San Diego, CA.

2002

274. Parasuraman, R. (2002, January). Human factors in countering terrorism. *Invited Presentation, Division of Behavioral and Social Sciences and Economics*, National Research Council, Washington DC.
275. Parasuraman, R. (2002, February). A framework for evaluation of human-system issues in aviation safety technologies. *Paper presented at the Inter Agency IPT Meeting*, Federal Aviation Administration, Washington DC.
276. Harris, W., Parasuraman, R., Zinni, M., Hancock, P.A., & Harris, S. C. (2002, March). Viking: Development of an Infantry Scenario Multi-task Environment. Paper presented at the Annual Midyear Symposium of the American Psychological Association, Divisions 19 (Military Psychology) and 21 (Engineering Psychology), Ft. Belvoir, VA.
277. Rovira, E., & Parasuraman, R. (2002, March). *Sensor to Shooter: Task development and empirical evaluation of the effects of automation unreliability*. Paper presented at the Annual Midyear Symposium of the American Psychological Association, Divisions 19 (Military Psychology) and 21 (Engineering Psychology), Ft. Belvoir, VA.
278. Rovira, E., Zinni, M., & Parasuraman, R. (2002, March). *Information and decision uncertainty: Effects of unreliable automation on multi-task performance and workload*. Paper presented at the Annual Midyear Symposium of the American Psychological Association, Divisions 19 (Military Psychology) and 21 (Engineering Psychology), Ft. Belvoir, VA.
279. Parasuraman, R. (2002, April). Adaptive automation matched to human mental workload. *Invited Keynote Paper, NATO Advanced Research Workshop on Operator Functional States*, Il Ciocco, Tuscany, Italy.
280. Caggiano, D., Greenwood, P. M., & Parasuraman, R. (2002, April). Aging alters the role of saccades in attentional scaling effects on visual search. *Paper presented at the Annual Meeting of the Cognitive Aging Society, Atlanta, GA*.
281. Greenwood, P. M., Sunderland, T., Friz, J., Lambert, C., & Parasuraman, R. (2002, April). Focusing attention at the boundary of healthy and pathologic aging. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, San Francisco, CA.
282. Jiang, X., Parasuraman, R., & Jiang, Y. (2002, April). 3-D shape from motion can be primed. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, San Francisco, CA.
283. Jiang, Y., Luo, Y., Peng, X., & Parasuraman, R. (2002, April). Electrophysiological correlates of the aging of visual motion priming. *Paper presented at the Annual Meeting of the Cognitive Aging Society, Atlanta, GA*.
284. Parasuraman, R. (2002, May). Human performance in automated systems. *Invited Colloquium, Symposium to Honor the*

Retirement of D. Roy Davies, Aston University, Birmingham, UK.

285. Parasuraman, R. (2002, June). Integrating human factors into the NAS Committee on Science and Technology For Countering Terrorism (STCT): Or giving human factors away to a non-human factors audience. *Invited Address to the National Research Council Committee on Human Factors Meeting*, Cape Cod, MA.
 286. Galster, S., Bolia, R. S., & Parasuraman, R. (2002, October). Effects of information automation and decision-aiding cueing on action implementation in a visual search task. *Paper presented at the 46th Annual Meeting of the Human Factors and Ergonomics Society*, Baltimore, MD.
 287. Hollander, T., Warm, J. S., Matthews, G. R., Dember, W. S., Parasuraman, R., Hitchcock, E. M., Beam, C. A., & Tripp, L. R. (October, 2002). Effects of signal regularity and salience on vigilance performance and cerebral hemovelocity. *Paper presented at the 46th Annual Meeting of the Human Factors and Ergonomics Society*, Baltimore, MD.
 288. Lorenz, B., Di Nocera, F., & Parasuraman, R. (2002, October). Display integration enhances information sampling and decision making in automated fault management in a simulated spaceflight micro-world. *Paper presented at the 46th Annual Meeting of the Human Factors and Ergonomics Society*, Baltimore, MD.
 289. Parasuraman, R. (2002, October). Giving Human Factors away to a lay audience: Integrating Human Factors into science and technology for countering terrorism. *Invited Panel on Human Factors in Homeland Security, presented at the 46th Annual Meeting of the Human Factors and Ergonomics Society*, Baltimore, MD.
 290. Parasuraman, R. (2002, October). Humans and automation: Trust and etiquette. *Invited Panel on the Etiquette Perspective for Human-Automation Relationships, presented at the 46th Annual Meeting of the Human Factors and Ergonomics Society*, Baltimore, MD.
 291. Rovira, E., McGarry, K., & Parasuraman, R. (2002, October). Effects of unreliable automation on decision making in command and control. *Paper presented at the 46th Annual Meeting of the Human Factors and Ergonomics Society*, Baltimore, MD.
 292. Rovira, E., Zinni, M., & Parasuraman, R. (2002, October). Effects of information and decision automation on multitask performance *Paper presented at the 46th Annual Meeting of the Human Factors and Ergonomics Society*, Baltimore, MD.
 293. Parasuraman, R. (2002, October). Humans and automation: Designing for effective system performance, *Invited Presentation, Workshop on Humans, Automation and Trust*, MicroAnalysis and Design Inc., Army Research Laboratory, Adelphi, MA.
 294. Miller, C. A., Goldman, R. P., Funk, H. B., & Parasuraman, R. (2002, October). Delegation as a model for human-automation interaction. *Paper presented at the 3rd International Workshop on Planning and Scheduling for Space*, Houston, TX.
 295. Fu, S., Caggiano, D., Greenwood, P. M., & Parasuraman, R. (2002, November). The attentional effects of cue validity and cue precision in a line orientation discrimination task. *Paper presented at the Annual Meeting of the Society for Neuroscience*, Orlando, FL.
 296. Greenwood, P. M., Sunderland, T., Friz, J., Lambert, C., & Parasuraman, R. (2002, November). Can a cognitive phenotype of apoE e4 be detected in middle-age? *Paper presented at the Annual Meeting of the Society for Neuroscience*, Orlando, FL.
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297. Parasuraman, R. (2003, February). ApoE-e4 gene dose effects on spatial attention and working memory in non-demented adults. *Paper presented at the Annual Meeting of the International Neuropsychological Society*, Honolulu. HI.
 298. Greenwood, P. M., Fossella, J., & Parasuraman, R. (2003, April). Double dissociation of modulation of visuospatial attention and working memory by normal allelic variation in cholinergic and dopaminergic genes. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, New York, NY.
 299. Fu, S., Greenwood, P. M., & Parasuraman, R. (2003, April). Event-related potentials reveal the neural mechanisms of attentional zoom-in and zoom-out. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, New York, NY.
 300. Galster, S., & Parasuraman, R. (2003, April). Application of a qualitative model of human-interaction with automated systems. *Paper presented at the International Symposium on Aviation Psychology*, Dayton. OH.
 301. Jha, P., Bisantz, A., & Parasuraman, R. (2003, April). A Lens model analysis of pilot and controller decision making under Free Flight. *Paper presented at the International Symposium on Aviation Psychology*, Dayton. OH .

302. Parasuraman, R. (2003, April). Discussant: The mediating role of aviation expertise in cognitive aging. *Paper presented at the International Symposium on Aviation Psychology*, Dayton, OH
303. Metzger, U., Rovira, E., & Parasuraman, R. (2003, April). Controller performance, workload, and attention allocation in distributed air traffic management. *Paper presented at the International Symposium on Aviation Psychology*, Dayton, OH
304. Lorenz, B., Di Nocera, F., & Parasuraman, R. (2003, April). Cognitive performance assessment in a complex space-system micro-world: On the use of Generalizability theory. *Paper presented at the International Symposium on Aviation Psychology*, Dayton, OH.
305. Parasuraman, R. (2003, April). Designing the alerting function for aviation safety detection systems. *Paper presented at the International Symposium on Aviation Psychology*, Dayton, OH.
306. Parasuraman, R. (2003, June). Single nucleotide polymorphisms (SNPs) and attention: Implications for aging and dementia. *Invited Colloquium, Department of Neurology, Oregon Health and Science University*, Portland, OR.
307. Parasuraman, R. (2003, June). Designing for effective human interaction with automation, robots, and unmanned vehicles. *Invited Lecture, Virginia Modeling and Simulation Center*, Portsmouth, VA.
308. Parasuraman, R. (2003, June). Levels of automation in human-robot interaction. *NATO Workshop on Unmanned Military Vehicles: Human Factors of Augmenting the Force*, Leiden, Netherlands
- 308A. Furukawa, H., & Parasuraman, R. (2003, October). Supporting system-centered view of operators through ecological interface design: two experiments on human-centered automation. *Paper presented at the 47th Annual Meeting of The Human Factors and Ergonomics Society*, Denver, CO.
309. Galster, S.M., & Parasuraman, R., (2003, October). The efficacy of training in a complex and dynamic simulated air-to-ground search and destroy mission. *Paper presented at the 47th Annual Meeting of The Human Factors and Ergonomics Society*, Denver, CO.
310. Helton, W.S., Hollander, T.D., Warm, J.S., Matthews, G., Wallart, W & Beauchamp, G, & Parasuraman, R., (2003, October). Challenges to the mindlessness model of vigilance through signal regularity. *Paper presented at the 47th Annual Meeting of The Human Factors and Ergonomics Society*, Denver, CO.
311. Jha, P., Bisabtz, A., & Parasuraman, R., (2003, October). Through the Lens: A new approach to decision modeling under Free Flight. *Paper presented at The Human Factors and Ergonomics Society 47th Annual Meeting*, Denver, CO.
312. Masalonis, A.J., & Parasuraman, R., (2003, October). Effects of situation-specific reliability on trust and usage of automated air traffic control decision aids. *Paper presented at the 47th Annual Meeting of The Human Factors and Ergonomics Society*, Denver, CO.
313. McGarry, K., Rovira, E., & Parasuraman, R. (2003, October). Effects of task duration and type of automation support on human performance and stress in a simulated battlefield engagement task. *Paper presented at the 47th Annual Meeting of The Human Factors and Ergonomics Society*, Denver, CO.
314. Miller, C. A., & Parasuraman, R., (2003, October). Beyond levels of automation: An architecture for more flexible human automation collaboration. *Paper presented at the 47th Annual Meeting of The Human Factors and Ergonomics Society*, Denver, CO.
315. Parasuraman, R., (2003, October). The etiquette perspective for human-automation relationships: Applications, models, and results. *Paper presented at the 47th Annual Meeting of The Human Factors and Ergonomics Society*, Denver, CO.
316. Parasuraman, R., (2003, October). Human factors challenges in future air traffic management. *Paper presented at the 47th Annual Meeting of The Human Factors and Ergonomics Society*, Denver, CO.
317. Chavez-Knott, C., Greenwood, P. M., & Parasuraman, R. (2003, November). Aging decreases efficient saccade execution in visual search. *Paper presented at the Annual Meeting of the Society for Neuroscience*, New Orleans, LA.
318. Kumar, R. Greenwood, P. M., & Parasuraman, R. (2003, November). Effects of age and precue precision on the distribution of visual attention. *Paper presented at the Annual Meeting of the Society for Neuroscience*, New Orleans, LA.
319. Fu, S., Greenwood, P. M., Vo, H. T., & Parasuraman, R. (2003, November). Early direct modulation or late feedback in striate cortex: An event-related potential localization study of visual attention. *Paper presented at the Annual Meeting of the*

Society for Neuroscience, New Orleans, LA.

2004

320. Galster, S., & Parasuraman, S. (2004, March). Task dependencies in stage-based examinations of the effects of unreliable automation. *Paper presented the Second Human Performance, Automation, and Situation Awareness Conference (HPSAID)*, Daytona Beach, FL.
321. Parasuraman, R. (2004, March). Adaptive and adaptable automation: 30 years later. *Paper presented at the Second Human Performance, Automation, and Situation Awareness Conference (HPSAID)*, Daytona Beach, FL.
322. Squire, P., Galster, S., & Parasuraman, R. (2004, March). The effects of levels of automation in the human control of multiple robots in the RoboFlag simulation environment. *Paper presented the Second Human Performance, Automation, and Situation Awareness Conference (HPSAID)*, Daytona Beach, FL.
323. Zinni, M., Proto, R., Parasuraman, R. & Harris, W. (2004, March). The effects of event rate and time on task on human performance and subjective ratings during a multi-task infantry simulation. *Paper presented the Second Human Performance, Automation, and Situation Awareness Conference (HPSAID)*, Daytona Beach, FL.
324. Fu, S., Huang, Y., Luo, Y., Greenwood, P. M., & Parasuraman, R. (2004, April). The role of perceptual difficulty in visuospatial attention: An event-related potential study. *Paper presented at the Meeting of the Cognitive Neuroscience Society*, San Francisco, CA.
325. Greenwood, P.M., Sunderland, T., Levy, J.A., & Parasuraman, R. (2004, April). APOE-epsilon4 gene dose modulates longitudinal cognitive change in middle-age: Evidence from the NIMH Prospective Study of Biomarkers for Older Controls at Risk for Alzheimer Disease (BIOCARD). *Paper presented at the Meeting of the Cognitive Neuroscience Society*, San Francisco, CA.
326. Kumar, R. Greenwood, P. M., & Parasuraman, R. (2004, April). Measuring the distribution of attention: Effects of aging. *Paper presented at the Meeting of the Cognitive Neuroscience Society*, San Francisco, CA.
327. Parasuraman, R. (2004, July). Attention, genetics, and Alzheimer's disease. *Invited Workshop, Joint Meeting of the International Neuropsychological Society and the Australian Society for Brain Impairment*, Brisbane, Australia.
328. Parasuraman, R. (2004, August). Neural and genetic assays of human mental workload. *Invited Colloquium, DARPA Program on Quantifying Human Information Processing (QHIP)*, Arlington, VA.
329. Parasuraman, R. (2004, September). Future trends: Harnessing the power of brain science. *Invited Presentation, Student Career and Professional Development Day, 48th Annual Meeting of the Human Factors and Ergonomics Society*, New Orleans, LA.
330. Parasuraman, R. (2004, September). Human control of teams of robotic vehicles: Exploring the limits of the possible. *Invited Panel, 48th Annual Meeting of the Human Factors and Ergonomics Society*, New Orleans, LA.
331. Galster, S. S., & Parasuraman, R. (2004, September). The effects of reliable and unreliable automation on military pilot performance in a simulated air-to-ground flight task. *Paper presented at the 48th Annual Meeting of the Human Factors and Ergonomics Society*, New Orleans, LA.
332. Moertl, P., Niehus, G. A., McGarry, K. A., Racine, N. S., Parasuraman, R., & Rehmann, A. (2004, September). Supporting taxiing for general aviation pilots through dynamic message signs: Simulation evaluation and implications for the prevention of runway incidents. *Paper presented at the 48th Annual Meeting of the Human Factors and Ergonomics Society*, New Orleans, LA.
333. Squire, P. N., Furukawa, H., Galster, S. M, Miller, C., & Parasuraman, R. (2004, September). Adaptability and flexibility are key! Benefits of the "Playbook" interface for human supervision of multiple unmanned vehicles. *Paper presented at the 48th Annual Meeting of the Human Factors and Ergonomics Society*, New Orleans, LA.
334. Zinni, M., & Parasuraman, R. (2004, September). The effects of task load on performance and cerebral blood flow velocity in a working memory and a visuomotor task. *Paper presented at the 48th Annual Meeting of the Human Factors and Ergonomics Society*, New Orleans, LA.
335. Greenwood, P. M., Fossella, J., & Parasuraman, R. (2004, October). Normal variation in a nicotinic receptor gene, but not a noradrenergic gene, modulates visuospatial attention. *Paper presented at the 34th Annual Conference of the Society for Neuroscience*, San Diego, CA.

336. Keech, T. D., Greenwood, P. M., Resca, L., & Parasuraman, R. (2004, October). Role of attention in guiding spontaneous saccades in visual search. *Paper presented at the 34th Annual Conference of the Society for Neuroscience*, San Diego, CA.

2005

337. McGarry, K., & Parasuraman, R. (2005, March). Adaptive change in the type of automation support reduces the cost of imperfect decision aids in a simulated battlefield engagement task. *Paper presented at the Annual Mid-Year Meeting of Division 21 of the American Psychological Association*, George Mason University, Fairfax, VA.

338. Squire, P., Mareish, E., & Parasuraman, R. (2005, March). Effects of flexible and restricted control interfaces on human-robot performance. *Paper presented at the Annual Mid-Year Meeting of Division 21 of the American Psychological Association*, George Mason University, Fairfax, VA.

339. Caggiano, D. Fu, S., & Parasuraman, R. (2005, April). Electrophysiological evidence for serial attention shifts during a target discrimination search task. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, New York.

340. Fu, S., Greenwood, P., & Parasuraman, R. (2005, April). Optimal conditions for eliciting modulation of primary visual cortex with visual attention: ERP studies. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, New York.

341. Greenwood, P. M., Sunderland, T., & Parasuraman, R. (2005, April). APOE genotype alters the effect of attention on memory but in a manner distinguishable from healthy aging. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, New York.

342. Kumar, R., Greenwood, P., & Parasuraman, R. (2005, April). Effects of age on the distribution of visuospatial attention across cue boundaries. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, New York.

342. Parasuraman, R., & Metzger, U. (2005, April). Integrated automation enhances air traffic controller performance under Free Flight. *Paper presented at the International Symposium on Aviation Psychology*, Oklahoma City, OK.

343. Parasuraman, R. (2005, April). Humans and automation: Benefits of a delegation approach. *Invited Keynote Address, South Jersey Human Factors and Ergonomics Society Conference*, FAA Technical Center, Atlantic City, NJ.

344. Parasuraman, R. (2005, May). Genetics and individual differences in attention and aging. *Invited Address, Medici II Conference on Positive Psychology*, Philadelphia, PA.

345. Parasuraman, R. (2005, July). Neuroergonomics: An overview of research and applications. *Invited Panel, 1st International Conference on Augmented Cognition*, Las Vegas, NV.

346. Parasuraman, R. (2005, July). Molecular genetics of augmented cognition. *Invited Panel, 1st International Conference on Augmented Cognition*, Las Vegas, NV.

347. Parasuraman, R. (2005, August). Human-automation interaction in complex systems: Aviation, air traffic control, and robotics. *Franklin Taylor Award Lecture, American Psychological Association*, Washington DC.

348. Espeseth, T., Reinvang, I., Greenwood, P. M., & Parasuraman, R. (2005, September). Age affects phasic alertness and spatial orienting in covert attention. *Paper presented at the 14th Meeting of the European Cognitive Psychology Society*, Leiden, Netherlands.

349. McGarry, K., Rovira, E., & Parasuraman, R. (2005, September). Adaptive change in the type of automation support reduces the cost of imperfect decision aids in a simulated battlefield engagement task. *Paper presented at the 49th Annual Meeting of the Human Factors and Ergonomics Society*, Orlando, FL.

350. Parasuraman, R. (2005, September). Individual differences in cognitive performance modulated by neurotransmitter genes. *Paper presented at the 49th Annual Meeting of the Human Factors and Ergonomics Society*, Orlando, FL.

351. Squire, P., & Parasuraman, R. (2005, September). Defining the challenges operators face when controlling multiple unmanned vehicles. *Paper presented at the 49th Annual Meeting of the Human Factors and Ergonomics Society*, Orlando, FL.

352. Fu, S., Wang, Y., Luo, Y., Greenwood, P., & Parasuraman, R. (2005, November). Involuntary visuospatial selective attention to the upper and lower visual field: an event-related potential study. *Paper presented at the Annual Conference of the Society for Neuroscience*. Washington DC.

353. Keech, T., Greenwood, P., Resca, L., & Parasuraman, R. (2005, November). A model of visual search that accounts for

the effects of memory, attention, and age of participants. *Paper presented at the Annual Conference of the Society for Neuroscience*. Washington DC.

2006

354. Parasuraman, R. (2006, February). Molecular genetics of attention and working memory. *Invited Paper, NSF/OECD Conference on Neuro-Math Education*, Copenhagen, Denmark.
355. Squire, P., Trafton, G., & Parasuraman, R. (2006, March). Human control of multiple unmanned vehicles: Effects of interface type on execution and task switching times. *Paper presented at the First Human-Robot Interaction Conference*, Salt Lake City, UT.
356. Fu, S., Zinni, M., Squire, P., Kumar, R., Caggiano, D. M., & Parasuraman, R. (2006, April). Perceptual load affects voluntary visuospatial attention at early processing stages: an event-related potential study. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*. San Francisco CA.
357. Negash, S., Smith, G. E., Geda, Y., Knopman, D. S., Boeve, B. F., Ivnik, R. J., Greenwood, P. M., Sunderland, T., Parasuraman, R., & Petersen, R. C. (2006, April). Effects of Apolipoprotein E genotype on spatial attention in healthy middle-aged, young-old, and old-old adults. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, San Francisco.
358. Parasuraman, R. (2006, July). Neuroergonomics of individual differences in cognition: Gene-environment interaction. *Paper presented at the International Ergonomics Association Congress*, Maastricht, Netherlands.
359. Parasuraman, R. (2006, July). Molecular genetics of attention and working memory. *Invited Colloquium, Beijing Normal University*, Beijing, China.
360. Parasuraman, R. (2006, July). Optimizing human interaction with automated systems: Adaptation and delegation. *Invited Colloquium, Institute of Psychology, Chinese Academy of Sciences*, Beijing, China.
361. Parasuraman, R. (2006, August). Neuroergonomics of individual differences in cognition: Genetics and training. *Invited Lecture, National Research Council Meeting of the Committee on Human Factors*, Woods Hole, MA.
362. De Visser, E., Parasuraman, R., Freedy, A., Freedy, E., & Weltman, G. (2006, October). A comprehensive methodology for assessing human-robot team performance for use in training and simulation. *Paper presented at the 50th Annual Meeting of the Human Factors and Ergonomics Society*, San Francisco, CA.
363. May, J. A., Baldwin, C. L., & Parasuraman, R. (2006, October). Prevention of rear-end crashes in drivers with task-induced fatigue through the use of auditory collision avoidance warnings. *Paper presented at the 50th Annual Meeting of the Human Factors and Ergonomics Society*, San Francisco, CA.
364. Parasuraman, R. (2006, October). Human factors of remotely operated vehicles. *Paper presented at the 50th Annual Meeting of the Human Factors and Ergonomics Society*, San Francisco, CA.
365. Rovira, E., & Parasuraman, R. (2006, October). Controller performance and attention allocation in future air traffic management: Effects of pilot intent information. *Paper presented at the 50th Annual Meeting of the Human Factors and Ergonomics Society*, San Francisco, CA.
366. Squire, P., & Parasuraman, R. (2006, October). Switching costs with multiple unmanned vehicles (UVs): Effects of workload and levels of automation. *Paper presented at the 50th Annual Meeting of the Human Factors and Ergonomics Society*, San Francisco, CA.
367. Caggiano, D., Fu, S., Zinni, M., Kumar, R., Squire, P. N., & Parasuraman, R. (2006, October). Voluntary and involuntary zooming of attention differentially affect visual search: an event-related potential study. *Paper presented the Annual Meeting of the Society for Neuroscience*, Atlanta, GA.
368. Greenwood, P. M., Kumar, R., Sundarajan, R., Fryxell, K. J., & Parasuraman, R. (2006, October). Effects of attention on working memory are modulated by a nicotinic SNP. *Paper presented the Annual Meeting of the Society for Neuroscience*, Atlanta, GA.
369. Henrickson, S., Sundarajan R., Lin, M. K., Fryxell, K. J., Greenwood, P. M., & Parasuraman, R. (2006, October). Normal variation in DBH genotype modulates age effects on working memory performance. *Paper presented the Annual Meeting of the Society for Neuroscience*, Atlanta, GA.

370. Kumar, R., Greenwood, P. M., & Parasuraman, R. (2006, October). Age-related changes in attentional distribution in a working-memory task. *Paper presented the Annual Meeting of the Society for Neuroscience*, Atlanta, GA.

371. Sundarajan, R., Fryxell, K. J., Lin, M. K., Greenwood, P. M., & Parasuraman, R. (2006, October). Comparison of the effects of two SNPs in the DBH gene on working memory. *Paper presented the Annual Meeting of the Society for Neuroscience*, Atlanta, GA.

372. Parasuraman, R. (2006, November). Molecular genetics of attention and working memory. *Invited Colloquium, College of William and Mary*, Williamsburg, VA.

2007

373. de Visser, E., Parasuraman, R., & Cosenzo, K. (2007, March). Effects of imperfect automation on human supervision of multiple uninhabited vehicles. *Paper presented at the Annual Meeting of Division 21 of the American Psychological Association*, George Mason University, Fairfax, VA.

374. de Visser, E., & Parasuraman, R. (2007, October). Effects of imperfect automation and task load on human supervision of multiple uninhabited vehicles. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society*, Baltimore, MD.

375. Greenwood, P. Henrickson, S., & Parasuraman, R. (2007, October). Visuospatial attention is distributed around a target with an inhibitory surround in older adults during visual search. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society*, Baltimore, MD.

376. Parasuraman, R. (2007, October). Individual differences in human performance: Neural, genetic, cognitive, and psychometric approaches. *Panel, Annual Meeting of the Human Factors and Ergonomics Society*, Baltimore, MD.

377. Parasuraman, R. (2007, October). Neuroergonomics of visual cognition: Research and applications. *Panel, Annual Meeting of the Human Factors and Ergonomics Society*, Baltimore, MD.

378. Greenwood, P. M., Kumar, R., Sundarajan, R., Lin, M-K., Fryxell, K. J., & Parasuraman, R. (2007, October). Nicotinic-muscarinic interactions in visuospatial attention revealed in effects of normal genetic variation. *Paper presented at the Society for Neuroscience Conference*, San Diego, CA.

379. Lin, M-K., Fryxell, K. J., Sundarajan, R., Greenwood, P. M., & Parasuraman, R. (2007, October). A single nucleotide polymorphism in the COMT gene has an age-dependent effect on working memory that also depends on memory load. *Paper presented at the Society for Neuroscience Conference*, San Diego, CA.

380. Squire, P. N., Greenwood, P. M., Kumar, R., Sundarajan, R., Lin, M-K., Fryxell, K. J., Fan, J., & Parasuraman, R. (2007, October). Nicotinic and muscarinic SNPs modulate executive attention in healthy young and older adults.. *Paper presented at the Society for Neuroscience Conference*, San Diego, CA.

381. Parasuraman, R. (2007, October). Adaptive automation for human supervision of multiple uninhabited vehicles. *Invited Lecture, TTCP Conference on the Science of Autonomy*, Army Research Laboratory, Adelphi, MD.

2008

382. Braganza, G., Greenwood, P. M., Levy, J. A., & Parasuraman, R. (2008, April). Improved working memory when individuals with Alzheimer's use a broad attentional focus. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, San Francisco, CA.

383. Fu, S., Fedota, J., & Parasuraman, R. (2008, April). Dissociation of visual Ci and Pi components as a function of attention: Event-related potential studies. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, San Francisco, CA.

384. Kumar, R., Greenwood, P., & Parasuraman, R. (2008, April). Effects of healthy aging on the distribution of attention in a working memory task. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, San Francisco, CA.

385. Parasuraman, R. (2008, May). Enhancing human performance in complex systems: Neuroergonomics research and applications. *Paper presented at the Cognition and Neuroergonomics CTA*, Army Research Laboratory, Reston, VA.

386. Parasuraman, R. (2008, May). Designing systems for human use: Adaptive and adaptable automation. *Invited Lecture, Berlin Technological University, Berlin, Germany.*
387. Squire, P., Greenwood, P. M., & Parasuraman, R. (2008, May). Are shifting, splitting, and scaling of attention similar processes? *Paper presented at the Annual Meeting of the Vision Sciences Society, Naples, FL.*
388. de Visser, E., Cohen, M. S., Le Goullon, M., Sert, O., Freed, A., Freedy, E., Weltman, G., Parasuraman, R. (2008, June). A design methodology for controlling, monitoring, and allocating unmanned vehicles. Paper presented at the Third International Conference on *Human Centered Processes (HCP-2008)*, Delft, Netherlands.
389. Cosenzo, K., Parasuraman, R., & Pillalamarri, K. (2008, September). The effect of task load and task based automation for the control of unmanned systems on operator performance. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society, New York, NY.*
390. Grier, R. A., Parasuraman, R., Entin, E. E., Bailey, N., & Stelzer, E. (2008, September). A test of intra- versus inter-modality interference as a function of time pressure in a warfighting simulation. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society, New York, NY.*
391. McGarry, K., & Parasuraman, R. (2008, September). Reliance and compliance: How automation failures affect user trust in automation *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society, New York, NY.*
392. de Visser, E., Le Goullon, M., Freedy, A., Freedy, E., Weltman, G., & Parasuraman, R. (2008, September). Designing an adaptive automation system for human supervision of unmanned vehicles: A bridge from theory to practice. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society, New York, NY.*
393. Fedota, J., Fu, S., & Parasuramaan, R. (2008, November). The role of temporal expectancy in ongoing performance monitoring during a response-conflict task: an event-related potential study. *Paper presented at the Annual Conference of the Society for Neuroscience, Washington D.C.*
394. Fu, S., Fedota, J., Greenwood, P. M., & Parasuraman, R. (2008, November). Early interaction between perceptual load and involuntary attention: an event-related potential study. *Paper presented at the Annual Conference of the Society for Neuroscience, Washington D.C.*
395. Greenwood, P. M., Lin, M.-K., Sundarajan, R., Fryxell, K., & Parasuraman, R. (2008, November). Gene-gene interactions between COMT and BDNF are exerted broadly on cognition. *Paper presented at the Annual Conference of the Society for Neuroscience, Washington D.C.*
396. Lin, M.-K., Sundarajan, R., Greenwood, P. M., Parasuraman, R., & Fryxell, K. (2008, November). The effect of COMT Val158Met on human working memory depends on age, task difficulty and memory load. *Paper presented at the Annual Conference of the Society for Neuroscience, Washington D.C.*
397. Ortigue, S., Thompson, J., Parasuraman, R., & Grafton, S. T. (2008, November). Understanding intentions reflects evoked responses in the human mirror neuron system: Evidence from fMRI and ERP repetition suppression. *Paper presented at the Annual Conference of the Society for Neuroscience, Washington D.C.*
398. Squire, P., Greenwood, P. M., & Parasuraman, R. (2008, November). Covert spatial attention: single or separate mechanisms?. *Paper presented at the Annual Conference of the Society for Neuroscience, Washington D.C.*
399. Wang, Y., Fu, S., Greenwood, P. M., & Parasuraman, R. (2008, November). Perceptual load, voluntary attention, and aging: an event related potential study. *Paper presented at the Annual Conference of the Society for Neuroscience, Washington D.C.*
400. Ortigue, S., Thompson, J. C., Parasuraman, R., & Grafton, S. T. (2008, December). Understanding intentions of others reflects evoked responses in the human mirror neuron system: Evidence from combined fMRI and EEG repetition suppression. *Paper presented at the 26th Army Science Conference, Orlando, FL.*
401. Parasuraman, R. (2008, December). Neuroergonomics. *Invited lecture presented at the 26th Army Science Conference, Orlando, FL.*
402. Parasuraman, R. (2009, February). Neuroergonomics: Neuroimaging and genetic approaches to enhance human performance in complex systems. *Invited Lecture, Workshop on Soldier Training: Optimizing Ability to Exploit Human Potential. U.S Army Research Laboratory. Crystal City, VA.*

403. Parasuraman, R. (2009, February). Trust and complacency in automated and networked systems. *Invited Lecture, Air Force Research Laboratory, Wright-Patterson Air Force Base, Dayton, OH.*
404. Parasuraman, R. (2009, February). Molecular genetics and proteomics of individual differences in cognition. *Invited Lecture, Air Force Research Laboratory, Wright-Patterson Air Force Base, Dayton, OH.*
405. Fedota, J., McDonald, C., & Parasuraman, R. (2009, March). Early attentional processes as predictors of response conflict and error commission. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.*
406. Ortigue, S., Thompson, J. C., Parasuraman, R., & Grafton, S. T. (2009, March). Understanding other people's intentions: Combined fMRI/EEG repetition suppression reveals anterior intraparietal sulcus dynamics within the action observation network. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.*
407. Parasuraman, R. (2009, April). Trust and complacency in automated and networked systems. *Distinguished Lecture, Information Trust Institute, University of Illinois, Champaign, IL.*
408. Hussey, E.A., Safford, A., Parasuraman, R., Thompson, J.C. (2009). Coding of goal, perspective, and kinematics in action observation. *Paper presented at the Annual Meeting of the Vision Sciences Society Annual Meeting, May 2009, Naples, FL.*
409. Safford, A., Hussey, E., Parasuraman, R., & Thompson, J. (2009, May). Selective attention to superimposed biological and tool motion: a combined fMRI and ERP study. *Paper presented at the Annual Meeting of the Vision Sciences Society, Naples, FL.*
410. Squire, P. N., Greenwood, P. M., & Parasuraman, R. (2009, May). Involuntary but not voluntary orienting modulates the splitting of attention. *Paper presented at the Annual Meeting of the Vision Sciences Society, Naples, FL.*
411. Zinni, M., Martinez, A., Parasuraman, R., & Hillyard, S. A. (2009, May). Attention spreads to unattended features of an object. *Paper presented at the Annual Meeting of the Vision Sciences Society, Naples, FL.*
412. De Visser, E., Shaw, T., Rovira, E., & Parasuraman, R. (2009, August). Could you be a little nicer? Pushing the right buttons with automation etiquette. *Paper presented at the International Ergonomics Association Conference, Beijing, China.*
413. De Visser, E., & Parasuraman, R. (October, 2009). Neuroergonomics of etiquette. *Invited Panel, Annual Meeting of the Human Factors and Ergonomics Society, San Antonio, TX.*
414. Parasuraman, R. (2009, October). Teaching human factors and ergonomics. *Invited Panel, Annual Meeting of the Human Factors and Ergonomics Society, San Antonio, TX.*
415. Parasuraman, R. (2009, October). Individualized adaptive automation, *Invited Panel, Annual Meeting of the Human Factors and Ergonomics Society, San Antonio, TX.*
415. Shaw, T., Parasuraman, R., Sikdar, S., & Warm, J. S. (2009, October). Knowledge of results and signal salience modify vigilance performance and cerebral hemovelocity. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society, San Antonio, TX.*
416. Squire, P. N., Barrow, J., Durkee, K., Smith, M., Moore, J., & Parasuraman, R. (October, 2009). Runway Incursion Detection and Alerting System (RIMDAS): A proposed system design for reducing runway incursions. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society, San Antonio, TX.*
417. Squire, P. N., Greenwood, P., & Parasuraman, R. (October, 2009). Is visuospatial attention controlled by a unitary of separate processes? *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society, San Antonio, TX.*
418. Lin, M.-K., Sundararajan, S., Fryxell, K.J., Greenwood, P.M., & Parasuraman, R. (October, 2009). The effect of CHRM2 A1890T and age on human spatial working memory. *Paper presented at the Annual Conference of the Society for Neuroscience, Chicago, IL.*
419. Parasuraman, R. (2009, November). Molecular genetics of individual differences in cognition. *Invited Colloquium, University of Kentucky, Lexington, KY.*
420. Parasuraman, R. (2009, November). Adaptive automation and neuroergonomics. *Invited Lecture, Topical Team on Human Performance in Space, European Space Agency, Paris, France.*

2010

421. Fedota, J., McDonald, C., & Parasuraman, R. (2010, April). The effects of stimulus ambiguity on conflict monitoring: Frontal N2 modulation in a visual oddball task. *Paper presented at the Annual Conference of the Cognitive Neuroscience Society*, Montreal, Canada.
422. Kim, J. S., Basak, C., Clarke, E., Erickson, K. I., Prakash, R., Voss, M. V., Fryxell, K. J., Parasuraman, R., Greenwood, P. M., McAuley, E., & Kramer, A. F. (2010, April). Effects of DBH genotype on executive control and memory in older adults. *Paper presented at the Cognitive Aging Conference*, Atlanta, GA.
423. Clarke, E., Andrews, A., Espeseth, T., Parasuraman, R., & Greenwood, P. M. (2010, May). Visuospatial attention influences mental representation in working memory as reflected in CDA. *Paper presented at the Annual Meeting of the American Psychological Society*, Boston, MA.
424. O'Connor, J.D., Peterson, M.S., & Parasuraman, R. (May 2010). The effect of extensive repeated viewing on visual recognition. 10th Annual Meeting of the Vision Sciences Society, Naples, FL.
425. De Visser, E. J., LeGoullon, M., Hovarth, D., Weltman, G., Freedy, A., Durlach, P., & Parasuraman, R. (2010, June). TECRA: C2 application of adaptive automation theory. *Paper presented at the IEEE Aerospace Conference*, Big Sky, Montana.
426. Safford, A.S., Hussey, E.A., Parasuraman, R., Thompson, J.C. (2010, June). Object-based attentional modulation of biological motion: Spatiotemporal dynamics using fMRI and EEG. *Paper presented at the 17th Annual Meeting Human Brain Mapping Conference*. Barcelona, Spain.
427. de Visser, E., & Parasuraman, R. (2010, July). A neuroergonomic approach to human-computer etiquette and trust. *Paper presented at the 1st International Conference on Neuroergonomics, Applied Human Factors and Ergonomics*. Miami, FL.
428. Funke, M. E., Warm, J. S., Matthews, G., Finomore, Jr, V., Vidulich, M., Knott, B. A., Helton, W. S., Shaw, T. H., & Parasuraman, R. (2010, July). Static and dynamic discriminations in vigilance: Effects on cerebral hemodynamics and workload. *Paper presented at the 1st International Conference on Neuroergonomics, Applied Human Factors and Ergonomics*. Miami, FL.
429. Gartenberg, D., & Parasuraman, R. (2010, July). Understanding brain arousal and sleep quality using a neuroergonomic Smart Phone application. *Paper presented at the 1st International Conference on Neuroergonomics, Applied Human Factors and Ergonomics*. Miami, FL.
430. Parasuraman, R. (2010, July). Neurogenetics of working memory and decision making under time pressure. *Paper presented at the 1st International Conference on Neuroergonomics, Applied Human Factors and Ergonomics*. Miami, FL.
431. Shaw, T. H., Parasuraman, R., Guagliardo, L., & de Visser, E. (2010, July). Towards adaptive automation: A neuroergonomic approach to measuring workload during a command and control task. *Paper presented at the 1st International Conference on Neuroergonomics, Applied Human Factors and Ergonomics*. Miami, FL.
432. de Visser, E., Shaw, T., Mohamed-Ameen, A., & Parasuraman, R. (2010, September). Modeling human-automation Team performance in networked systems: Individual differences in working memory count. *Paper presented at the Annual Conference of the Human Factors and Ergonomics Society*, San Francisco, CA.
433. Parasuraman, R. (2010, September). The basic versus applied research dilemma. *Invited Panel, Annual Conference of the Human Factors and Ergonomics Society*, San Francisco, CA.
434. Shaw, T., Emfield, A., Garcia, A., de Visser, E., Miller, C., Parasuraman, R., & Fern, L. (2010, September). Evaluating the benefits and potential costs of automation delegation for supervisory control of multiple UAVs. *Paper presented at the Annual Conference of the Human Factors and Ergonomics Society*, San Francisco, CA.
435. Shaw, T., Guagliardo, L., de Visser, E., & Parasuraman, R. (2010, September). Using Transcranial Doppler Sonography to measure cognitive load in a command and control task. *Paper presented at the Annual Conference of the Human Factors and Ergonomics Society*, San Francisco, CA.
436. Clarke, E., Andrews, A., Espeseth, T., Parasuraman, R., & Greenwood, P. M. (2010, November). Visuospatial attention influences mental representation in working memory as reflected in the CDA. *Paper presented at the Annual Conference for the Society of Neuroscience*, San Diego, CA.

437. Fedota, J., McDonald, C. G., & Parasuraman, R. (2010, November). Modulation of conflict monitoring processes by stimulus ambiguity in an Eriksen flanker task: An event-related potential study. *Paper presented at the Annual Conference for the Society of Neuroscience*, San Diego, CA.
438. Fu, S., Greenwood, P. M., Lin, M.-K., Wang, Y., Fryxell, K., & Parasuraman, R. (2010, November). CHRNA4 genotypes and visuospatial attention: An event-related potential study. *Paper presented at the Annual Conference for the Society of Neuroscience*, San Diego, CA.
439. Greenwood, P. M., Lin, M.-K., Fryxell, K., & Parasuraman, R. (2010, November). Normal variation in BDNF and COMT genes and individual differences in working memory in old age. *Paper presented at the Annual Conference for the Society of Neuroscience*, San Diego, CA.
440. McGarry, W. R., Greenwood, P. M., & Parasuraman, R. (2010, November). The change in distribution of visuospatial attention with aging. *Paper presented at the Annual Conference for the Society of Neuroscience*, San Diego, CA.
441. Parasuraman, R. (2010, November). Cognitive superstars: Behavioral, neuroimaging, and genetic studies. *Invited Lecture, Distinguished Speakers Series, University of Central Florida*, Orlando, FL.

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442. Parasuraman, R. (2011, January). Progress report on Center of Excellence in Neuroergonomics, Technology, and Cognition (CENTEC). *Invited presentation, AFOSR Program Review on Cognition*, Dayton, OH.
443. Parasuraman, R. (2011, April). Cognitive superstars: Behavioral, neuroimaging, and genetic studies. *Invited Lecture, Department of Biomedical Engineering, Drexel University*, Philadelphia, PA.
444. Parasuraman, R. (2011, April). CENTEC: Center of Excellence in Neuroergonomics, Technology, and Cognition. *Invited talk, Colloquium on Inova and Mason Neuroscience: Towards a Translational Roadmap, George Mason University*, Fairfax, VA.
445. Dillard, M., Boles, D. B., Funke, M., Funke, G., Finomore, V., Dukes, A., Warm, J. S., Knott, B., Matthews, G., & Parasuraman, R. (2011, May). The SART task does not promote mindlessness in vigilance performance. *Paper presented at the International Symposium on Aviation Psychology*, Dayton, OH.
446. Clarke, E., Greenwood, P. M., & Parasuraman, R. (2011, May). The distribution of the attentional gradient during working memory in young and older adults. Presented at the Annual Conference of the Association for Psychological Science, Washington DC.
447. Parasuraman, R. (2011, June). The aging brain and mind. *Invited Lecture, National Pedagogic Institute, ARTEK*, Gurzuf, Ukraine.
448. Parasuraman, R. (2011, June). Cognitive superstars: Behavioral, neuroimaging, and genetic studies. *Invited Lecture, Department of Psychology, University of Rome, La Sapienza*, Rome, Italy.
449. Parasuraman, R. (2011, June). Neuroergonomics research at CENTEC. *Invited Lecture, Institute for Aerospace Engineering, Technical University of Berlin*, Berlin, Germany.
450. Iyengar V., Parasuraman, R., Thornburg, M., Weel, J., Lin, M., Clarke, E., McCabe, K., Lipsky, R. H., & Krueger, F. (2011, August). Genetic variation in the oxytocin receptor gene impact trust behavior. *Paper presented at the Annual Meeting of the American Psychological Association*, Washington DC.
451. Parasuraman, R. (2011, August). Neurogenetics of individual differences in working memory and decision making: Implications for selection and training. *Paper presented at the Annual Meeting of the American Psychological Association*, Washington DC.
452. McKendrick, R., Shaw, T., Saqer, H., de Visser, E., & Parasuraman, R. (2011, September). Team performance and communication within networked supervisory control human-machine systems. *Paper presented at the Annual Conference of the Human Factors and Ergonomics Society*, Las Vegas, NV.
453. Miller, C., Shaw, T., Emfield, A., Hamell, J., de Visser, E., Parasuraman, R., & Musliner, D. (2011, September). Delegating to automation: Performance, complacency and bias effects under non-optimal conditions. *Paper presented at the Annual Conference of the Human Factors and Ergonomics Society*, Las Vegas, NV.

454. Parasuraman, R. (2011, September). Can behavioral, neuroimaging, and molecular genetic studies of “cognitive superstars” tell us how to augment cognition? *Paper presented at the Annual Conference of the Human Factors and Ergonomics Society*, Las Vegas, NV.
 455. Saqer, H., de Visser, E., Emfield, A., Shaw, T., & Parasuraman, R. (2011, September). Adaptive automation to improve human performance in supervision of multiple uninhabited aerial vehicles: Individual markers of performance. *Paper presented at the Annual Conference of the Human Factors and Ergonomics Society*, Las Vegas, NV.
 456. Parasuraman, R. (2011, September). Neuroergonomics: Theory and methods. *Invited Webinar, Human Factors and Ergonomics Society*, Santa Monica, CA.
 457. Parasuraman, R. (2011, October). Cognitive distraction and attentional error: Bringing cognitive science to the rail industry. *Invited Lecture, Veolia, Inc*, New Orleans, LA.
 458. Clarke, E., McGarry, R., Bickel, J., Thompson, J., Peterson, M., Strohl, J., Greenwood, P., & Parasuraman, R. (2011, November). Cognitive training in healthy old age: Comparison of three training tasks on everyday cognitive functioning and white matter integrity. *Paper presented at the Annual Meeting of the Society for Neuroscience*, Washington D.C.
 459. McGarry, W. R., Strenziok, M., Greenwood, P., Thompson, J., & Parasuraman, R. (2011, November). Interactions between cognition, aging, and cortical thickness in healthy older adults. *Paper presented at the Annual Meeting of the Society for Neuroscience*, Washington D.C.
 460. Lin, M., Greenwood, P. M., McGarry, W. R., Fryxell, K., Thompson, J., & Parasuraman, R. (2011, November). Effects of COMT haplotype on cortical thickness and surface area in human brain. *Paper presented at the Annual Meeting of the Society for Neuroscience*, Washington D.C.
 461. Ploran, E. J., Parasuraman, R., & Thompson, J. (2011, November). Future memory relies on activity in hippocampus, general elaboration mechanisms in frontal cortex, and specific task-relevant regions at encoding. *Paper presented at the Annual Meeting of the Society for Neuroscience*, Washington D.C.
 462. Strenziok, M., Greenwood, P., McGarry, R., Thompson, J., & Parasuraman, R. (2011, November). White matter integrity in the left anterior PFC and right posterior frontal and parietal cortices facilitates cued spatial working memory performance in healthy aging. *Paper presented at the Annual Meeting of the Society for Neuroscience*, Washington D.C.
- 2012
463. Parasuraman, R. (2012, February). Neurogenetics of individual differences in complex decision making. *Paper presented in the Symposium on Neuroergonomics, Technology, and Cognition, International Ergonomics Association Conference*, Recife, Brazil.
 464. Funke, G., Dillard, M., Funke, M., Warm, R., & Parasuraman, R. (2012, February). The SART does not promote mindlessness in vigilance. *Paper presented in the Symposium on Neuroergonomics, Technology, and Cognition, International Ergonomics Association Conference*, Recife, Brazil.
 465. Fedota, J., McDonald, C., & Parasuraman, R. (2012, March). Contextual task difficulty modulates stimulus discrimination: Electrophysiological evidence for interaction between sensory and executive processes. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, Chicago, IL.
 466. Greenwood, P., Clarke, E., Strenziok, M., Bickel, J., McGarry, R., Strohl, J., Thompson, J., & Parasuraman, R. (2012, March). Cognitive training in healthy old age: Comparison of 3 training tasks on cognitive functioning and white matter integrity. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, Chicago, IL.
 467. Moody, L., Parasuraman, R., Twieg, P., de Visser, E., McCabe, K., O'Hara, M., Lee, M., & Krueger, F. (2012, March). Oxytocin increases empathy for victims of criminal offenses. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, Chicago, IL.
 468. Strenziok, M., Chung, M., Greenwood, P., Santacruz, S., & Parasuraman, R. (2012, March). Reduced dorsolateral prefrontal activation during attentionally-guided spatial working memory processing. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, Chicago, IL.
 469. Parasuraman, R., & Galster, S. (2012, March). *Invited Chair, Panel on Sensing, Workshop on Human Performance Augmentation*, Arizona State University, Tempe, AZ.

470. Thompson, J.C., Ploran, E., Oshiro, J., Hussey, E., Hawkins, D., Bevitt, J., Parasuraman, R. (2012, May). Self-motivated visual exploration of the environment predicts subsequent navigation performance and style. *Annual Meeting of the Vision Sciences Society*, Naples, FL.
471. Parasuraman, R. (2012, June). Supercharging cognition: Neuroimaging, genetic, and brain stimulation studies. *Invited Lecture, Key Laboratory of the Cognitive Neuroscience of Learning, Beijing Normal University*, Beijing, China.
472. Parasuraman, R. (2012, June). Supercharging cognition: Neuroimaging, genetic, and brain stimulation studies. *Invited Lecture, Department of Psychology, Tsinghua University*, Beijing, China.
473. Parasuraman, R. (2012, June). Supercharging cognition: Neuroimaging, genetic, and brain stimulation studies. *Invited Lecture, Department of Kinesology, Shanghai University of Sport*, Beijing, China.
474. Parasuraman, R. (2012, June). Supercharging cognition: Neuroimaging, genetic, and brain stimulation studies. *Invited Lecture, Laboratory of Brain and Cognitive Disorders, Hangzhou Normal University*, Beijing, China.
475. De Visser, E. J., Krueger, F., McKngith, P., Chalk, S., & Parasuraman, R. (2012, October). The world is not enough: Trust in cognitive agents. *Paper presented at the Annual Conference of the Human Factors and Ergonomics Society*, Boston, MA.
476. McKendrick, R., & Parasuraman, R. (2012, October). Effects of different types of variable priority and adaptive training on skill acquisition in dual verbal-spatial working memory tasks. *Paper presented at the Annual Conference of the Human Factors and Ergonomics Society*, Boston, MA.
477. Funke, G., Funke, M., Dillard, M., Finomore, V., Shaw, T., Epling, S., Warm, J. S., & Parasuraman, R. (2012, October). *Paper presented at the Annual Conference of the Human Factors and Ergonomics Society*, Boston, MA.
478. Kidwell, B., Calhoun, G., Ruff, R., & Parasuraman, R. (2012, October). Adaptable and adaptive automation for supervisory control of multiple autonomous vehicles. *Paper presented at the Annual Conference of the Human Factors and Ergonomics Society*, Boston, MA.
479. Falcone, B., & Parasuraman, R. (2012, October). Comparative effects of first-person shooter video game experience and brain stimulation on threat detection learning. *Paper presented at the Annual Conference of the Human Factors and Ergonomics Society*, Boston, MA.
480. Parasuraman, R. (2012, October). Our future HF/E professors and researchers: Is anyone in the pipeline? *Invited Panel, Past President's Forum, Annual Conference of the Human Factors and Ergonomics Society*, Boston, MA.
481. Parasuraman, R. (2012, October). Paul M. Fitts Education Award winners: Teaching human factors and ergonomics. *Invited Panel, Annual Conference of the Human Factors and Ergonomics Society*, Boston, MA.
482. Parasuraman, R. (2012, October). Applications of NIRS in ergonomics and human factors. *Invited Panel, Annual Conference of the Human Factors and Ergonomics Society*, Boston, MA.
483. Parasuraman, R. (2012, October). Reducing major rule violations in commuter rail operations: The role of distractions and attentional errors. *Invited Panel, Annual Conference of the Human Factors and Ergonomics Society*, Boston, MA.
484. Satterfield, K., Ramirez, R., Shaw, T., & Parasuraman, R. (2012, October). Measuring workload during a dynamic supervisory control task using cerebral blood flow velocity and the NASA-TLX. *Paper presented at the Annual Conference of the Human Factors and Ergonomics Society*, Boston, MA.
485. Parasuraman, R. (2012, November). Supercharging cognition: Neuroimaging, genetic, and brain stimulation studies. *Invited Lecture, 25th Anniversary of the Cognitive and Behavioral Neuroscience Program, University of Groningen*, Groningen, Netherlands.
486. Strohl, J., Greenwood, P. M., Lindgren, E., & Parasuraman, R. (2012, November). Differential effects of transcranial direct current stimulation of prefrontal and motor cortex on a complex cognitive task. *Poster presented at the Annual Meeting of the Society for Neuroscience*, New Orleans, LA.

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487. Parasuraman, R. (2013, February). Introduction to neuroergonomics. *Invited Lecture, Department of Psychology, Banaras Hindu University*, Varanasi, India.

488. Parasuraman, R. (2013, February). Supercharging cognition. *Invited Lecture, Department of Psychology, Banaras Hindu University, Varanasi, India.*
489. Parasuraman, R. (2013, April). Nurturing the older brain and mind. *Invited Lecture, Laboratory of Experimental Psychology, Chengu Medical College, Chengdu, China.*
490. Falcone, B., McKendrick, R., & Parasuraman, R. (2013, April). Enhancing verbal and spatial working memory with non-invasive direct current stimulation of left dorsolateral prefrontal cortex. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.*
491. McGarry, W., Strenziok, M., Cisler, D., Clarke, E., Santa Cruz, S., Thompson, J., Parasuraman, R., & Greenwood, P. (2013, April). Real-time strategy video game training increases fronto-parietal cortical thickness, default mode network connectivity, and reasoning ability in healthy older adults. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.*
492. Roberts, D., Fedota, J., Buzzell, G., Parasuraman, R., & McDonald, C. (2013, April). Top-down modulation of prestimulus alpha power and its relation to a stimulus discrimination process. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.*
493. Sarbone, B., Greenwood, P. M., Smelser, J., & Parasuraman, R. (2013, April). Working memory training exerts stronger effects on risk aversion than stimulation of prefrontal cortex. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.*
494. Scheldrup, M., Strohl, J., Vance, J., Walker, D., Greenwood, P., & Parasuraman, R. (2013, April). Transcranial Direct Current Stimulation exerts selective benefits on executive control in a complex task whether prefrontal or motor cortex is stimulated. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.*
495. Strenziok, M., Clarke, E., Cruz, S. A., Thompson, J. C., Parasuraman, R., & Greenwood, P. M. (2013, April). Effects of real-time strategy video game training on white matter integrity in inhemipsheric posterior callosal connections of the precuneus in healthy aging. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.*
496. Parasuraman, R. (2013, June). Supercharging cognition: Neuroimaging, genetic, and brain stimulation studies. *Invited Lecture, Department of Psychology, Ludwig Maximillians University, Munich, Germany.*
497. Thompson, J., Ploran, E., Baccus, W., Bevitt, J., Hussey, E., & Parasuraman, R. (2013, June). An fMRI study of encoding and retrieval differences between egocentric and allocentric navigators. *Paper presented at the 19th Annual Meeting of the Organization for Human Brain Mapping, Seattle, WA.*
498. Parasuraman, R., & Greenwood, P. M. (2013, August). Video game training and noninvasive brain stimulation enhance human learning and brain function. *Invited Panel, Annual Conference of the American Psychological Association, Honolulu, HI.*
499. Parasuraman, R. (2013, August). We're in the money: Helpful hints from psychological scientists about securing research funding. *Invited Panel, Graduate Student Forum, Annual Conference of the American Psychological Association, Honolulu, HI.*
500. de Visser, E., Kidwell, B., Payner, J., Lu, L., Parker, J., Brooks, J., Chabuk, J., Spriggs, S., Freedy, A., Scerri, P., & Parasuraman, R. (2013, October). Best of both worlds: Design and evaluation of an adaptive delegation interface. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Conference, San Diego, CA.*
501. Falcone, B., McKendrick, R., & Parasuraman, R. (2013, October). A shocking lack of difference: Noninvasive brain stimulation in verbal and spatial working memory. *Paper presented at the Annual Meeting of the Human Factors and Ergonomics Conference, San Diego, CA.*
502. Ploran, E., Rovira, E., Thompson, J., & Parasuraman, R. (2013, November). The role of sense of direction and other factors during navigation in a large-scale, unconstrained environment. *Paper presented at the Annual Meeting of the Psychonomic Society, Toronto, Canada.*
503. Scheldrup, M. R., Vance, J., Darmani, Y., Falcone, B., McKendrick, R., McKinley, A., Parasuraman, R., & Greenwood, P. (2013, November). Transcranial Direct Current Stimulation and acquisition of complex cognitive tasks: Effect of site specificity and training time. *Paper presented the Annual Conference of the Society for Neuroscience, San Diego, CA.*

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504. Parasuraman, R. (2014, January). Enhancing brain and mind in health and in disease. *Invited Opening Address*, 2nd International Conference on Recent Advances in Cognition and Health, Varanasi, India.
505. Blumberg, E., Kidwell, B., Peterson, M., & Parasuraman, R. (2014, April). Improving multiple object tracking performance by stimulating the anterior intraparietal sulcus. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, Boston, MA.
506. Buzzell, G. A., Fedota, J., Braymiller, J., Thompson, J., Parasuraman, R., & McDonald, C. (2014, April). Ventral striatal and dorsal anterior cingulate cortex activation reflect subjective certainty in a difficult visual discrimination task. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, Boston, MA.
507. Foroughi, C., Blumberg, E., Scheldrup, M., Peterson, M., Parasuraman, R., & Boehm-Davis, D. (2014, April). Exploring the relationship between the DLPFC and task resumption with tDCS. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, Boston, MA.
508. Goodyear, K., Bowman, A., Chernyak¹, De Visser¹ E., Parasuraman, R., & Krueger, F. (2014, April.) How automation bias influences human-human and human-automation trust: An fMRI study. *Paper presented at the Annual Meeting of the Cognitive Neuroscience Society*, Boston, MA.
509. Parasuraman, R. Greenwood, P., Scheldrup, M., Falcone, B., Kidwell, B., & McKendrick, R. (2014, July). Neuroergonomics of skill acquisition: Genetic and non-invasive brain stimulation studies. *Paper presented at the Applied Human Factors and Ergonomics Conference*, Krakow, Poland.

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