



Gul Afshan

Professor, Physics and Chemistry

Degree with Fields, Institution, and Date

- Non-Degree Seeking, Post Doctorate Clinical Lab Medicine/Pathology, University of Wisconsin Centers, 2000
- Doctor of Philosophy, Biochemistry, University of Wisconsin – Milwaukee, 1999
- Masters of Philosophy, Chemistry, Quaid-i-Azam University, Islamabad, Pakistan, 1987
- Masters of Science, Chemistry, Quaid-i-Azam University, Islamabad, Pakistan, 1985
- Bachelors of Science, Biology, Lahore College for Women, Lahore, Pakistan, 1981

Years of Service on this Faculty: 18

Date of Original Appointment: September 2000

Advancement in Rank/Position

- Professor, September 2010
- Associate Professor, September 2003
- Assistant Professor, September 2000

Other Teaching Experience

- Adjunct Associate Professor, Dept. of Chemistry and Biochemistry, University of Wisconsin-Milwaukee.
- Research Assistant, University of Wisconsin – Milwaukee.

- Lab Teaching Assistant, Undergraduate Biochemistry, Department of Chemistry and Biochemistry. University of Wisconsin – Milwaukee.
- Lecturer, Chemistry, Quaid i Azam University, Islamabad, Pakistan.
- Teacher, ESL. House of Knowledge.
- Science Teacher, Islamabad Grammar High School, Pakistan.

Industrial Experience

- Consultant Researcher, University of Wisconsin – Milwaukee, Department of Chemistry and Biochemistry.
- Technical Assistant, Precision Analytical Laboratories, Milwaukee, WI.

Consulting and Patents

- Consultant for Gruber Law Offices, LLC.
- Consultant Wisconsin Public Service Corporation for Heavy Hydrocarbons.

Publications

- Promoting Multidisciplinary Education and Gender Diversity by Integrating Sciences into New Biomolecular Engineering Curriculum. Proceedings of ASEE North Midwest Annual Meeting, 2009.
- From a Mother To Her Child poem. Ink Waves MSOE Creative Writing Magazine. Page 9, 2009
- Speech delivered at an after school conference. Published at Governor Doyle's website. It is used by the Wisconsin Dept. Of Public Instructions, DPI, to promote grants for afterschool programs, 2006
- Colloquium of The Students By The Students For The Students, A teachers Point of View. Ingenium December 12 volume XXIII, issue 11, page 1, 1996
- Depletion of Cellular Iron by BPS and Ascorbate. Effect of Toxicity of Adriamycin. Free Radical Biology and Medicine 20, 319 to 329, 1996

Scientific and Professional Societies of Which a Member

- American Institute of Chemical Engineers (AIChE). 2009-Present
- Society for Biological Engineering, SBE and AIChE technological community. 2009-Present
- American Society for Engineering Education. ASEE. 2009-Present
- MSOE School of Nursing Honor Society. 2007-Present
- Biotechnology Industry Organization. BIO. 2006-Present
- Biomedical Research Alliance of New York Institutional Biosafety Committee BRANY IBC. 2005-Present

Honors and Awards

- Finalist for the Distinctive Werwath Teacher's Award, MSOE, 2011
- ASEE North Midwest Outstanding Educator Award, 2009
- Outstanding Mentor Award, MSOE, 2006
- Falk Excellent Engineering Educator Award, MSOE, 2005
- Finalist for the Falk Excellent Engineering Educator Award, MSOE, 2004
- Merit Travel Grant. ASM Regional meeting in South Dakota, 1999
- Award of Special Merit in Recognition of High Quality of Work - ASM 99th general meeting, 1999
- Merit Travel Grant ASM 99th meeting, 1999
- Merit Scholarship Award. Quaid i Azam University, Islamabad, Pakistan, 1988
- Merit Scholarship Award Lahore College for Women. Lahore, Pakistan, 1982

Professional Service

- President Scholarships Selection Committee, 2011
- Advisory Committee for the Post Doctoral Fellow, Medical College of Wisconsin, 2011
- Coordinator Discover I and Discover II soft recruitment activities, MSOE, Summer 2011
- Session Chair, ASEE Frontiers in Education Conference, Title Science and Engineering, 2011

- ABET evaluator in training, Fall 2011
- Upward Bound Planning Committee to work on the racial diversity, MSOE
- Proposal in part, An Interdisciplinary Approach to Biological Energy Transfer Cross Institutional Collaboration and Adaptation, 2010
- KEEN proposal prepared in part, 2010
- Hostess, Table at the Business Dinner, MSOE, 2010
- Leader, team to figure out BioE new labs' logistics, 2010
- Chair, Protracted Leave Committee, MSOE, 2010-2012
- Program Director, BioMolecular Engineering, MSOE, 2009-July 2017
- Academic Advisor, MSOE, 2009-Present
- Instructor, TRIO programs, MSOE, Summer 2009
- Pilot grant proposal, Planning A Biotechnology research oriented education at an Engineering, Nursing Undergraduate Institution written and submitted as a PI to NSF, 2004
- CFARC Member, 2002-2004
- Assessment Committee, Organic and Biochemistry, MSOE, 2002
- Parents Weekend Panel, MSOE, 2002
- College Student Inventory CSI Advisor, MSOE, 2002-2003 and 2005-2006
- Faculty Senator, MSOE, 2002-2004
- Faculty representative for Jack Cooke Foundation Undergraduate Scholarship Program, MSOE, 2002-2003
- Biotechnology and molecular biology instructor for high school teachers NIH SEPA Program, MSOE, 2002
- NSF Grant Review, Use of Zebrafish development model for undergraduate teaching and research, Area Eukaryotic Genetics, 2002
- Mentor for freshmen Engineering and Nursing students, MSOE Mentor Program, 2001-2006
- Opportunity Exam question, prepared 12 Biochemistry questions, MSOE, 2001
- Review of The Practice of Chemistry by Wink, Fetzer Gislason, and McNicholas, 2001
- Review of Essential Chemistry by Raymond Chang 3rd edition, 2001

- Advisor Undergraduate research program REU, Department of Rapid Prototyping, MSOE, 2001
- Representative MSOE in WEPAN, Seattle, WA, 2001
- Handbook of Analytical Techniques published by John Wiley and Sons, 2001
- Proctor OP Exam, MSOE, 2000
- Leader for developing and launching BioMolecular Engineering program, 2000-2009
- Participant, WEPAN 2000 workshop in Seattle, WA. 2000.
- Member of Women in Engineering Programs and Advocates Network, 2000-2001
- Review of Biochemistry The molecular basis of life, by Trudy and Jim McKee, 2000

Professional Development and Activities

- Synthetic Biology ATGE Workshop, 2012
- ABET PEV on-site training, 2012
- Proposal prepared in part. Acquisition of a Multiphoton ConJocal Microscope-Bioscience and Bioengineering Research Group of Milwaukee. 2012.
- IDEAL Scholar ABET assessment leadership training, 2011
- Proposal prepared in part. Acquisition of X-ray Diffraction Facilities for Multidisciplinary Research at the University Of Wisconsin - Milwaukee. 2011.
- Purchase Module Training, 2010
- Submitted a grant to NSF on Planning a Biotechnology research-oriented education at an engineering/nursing undergraduate institution. 2004.
- Protein Explorer Workshop Training, 2001
- Participant Protein Explorer workshop, Medical College of Wisconsin, Milwaukee, WI, 2001
- Animal safety and handling of uninfected and HIV infected blood Training, 2001
- Confocal Microscopy Training
- BLS 3 Biosafety Level 3 Training
- BLS 2 Biosafety Level 2 Training
- Radioactive ³²P and Radioactive Cr51, Radiation Safety Training

Grants Received

- Project proposal title An Interdisciplinary Approach to Biological Energy Transfer Cross Institutional Collaboration and Adaptation. Total award 200,000.
- Project proposal title A BioMolecular Engineering Program at MSOE. A proposal total amount endowed to MSOE was 6,000,000.

Presentations Given

- Seminar at Kiwanis's Club on BioMolecular Engineering Advances in the society, 2012
- Leadership Seminar at Whitefish Bay High School on Cultural Diversity, 2012
- Leadership Seminar to talk to high school groups about immigration and society, Carroll University, Waukesha, WI, 2011
- Seminar Series on Biology and Engineering, Whitefish Bay High School, 2011
- Seminar guest speaker for the Women Faculty at MSOE, Titled Experiences in the Fields of Engineering, 2011
- Presentation as a guest speaker to MSOE Nursing Department entitled Genomics and The Medical Field, 2011
- Presented a speech at the BioMolecular Engineering lab dedication, 2010
- Presented Update on BioE labs in the Regents Meeting, 2010
- Presented BioE Program to Baxter Inc. team for collaborations, 2010
- Presented BioE Program to Mary O'Brien, Chief Administrative Officer, Aurora St. Luke's for collaborations, 2010
- Presented BioE Program to Dr. Greene, Chief Administrative Officer, Biotechnology, Bioengineering Innovation Center for Collaborations, 2009
- Labs for a Science Integrated BioMolecular Engineering Program, MSOE, Annual Regents Meeting, 2009
- Seminar Promoting Multidisciplinary Education and Gender Diversity by Integrating Sciences into New BioMolecular Engineering Curriculum, ASEE North Midwest Annual Meeting, 2009
- Seminar Stem Cell A Powerful Ally of Humanity, MSOE Faculty In-Service, 2009

- Seminar On The Ground In Pakistan, presented as a team with Dr. Schenstrom, Annual fund raiser of Human Development Foundation, Chicago, IL, 2009
- Five seminar presentations BioMolecular Engineering, what is it. For 5 different sophomore pre engineering Project Lead the Way classes at Warren Township High School in Gurnee, IL, 2008
- Presentation BioMolecular Engineering Program, Annual Regents Meeting, MSOE, 2008
- Seminar Biomolecular Engineering, A Baby of Molecular Biology and Engineering, MSOE Faculty In-Service, 2008
- Colloquium How to Bring BioMolecular Engineering Program to MSOE, Budget and BioE proposal presentation at Kern's Foundation, 2008
- Seminar Budget and Applications of the Biomolecular Engineering Program at MSOE For Dr. Viets, Dr. Matthew Tector and Dr. Alfred Tector, 2008
- Colloquium presented A Discussion on Teaching Methodologies, As a team with Drs. Ron Gerrits and Karl David, MSOE Faculty In-Service, 2007
- Presentation Proposal BioE Program for MSOE Board Members, 2007
- BioMolecular Engineering Program at MSOE for MSOE Regents' Spouses, 2007
- BioMolecular Engineering Proposal, presented to the MSOE Growth Committee, 2007
- Proposal presented for a New BioMolecular Undergraduate Engineering Program at MSOE, For the President and Vice Presidents of MSOE, 2006
- Presented a program for the Pink Party for Breast Cancer Awareness, MSOE, 2006
- Invited speaker at Governor Jim Doyle's summit on after school programs, Madison, WI, 2006
- Poster Presentation, American Society of Microbiology, National Meeting, The role of a Virally-encoded Phosphoprotein in the Life-cycle of Vaccinia, Seminar The Role of a Virally
- American Society of Microbiology, North Central Branch Annual Meeting