Curriculum Vitae
Pinliang Dong

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Education

- Ph.D., 2003, Geology (with emphasis on GIS and Remote Sensing), University of New Brunswick, Fredericton, New Brunswick, Canada

- M.Sc., 1990, Remote Sensing and Cartography, Institute of Remote Sensing Applications (IRSA), Chinese Academy of Sciences, Beijing, China

- B.Sc., 1987, Geology, Peking University, Beijing, China

Professional Experience

- Professor (08/2016 – present)
  Department of Geography and the Environment, University of North Texas, Denton, TX 76203

- Associate Professor (09/2010 – 05/2016)
  Department of Geography, University of North Texas, Denton, TX 76203

- Assistant Professor (09/2004 – 08/2010)
  Department of Geography, University of North Texas, Denton, TX 76203

- Staff Associate/GIS Specialist/Geospatial Technologies Instructor (01/2004 - 08/2004)
  Center for International Earth Science Information Network (CIESIN)
  Columbia University, Palisades, NY 10964

- Senior GIS Analyst/Programmer (06/2001 – 01/2004)
  Titan Corporation/Geospatial Information Division (worked in Japan 01/2002 – 10/2003)
  Santa Maria, CA 93454

- GIS Analyst/Programmer (12/1997 – 05/2001)
  Titan Corporation/Geospatial Information Division, Santa Maria, CA 93454

- Teaching Assistant/Research Assistant (09/1993 – 12/1997)
  GIS Laboratory/Department of Geology, University of New Brunswick
  Fredericton, N.B. E3B 5A3, Canada

- Research Associate (12/1990 – 07/1993)
  Institute of Remote Sensing Applications (IRSA)
  Chinese Academy of Sciences, Beijing 100101, China

Honors and Awards

- Included in the world's top 2% most-cited scientist list by Stanford University, 2022.
- *Research Excellence Award*, College of Arts and Sciences, University of North Texas, 2014.
- *Teacher of Merit Award*, Intel Science Talent Search Program, 2011.
- *Honor Professor Award*, University of North Texas, 2009.
- *Ralph E. Powe Junior Faculty Enhancement Award*, Oak Ridge Associated Universities (ORAU), 2006.
- *Best Paper Award*, the First Conference on Remote Sensing and Geographic Information Systems, Chinese Academy of Sciences, 1991.
- *Guest Research Professor* (2010 – 2015), Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences.
- *Guest Professor* (2016 – 2019), College of Geospatial Science and Technology, Capital Normal University, Beijing, China.
- *Guest Professor*, Institute of Disaster Prevention, Hebei, China (2017 – present).
- *Guest Professor*, Yunnan University, Yunnan, China (2018 – 2023).
- *Member*, Academic Committee of the Key Laboratory for Resource and Environmental Remote Sensing, Yunnan Province, China (2017 – 2020).
- *Member*, Academic Committee of the Geospatial Information Engineering and Technology Research Center, Yunnan Province, China (2017 – 2020).

Areas of Expertise

- Geographic information systems (GIS), spatial analysis, and spatial modeling
- GIS and remote sensing for environmental science, geosciences, and population studies
- LiDAR remote sensing and applications (urban environments, forestry, geosciences, and disaster assessment)
- Digital image analysis
- Physical geography and geology
- Geography of China

Summary of Major Contributions and Impact of Academic Research

- Proposed and implemented a Toe Line Tracking (TLT) method (Dong et al., 2021) for automated measurement of sand dune migration rates and migration directions using LiDAR data. This original work is a major contribution to the field of Earth and planetary surface processes because:

    - Automated measurement of sand dune migration in large dune fields has long been a challenging problem. So far there are only two such methods: COSI-Corr proposed by Caltech's Leprince et al. (2007), and PSTP proposed by me (Dong 2015).

    - The TLT method is a major improvement over the PSTP method (Dong 2015) in that it can handle dunes with or without slipfaces that reach the angle of repose. Since sand dunes on Earth and other planetary surfaces may have different angles of repose, this new method is of significance to the study of Earth and planetary surface processes.

- Proposed and implemented a PSTP (Pairs of Source and Target Points) method (Dong 2015) for automated measurement of sand dune migration rates and migration directions using LiDAR data. This was the second method after Caltech's Leprince et al. (2007) for automated measurement of sand dune migration rates and migrations directions in large dune fields.

- Proposed and implemented an original method for generating and updating ordinary and weighted Voronoi diagrams for point, line, and polygon features in geographic information systems (Dong 2008). The free software has over 5,000 lines of code. The impact of this work includes:
  - It bridges a major gap in spatial analysis and modeling where the weights (importance) of point, line, and polygon features are often difficult to handle in spatial partitioning problems.

  - This was (and still is) the only software for generating and updating both ordinary and weighted Voronoi diagrams for point, line, and polygon features. In the most recent versions of ArcGIS and ArcGIS Pro developed by Esri (the world's leading GIS software vendor), ordinary Voronoi diagrams can be generated, but the functionality for generating and updating weighted Voronoi diagrams for point, line, and polygon features is still missing.

  - The free software was downloaded by 5,127 world-wide users from Esri's Code Sharing website at http://arcscripts.esri.com/details.asp?dbid=15481 (last accessed on July 30, 2015), with positive feedback from users at the World Bank, Rand Corporation, Sandia National Laboratories, USGS, Google Inc., Penn State, Univ. of Maine, UT Dallas, Univ. of Edinburgh, Univ. of Southampton, Univ. of Tokyo, Chinese Academy of Sciences, Peking University, and Hong Kong Polytechnic University, among others.

  - The paper (Dong 2008) in *Computers and Geosciences* was ranked 13th among the journal's "Top 25 Hottest Papers" of 2008.

- Based on my single-authored paper on a new lacunarity estimation method for fractals and non-fractals (Dong 2000), which has been cited nearly 200 times by multidisciplinary researchers, I have extended multi-scale lacunarity analysis to images and one-, two-, and three-dimensional (1D-2D-3D) point patterns (Dong 2009). The free software was downloaded by 674 world-wide users from Esri's Code Sharing website at http://arcscripts.esri.com/details.asp?dbid=16256 (last accessed on July 30, 2015). A doctoral student (E. Rahimi) at the Environmental Science Research Institute, Shahid Beheshti University, Tehran, Iran, was interested in my work on spatial heterogeneity measurement in landscape ecology, and invited me to be his co-advisor. We have co-authored several papers so far, with more papers under review.

- Proposed mathematical models for simulating three-dimensional LiDAR point clouds for tree crowns (Dong 2009 & 2010). This work is important in facilitating tree crown measurement and biomass estimation using LiDAR data. The models have been used in other studies, including a 2021 paper (Liu et al. 2021) co-authored with a former graduate student and published in *Remote Sensing of Environment* (the top journal in remote sensing).

- Published one of the most comprehensive books on LiDAR remote sensing – ***LiDAR Remote Sensing and Applications*** (Taylor & Francis/CRC, 2018).

  - The book covers LiDAR principles, data processing methods, applications in several important fields (forestry, vegetation mapping and measurement, urban environments, disaster damage assessment, and geosciences), and hands-on projects for students.
  - The book has been adopted as a textbook by at least five universities in the United States and China.
  - The book has been cited over 160 times since 2018.
  - The book's Research Interest (RI) score is higher than 94% of items on ResearchGate.
  - The book's Research Interest (RI) score is higher than 98% of items published in 2018 on ResearchGate.

- Published nearly 100 peer-reviewed journal papers/book chapters (mostly in Tier 1 journals), and two computer science conference papers with low acceptance rates (24% and 28%); delivered 41 invited talks and 27 conference presentations; major professor for 9 doctoral students and 40 Master's students; host of 21 international visiting scholars from China, Spain, Turkey, and Turkmenistan.

- Productivity analysis: A total of nearly 100 publications. Published 30 papers in 2020 – 2022 (less than three years), about **10 papers per year**, and 40 papers in 2018 – 2022 (less than five years), about **8 papers per year** (excluding the highly successful book "LiDAR Remote Sensing and Applications"). Among the 40 papers published in the last five years, I am the sole author, first author, or major contributor (my graduate students as first authors) of 26 papers. About 50% of the 40 papers in the past 5 years are published in **top journals or Tier 1 (Q1) journals** based on the SJC journal ranking.

- Principal Investigator (PI) or Co-PI for 21 research grants totaling $378,593, including external grants of $325,593.

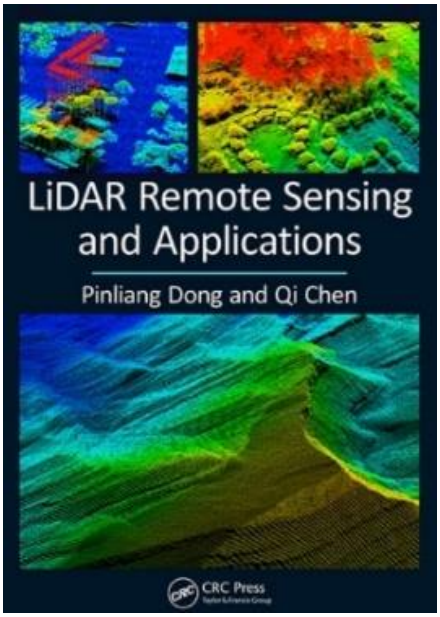
Professional Activities

- Section Editor (Urban Remote Sensing), *Remote Sensing* (Impact Factor: 5.349), ranked 2nd in remote sensing journals according to Google Scholar. Also worked as Guest Editor for two Special Issues in *Remote Sensing*.
- Editor and Editorial Board Member, *International Journal of Spatial, Temporal and Multimedia Information Systems.*
- Editor and Editorial Board Member, *Journal of Remote Sensing and GIS.*
- Editor and Editorial Board Member, *Journal of Geology and Geophysics*.
- Editor and Editorial Board Member, *Journal of Hydrogeology & Hydrologic Engineering*.
- Member, International Society for Digital Earth (**ISDE**)
- Member, Association of American Geographers (**AAG**)
- Member, American Geophysical Union (**AGU**)
- Member, Scientific Freedom & Responsibility Committee, Association of American Geographers (**AAG**), 2010-2013.
- Member, Research Proposal Review Panel and Technical Assistance Panel, Texas Department of Transportation (**TxDOT**), 2005 – present.
- Member, GIS Advisory Board, Collin College. 2013 – present.
- Faculty Member, The Advanced Environmental Research Institute (AERI), University of North Texas
- Associate, Committee on Space Research (COSPAR), International Council for Science (ICSU)
- Guest Research Professor, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, China.
- Guest Professor, Yunnan University, Kunming, China.
- Reviewer for the National Science Foundation (**NSF**)
- Reviewer for Taylor & Francis (three book proposals)
- Reviewer for the following books:
  - *Advanced GIS Technologies.* ESRI Press.
  - *Extending ArcGIS: Spatial Analyst.* ESRI Press.
- Reviewer for the following **40** international journals:
  - *Applied Geography*
  - *Arabian Journal of Geosciences*
  - *Biomass and Bioenergy*
  - *Computers and Geosciences*
  - *Computers, Environment and Urban Systems*
  - *Environmental Modelling and Software*
  - *Geocarto International*
  - *Geographical Analysis*
  - *GeoInformatica*
  - *Geomatics, Natural Hazards and Risk*
  - *Geomorphology*
  - *IEEE Geoscience and Remote Sensing Letters*

- *IEEE Transactions on Geoscience and Remote Sensing*
- *International Journal of Applied Geospatial Research*
- *International Journal of Digital Earth*
- *International Journal of Geographic Information Science*
- *International Journal of Geo-Information*
- *International Journal of Environmental Research and Public Health*
- *International Journal of Remote Sensing*
- *International Journal of Spatial, Temporal, and Multimedia Information Systems*
- *Journal of Arid Environments*
- *Journal of Applied Physics*
- *Journal of Applied Remote Sensing*
- *Journal of Asian Earth Sciences*
- *Journal of Geology and Geoscience*
- *Journal of Hydrogeology & Hydrologic Engineering*
- *Journal of Spatial Science*
- *Journal of the Indian Society of Remote Sensing*
- *Landscape Ecology*
- *Nonlinear Processes in Geophysics*
- *Natural Hazards*
- *Ore Geology Review*
- *Papers in Applied Geography*
- *Pattern Recognition Letters*
- *Photogrammetric Engineering and Remote Sensing (PE & RS)*
- *Remote Sensing*
- *Remote Sensing of Environment*
- *Remote Sensing Letters*
- *Sensors*
- *Signal Processing*

Published Book

Dong, P., and Chen, Q., 2018. *LiDAR Remote Sensing and Applications*. CRC Press/Taylor & Francis Group. 200 Pages - 40 Color & 143 B/W Illustrations, ISBN 9781138747241.



- The book has six chapters. My co-author Prof. Qi Chen (University of Hawai‘i at Mānoa) contributed part of Chapter 3 (Data Processing Methods) and part of Chapters 4 (Forestry Applications).
- One of the most comprehensive books on LiDAR remote sensing covering LiDAR principles, data processing methods, applications in several important fields (forestry, vegetation mapping and measurement, urban environments, disaster damage assessment, and geosciences), and hands-on projects for students.
- The book has been adopted as a textbook by at least five universities in the United States and China.
- The book has been cited over 160 times since 2018.
- The book’s Research Interest (RI) score is higher than 94% of items on ResearchGate.
- The book’s Research Interest (RI) score is higher than 98% of items published in 2018 on ResearchGate.

Peer-reviewed Journal Papers and Book Chapters

(**Notes:** ① – Peer-reviewed papers in Tier 1 international journals with high impact factors in the field; [g] – Papers from research grants; [b] – Peer-reviewed book chapters; **Δ** – Peer-reviewed papers for international conferences in computer science with low acceptance rates (less than 28%). * – Graduate students)

[90] Isazade, V., Qasimi, A.B., **Dong, P.**, Kaplan, G., Isazade, E., 2023. Spatio-temporal modeling of COVID-19 outbreak in Qom and Mazandaran provinces, Iran. *Modeling Earth Systems and Environment* (in press).

[89] Xia, J., Wang, Y., **Dong, P.**, Zhao, F., He, S., Luan, G., 2022. Object-oriented canopy gap extraction from UAV images based on edge. ***Remote Sensing,*** 14(19), 4762; https://doi.org/10.3390/rs14194762. ①. 2021 Impact Factor: 5.349.

[88] Mao, Z., Fan, L., **Dong, P**., 2022. Modeling distance uncertainties in two-dimensional space. *Measurement*, https://doi.org/10.1016/j.measurement.2022.111818. ①

[87] *Rahimi, E., **Dong, P**., 2022. Estimating the pollination supply of urban green spaces to determine suitable areas for urban agriculture in the City of Tehran. *Urban Ecosystems*, https://doi.org/10.1007/s11252-022-01289-6. (I am a co-advisor of E. Rahimi, doctoral student at the Environmental Science Research Institute, Shahid Beheshti University, Tehran, Iran).

[86] *Rahimi, E., **Dong, P**., 2022. The most important human pressures affecting Iran's protected areas. *Journal of Environmental Studies and Sciences*, 12: 682-691. (I am a co-advisor of E. Rahimi, doctoral student at the Environmental Science Research Institute, Shahid Beheshti University, Tehran, Iran).

[85] Wang, Y., **Dong, P**., Liao, S., Zhu, Y., Zhang, D., and Yin, N., 2022. Urban expansion monitoring based on the digital surface model—A case study of the Beijing–Tianjin–Hebei Plain. *Applied Sciences*, 2022, 12, 5312. https://doi.org/10.3390/app12115312

[84] Chang, Z., **Dong, P.**, Yuan, R., Hou, J., Li, J., Chang, H. 2022. The 2014 northern Thailand Mw 6.1 earthquake and its seismogenic tectonics. *Acta Geologica Sinica (English Edition)*, 2022, 96(2): 648–660.

[83] *Rahimi, E., Barghjelveh, S., **Dong, P**., 2022. A comparison of discrete and continuous metrics for measuring landscape changes. *Journal of the Indian Society of Remote Sensing*, 50: 1257–1273. (I am a co-advisor of E. Rahimi, doctoral student at the Environmental Science Research Institute, Shahid Beheshti University, Tehran, Iran).

[82] *Rahimi, E., Barghjelveh, S., **Dong, P**., 2022. Amount, distance-dependent and structural effects of forest patches on bees in agricultural landscapes: A review. *Agriculture & Food Security*, 11(10), https://doi.org/10.1186/s40066-022-00360-x. (I am a co-advisor of E. Rahimi, doctoral student at the Environmental Science Research Institute, Shahid Beheshti University, Tehran, Iran).

[81] Zhang, J., Wang, J., **Dong, P**., Ma, W., Liu, Y., Liu, Q., Zhang, Z., 2022. Tree stem extraction from point-cloud data of natural forests based on geometric features and DBSCAN. *Geocarto International*, https://doi.org/10.1080/10106049.2022.2034988.

[80] *Rahimi, E., Barghjelveh, S., **Dong, P**., 2022. A review of diversity of bees, the attractiveness of host plants and the effects of landscape variables on bees in urban gardens. *Agriculture & Food Security*, 11(6), https://doi.org/10.1186/s40066-021-00353-2. (I am a co-advisor of E. Rahimi, doctoral student at the Environmental Science Research Institute, Shahid Beheshti University, Tehran, Iran).

[79] *Rahimi, E., Barghjelveh, S., **Dong, P**., Pirlar, M.A., and Jahanbakhshian, M.M., 2021. PollMap: A software for crop pollination mapping in agricultural landscapes. *Journal of Ecology and Environment*, 45(27), https://doi.org/10.1186/s41610-021-00210-0. (I am a co-advisor of E. Rahimi, doctoral student at the Environmental Science Research Institute, Shahid Beheshti University, Tehran, Iran).

[78] **Dong, P.**, Xia, J., Zhong, R., Zhao, Z., Tan, S., 2021. A new method for automated measurement of sand dune migration based on multi-temporal LiDAR-derived digital elevation models. *Remote Sensing*, 13, 3084. https:// doi.org/10.3390/rs13163084. ①. 2021 Impact Factor: **5.349**.

[77] *Rahimi, E., Barghjelveh, S., **Dong, P.**, 2021. Using the Lonsdorf and ESTIMAP models for large-scale pollination mapping (case study: Iran). *Environmental Resources Research*, 9: 235-251, DOI: 10.22069/IJERR.2021.18872.1332. (I am a co-advisor of E. Rahimi, doctoral student at the Environmental Science Research Institute, Shahid Beheshti University, Tehran, Iran).

[76] *Rahimi, E., Barghjelveh, S., **Dong, P.**, 2021. Quantifying how urban landscape heterogeneity affects land surface temperature at multiple scales. *Journal of Ecology and Environment*, 45(22), https://doi.org/10.1186/s41610-021-00203-z. (I am a co-advisor of E. Rahimi, doctoral student at the Environmental Science Research Institute, Shahid Beheshti University, Tehran, Iran).

[75] *Rahimi, E., Barghjelveh, S., **Dong, P.**, 2021. Estimating landscape structure effects on pollination for management of agricultural landscapes. *Ecological Process*, 10(59), https://doi.org/10.1186/s13717-021-00331-3. (I am a co-advisor of E. Rahimi, doctoral student at the Environmental Science Research Institute, Shahid Beheshti University, Tehran, Iran).

[74] *Rahimi, E., Barghjelveh, S., **Dong, P.**, 2021. How effective are artificial nests in attracting bees? A review. *Journal of Ecology and Environment*, 45(16), https://doi.org/10.1186/s41610-021-00192-z. (I am a co-advisor of E. Rahimi, doctoral student at the Environmental Science Research Institute, Shahid Beheshti University, Tehran, Iran).

[73] *Pu, J., Zhao, X., **Dong, P.**, Wang, Q., Yue, Q., 2021. Extracting information on rocky desertification from satellite images: A comparative study. *Remote Sensing* 13(13), 2497. ①. 2021 Impact Factor: **5.349**.

[72] *Rahimi, E., Barghjelveh, S., **Dong, P.**, 2021. Estimating potential range shift of some wild bees in response to climate change scenarios in northwestern regions of Iran. *Journal of Ecology and Environment*, 45(14), https://doi.org/10.1186/s41610-021-00189-8. (I am a co-advisor of E. Rahimi, doctoral student at the Environmental Science Research Institute, Shahid Beheshti University, Tehran, Iran).

[71] *Rahimi, E., Barghjelveh, S., **Dong, P.**, 2021. Using the Lonsdorf model for estimating habitat loss and fragmentation effects on pollination service. *Ecological Processes*, 12. https://doi.org/10.1186/s13717-021-00291-8. (I am a co-advisor of E. Rahimi, doctoral student at the Environmental Science Research Institute, Shahid Beheshti University, Tehran, Iran).

[70] *Liu, H., **Dong, P.**, and Wu, C., Wang, P., Fang, M., 2021. Individual tree identification using a new cluster-based approach with discrete-return airborne LiDAR data. *Remote Sensing of Environment* 258: 112382. ①. 2020 Impact Factor: **10.69.**

[69] *Wu, Q., Zhong, R., **Dong, P.**, Mo, Y., Jin, Y., 2021. Airborne LiDAR intensity correction based on a new method for incidence angle correction for improving land-cover classification. *Remote Sensing*, 13(3), 511; https://doi.org/10.3390/rs13030511. ①. 2021 Impact Factor: **5.349**.

[68] Wang, Y., **Dong, P.**, Zhu, Y., Shen, J., Liao, S., 2021. Geomorphic analysis of Xiadian buried fault zone in eastern Beijing plain based on SPOT image and unmanned aerial vehicle (UAV) data. *Geomatics, Natural Hazards and Risk*, Vol. 12, No. 1, pp. 261-278.

[67] Wang, R., Shi, W., and **Dong, P.**, 2020. Mapping dragon fruit croplands from space using remote sensing of artificial light at night. *Remote Sensing*, 12(24), 4139; https://doi.org/10.3390/rs12244139. ①. 2019 Impact Factor: **4.509**.

[66] *Man, Q., **Dong, P**., Yang, X., Wu, Q., and Han, R., 2020. Automatic extraction of grasses and individual trees in urban area based on airborne hyperspectral and LiDAR data. *Remote Sensing.* 12(17), 2725; https://doi.org/10.3390/rs12172725. ①. 2019 Impact Factor: **4.509**.

[65] Hart, R., Liang, L., and **Dong, P**., 2020. Monitoring, mapping, and modeling spatial-temporal patterns of PM2.5 for improved understanding of air pollution dynamics using portable sensing technologies. *International Journal of Environmental Research and Public Health.* Vol. 17, No. 14, 4914; https://doi.org/10.3390/ijerph17144914.

[64] *Liu, M., **Dong, P.**, and Zhong, R., 2020. A rapid method for estimating angle of repose and volume of grain piles using terrestrial laser scanning. *Remote Sensing Letters*, Vol. 11, No. 7, pp. 707-713. ①. 2016 Impact Factor: **2.298.**

[63] **Dong, P**., Zhong, R., Xia, J., and Tan, S., 2020. A semi-automated method for extracting channels and channel profiles from lidar-derived digital elevation models. *Geosphere.* ①. 2019 Impact Factor: **2.847**. Vol.16, No.3, pp. 806-816.

[62] Xia, J., **Dong, P.**, Zhao, Z., 2020. Selecting inter-city transportation routes in complex terrains using quantitative methods: A case study from Northern Yunnan, China. *Promet - Traffic & Transportation*. Vol. 32, No. 2, pp. 269-277.

[61] **Dong, P.**, *Sadeghinaeenifard, F., Xia, J., and Tan, S., 2019. Zonal lacunarity analysis: A new spatial analysis tool for geographic information systems. *Landscape Ecology*, Vol. 34, No. 10, pp. 2245-2249. ①. Impact Factor: **4.349**.

[60] Wang, Y., **Dong, P.**, and Liao, S., 2019. Geomorphic analysis of the Beijing Plain based on ZY3 DEM and SRTM data. Quaternary Sciences, Vol. 39, No., 5, pp. 1211-1221.

[59] Xia, J., *Li, J., **Dong, P.**, Yang, K., 2019. An ArcGIS add-in for spatiotemporal data mining in climate data. *Earth Science Informatics*, DOI: 10.1007/s12145-019-00404-0.

[58] Peng, S., Xi, X., Wang, C., **Dong, P.**, Wang, P., Nie, S.,2019. Systematic comparison of power corridor classification methods from ALS point clouds. *Remote Sensing*, 11, 1961; doi:10.3390/rs11171961. ①. 2018 Impact Factor: **4.118**.

[57] Wang, C., Qin, H., Zhao, K., **Dong, P.**, Yang, X., Zhou, G., Xi, X., 2019. Assessing the impact of the built-up environment on nighttime lights in China. *Remote Sensing*, 11, 1712; doi:10.3390/rs11141712. ①. 2018 Impact Factor: **4.118**.

[56] *Man, Q. and **Dong, P.**, 2019. Extraction of urban objects in cloud shadows based on fusion of airborne LiDAR and hyperspectral data. *Remote Sensing*, 11, 713; doi:10.3390/rs11060713. ①. 2018 Impact Factor: **4.118**.

[55] *Sadeghinaeenifard, F. and **Dong, P.**, 2019. Comparison of longitude-latitude and Euclidean distance shape

descriptors for determining tree crown shapes derived from LiDAR data. *International Journal of Remote Sensing*, Vol. 40, No. 22. ①. 2018 Impact Factor: **2.493**.

[54] *Xia, J. and **Dong, P.**, 2019. Spatial characteristics of physical environments for human settlements in Jinsha River watershed (Yunnan Section), China. *Geomatics, Natural Hazards and Risk*, Vol. 10., pp. 544-561. (J. Xia was my post-doctoral fellow).

[53] **Dong, P.**, Zhong, R., Yigit*, A., 2018. Automated parcel-based building change detection using multitemporal airborne LiDAR data. *Surveying and Land Information Science*, Vol. 77, No. 1, pp. 5-13.

[52] *Liu, G., Wang, J., **Dong, P**., Chen, Y., and Liu, Z., 2018. Estimating individual tree height and diameter at breast height (DBH) from terrestrial laser scanning (TLS) data at plot level. *Forests*,9(398), 19 pages. ①

[51] **Dong, P**., 2017. Automated accuracy assessment for ridge and valley polylines using high resolution digital elevation models. *Geosphere*, Vol. 13, No. 6, 2078-2084. ①. 2016 Impact Factor: **2.304**.

[50] *Nie, S., Wang, C., **Dong, P**., Li, G., and Xi, X., Luo, S., and Qin, H., 2017. A novel model for terrain slope estimation using ICESat/GLAS waveform data. *IEEE Transactions on Geoscience and Remote Sensing*, Volume: PP, Issue: 99, pp. 1-11. ①. 2016 Impact Factor: **4.942**.

[49] Nie, S., Wang, C., **Dong, P**., Xi, X., Luo, S., and Qin, H., 2017. A revised progressive TIN densification for filtering airborne LiDAR data. *Measurement*, 104, 70-77. ①. 2016 Impact Factor: **2.359**.

[48] Xia, J., and **Dong, P**., 2016. A GIS add-in for automated measurement of sand dune migration using LiDAR-derived multi-temporal and high-resolution digital elevation models. *Geosphere*, Vol. 12, No. 4, pp. 1316-1322. ①. 2016 Impact Factor: **2.304**.

[47] *Nie, S., Wang, C., **Dong, P.**, Xi, X., Luo, S., and Zhou, H., 2016. Estimating leaf area index of maize using airborne discrete-return LiDAR data. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, Vol. 9, No. 7, pp. 3259 - 3266. Impact Factor: **2.913.**

[46] *Li, D., Guo, H.D., Wang, C., **Dong, P**., and Zuo, Z., 2016. Improved bore-sight calibration for airborne LiDAR using planar patches. *Journal of Applied Remote Sensing*, 10(2), 024001 (2016), doi: 10.1117/1.JRS.10.024001. 5-year Impact Factor: **1.309**.

[45] **Dong, P.**, 2015. Automated measurement of sand dune migration using multi-temporal LiDAR data and GIS. *International Journal of Remote Sensing*, Vol. 36, No. 21, pp. 5426-5447. ①. 2014 Impact Factor: **1.652**.

[44] Xia, J., **Dong, P.**, and *Tang, J., 2015. Efficient rendering of natural hazards data in mobile GIS. *Geomatics, Natural Hazards and Risk*, Vol. 7, No. 5, pp. 1726-1730. [g]. 2014 Impact Factor: **1.310**.

[43] *Nie, S., Wang, C., **Dong, P.**, and Xi, X., 2015. Estimating leaf area index of maize using airborne full-waveform LiDAR data. *Remote Sensing Letters*, Vol. 7, No. 2, pp. 111-120. ①. 2014 Impact Factor: **1.573**.

[42] *Man, Q., **Dong, P.**, and Guo, H.D., 2015. Pixel- and feature-level fusion of hyperspectral and LiDAR data for urban land use classification. *International Journal of Remote Sensing*, Vol. 36, No. 6, 1618-1644. ①[g]. 2014 Impact Factor: **1.652**.

[41] **Dong, P.**, 2014. LiDAR data for characterizing linear and planar geomorphic markers in tectonic geomorphology. *Journal of Geophysics and Remote Sensing* 4: 136. doi:10.4172/2169-0049.

[40] *Man, Q., **Dong, P.**, and Guo, H.D., Liu, G., and Shi, R., 2014. LiDAR and hyperspectral data for estimation of forest biomass: A review. *Journal of Applied Remote Sensing* 8(1), doi:10.1117/1.JRS.8.081598. [g]. 5-year Impact Factor: **1.309**. (**The paper was among the top 10 downloads of the journal for February 2015**).

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[34] **Dong, P.**, Wang, C., and *Ding, J., 2013. Estimating glacier volume loss using digital elevation data, remotely sensed images and GIS modeling. *International Journal of Remote Sensing*. Vol. 34, No. 24, pp. 8881-8892. ①[g]. 2014 Impact Factor: **1.652**.

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[17] **Dong, P.**, 2008. Fractal signatures for multiscale processing of hyperspectral image data. *Advances in Space Research.* Vol. 41, pp. 1733-1743. [g]. 2014 Impact Factor: **1.238**.

[16] Huang, Y., *Chen, C., and **Dong, P.**, 2008. Modeling herds and their evolvements from trajectory data. *GIScience 2008-the 5th International Conference on Geographic Information Science, Park City, Utah, September 23-26, 2008*. (Peer-reviewed conference paper, acceptance rate: **24%**). ①Δ

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[14] **Dong, P.**, and Leblon, B., 2004. Rock unit discrimination on Landsat-TM, SIR-C and RADARSAT images using spectral and textural information. *International Journal of Remote Sensing*, Vol. 25, No. 18, pp.3745-3768. ①[g]. 2014 Impact Factor: **1.652**.

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[12] **Dong, P.**, 2000. Test of a new lacunarity estimation method for image texture analysis. *International Journal of Remote Sensing*. Vol. 21, No. 17, pp. 3369-3373. ①. 2013 Impact Factor: **1.652**. **(The citation of the paper is among the top 15% compared with 283 papers published in the journal in 2000 according to data analyses using the Publish or Perish software).**

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[10] **Dong, P.**, 1995. A test study on alteration mapping using Landsat TM data and geographic information system. (Guo et al. eds) *Methodology and practice of remote sensing for mineral exploration*, Science Press, Beijing. (in Chinese with English abstract), pp. 24-28. [g]

[9] **Dong, P.**, 1995. Integration of Landsat TM and airborne SAR imagery in Qinghe Area, Xinjiang. (Guo, ed.) *Methodology and Practice of Remote Sensing for Mineral Exploration.* Science Press, Beijing. (in Chinese with English abstract). pp. 49-53. [g]

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[7] **Dong, P.**, 1995. Trend surface analysis of the lineaments derived from remotely sensed imagery and its geological significance in eastern Altay region. (Guo, ed.) *Methodology and Practice of Remote Sensing for Mineral Exploration.* Science Press, Beijing. (in Chinese with English abstract). pp. 130-136. [g]

[6] **Dong, P.**, 1995. Integration of multi-source remotely sensed and ancillary data sets. (Guo ed.) *Remote Sensing for Geological Mapping and Mineral Exploration in Northern Xinjiang.* (in Chinese), Science Press, Beijing, pp. 45-52. [g]

[5] Guo, H.D., Li, L., and **Dong, P.**, 1995. Perspective of remote sensing techniques for geological mapping and mineral exploration. (Guo ed.) *Remote sensing for Geological Mapping and Mineral Exploration in Northern Xinjiang*. (in Chinese), Science Press, Beijing, pp. 230-246. [g]

[4] Guo, H.D., **Dong, P.**, Li, L., and Wang, J.D., 1993. Methodologies of remote sensing information extraction and multi-source data integration for mineral exploration. (G.Z. Tu ed.*) Advances in Solid Earth Research of Xinjiang, China*. Science Press, Beijing. (in Chinese with English abstract). pp. 421-437. [g]

[3] Guo, H.D., Zhang, Y.H., Shao, Y., **Dong, P.**, and Wang, C., 1993. Geological analysis using shuttle imaging radar and airborne SAR in China. *Advances in Space Research*, Vol. 13, No. 11, pp. 79-82. [g]. 2013 Impact Factor: **1.238**.

[2] Guo, H.D., and **Dong, P.**, 1992. Integrated MSS-SAR-SPOT-Geophysical and Geochemical Data for Exploration Geology in Yeder Area. *Advances in Space Research*, Vol.12, No.7, pp. 27-30. [g]. 2013 Impact Factor: **1.238**.

[1] **Dong, P.**, 1992. Extraction and comparison of lineaments from synthetic aperture radar images with two illumination directions. (Guo et al. eds) *Radar Image Analysis and Applications.* Science Press, Beijing. (in Chinese with English abstract), pp. 36-41. [g]

Invited Talks

[41] Dong, P., LiDAR remote sensing and applications. Webinar presentation invited by GIS Day in Iran. November 17, 2021.

[40] Dong, P., Introduction to GIS. Webinar presentation organized by the Graduate School, University of North Texas (UNT). September 2020.

[39] Dong, P., Introduction to GIS. Workshop presentation organized by the Graduate School, University of North Texas (UNT). March 5, 2020.

[38] Dong, P., Using GIS in your research. Workshop presentation at the Department of Political Science, UNT. November 14, 2019.

[37] Dong, P., A semi-automated method for extracting channels and channel profiles from LiDAR-derived digital elevation models. Yunnan University, Kunming, China. June 20, 2019.

[36] Dong, P., LiDAR Remote sensing for change detection. Fuzhou University, Fuzhou, China. June 3, 2019.

[35] Dong, P., Workshop: LiDAR principles, data processing methods, and applications. Yunnan Normal University, Kunming, China. June 25-26, 2018.

[34] Dong, P., Geospatial data and social media data. Yunnan Normal University, Kunming, China. June 24, 2018.

[33] Dong, P., LiDAR applications in tectonic geomorphology and active fault studies. Yunnan Seismological Bureau, Kunming, China. June 15, 2018.

[32] Dong, P., Geospatial data and social media data. Yunnan University, Kunming, China. June 11, 2018.

[31] Dong, P., A review of LiDAR applications in urban environments. Department of Geography, Oklahoma State University, Stillwater, Oklahoma. April 27, 2018.

[30] Dong, P., Geography and geospatial information science. Department of Information Science, University of North Texas, Denton, Texas. November 10, 2017.

[29] Dong, P., Parcel-based change detection using multi-temporal LiDAR data and GIS. City of Dallas, Texas. August 23, 2017.

[28] Dong, P, GIS programming: trends and applications. Yunnan Normal University, Kunming, China. June 13, 2017.

[27] Dong, P, LiDAR applications in forestry and urban environments. Yunnan Normal University, Kunming, China. June 9, 2017.

[26] Dong, P., LiDAR applications in earth sciences. Institute of Disaster Prevention Science and Technology, Beijing, China. May 25, 2017.

[25] Dong, P., LiDAR and GIS for land use land cover change analysis. The Meteorological Bureau of Yunnan Province, China. August 4, 2016.

[24] Dong, P., Recent developments in LiDAR applications. Yunnan University, Kunming, China. June 10, 2016.

[23] Dong, P., LiDAR applications in forestry, urban environments, and geosciences. Capital Normal University, Beijing, China. May 13, 2016.

[22] Dong, P., *Automated measurement of sand dune migration rates using multi-temporal LiDAR data and GIS.* Invited lecture in the Human Geoscience/GIS Session, Japan Geoscience Union Meeting 2015, May 24-28, Chiba, Japan.

[21] Dong, P., *Taking pictures of the Earth from satellites*. Invited lecture for 3rd grade students at the Newton Rayzor Elementary School, Denton, TX 76203. January 12, 2015.

[20] Dong, P., *LiDAR data for characterizing tectonic landforms and coseismic deformation: A review*. Invited presentation at the 91st Forum for Earth Observation and Digital Earth, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, China, November 20, 2014.

[19] Dong, P., *China Field School – A UNT Study Abroad Program*. Invited presentation at the Department of Geography Annual Banquet, University of North Texas, May 3, 2014.

[18] Dong, P., *Geospatial technology and earthquake damage assessment*. Invited presentation at the China Seismological Bureau, Beijing, China, December 16, 2013.

[17] Dong, P., *GIS and remote sensing education at the University of North Texas*. Invited presentation at the College of Earth and Environmental Sciences, Yunnan University, Kunming, China, May 30, 2013.

[16] Dong, P., *Volunteered geographic information (VGI) and OpenStreetMap*. Invited presentation at the College of Earth and Environmental Sciences, Yunnan University, Kunming, China, May 23, 2012.

[15] Dong, P., *Application of LiDAR data, Google Building Maker and OpenStreetMap in urban environments*. Invited presentation at the Center for Earth Observation and Digital Earth (CEODE), Chinese Academy of Sciences, Beijing, China. April 27, 2012.

[14] Dong, P., *LiDAR data and volunteered geographic information for automated detection of road blockage in post-disaster scenarios*. Invited presentation at the Department of Information Technology and Decision Science, University of North Texas, Denton, TX, March 30, 2012.

[13] Dong, P., *Shape signatures of 3D building models derived from LiDAR data and volunteered geographic information*. Invited presentation at the Center for Earth Observation and Digital Earth (CEODE), Chinese Academy of Sciences, Beijing, China. June 16, 2011.

[12] Dong, P., *LiDAR data and volunteered geographic information for automated assessment of disaster damage*. Invited presentation at the College of Computer and Information Science, Hefei University of Technology, Hefei, China. June 13, 2011.

[11] Dong, P., *GIS and remote sensing for emergency planning and response*. Invited presentation at the Department of Public Administration, University of North Texas, Denton, TX. September 28, 2010.

[10] Dong, P., *3D crown shapes and biomass derived from LiDAR data*. Invited presentation at the College of Engineering and Technology, Northeast Forestry University, Harbin, China. June 27, 2011.

[9] Dong, P., *Microwave remote sensing and LiDAR data for forestry studies*. Invited presentation at the Southwest Forestry University, Kunming, China, June 25, 2010.

[8] Dong, P., *Application of LiDAR data and GIS in urban studies*. Invited presentation at the School of Earth and Environmental Sciences, Yunnan University, Kunming, China, June 24, 2010.

[7] Dong, P., *Characterizing forest structure and urban environment using LiDAR data*. Invited presentation at the Yunnan Normal University, Kunming, China, June 23, 2010.

[6] Dong, P., *Estimating forest biophysical parameters using LiDAR data*. Invited presentation at the Center for Earth Observation and Digital Earth (CEODE), Chinese Academy of Sciences, Beijing, China, June 17, 2010.

[5] Dong, P., *The use and misuse of geospatial data and tools*. Invited presentation at the Metroplex Arc User Group (MAUG)/North Central Texas Geographic Information and Technology Association (NCTGITA) Regional GIS Consortium, Dallas, USA. August 28, 2008.

[4] Dong, P., *Some research topics in geographic information science*. Invited presentation at the Department of Geographic Information Science, Yunnan University, Kunming, China, July 11, 2008.

[3] Dong, P., *Modeling vegetation canopy structure using LiDAR data*. Invited presentation at the UNT Department of Computer Science and Engineering. March 14, 2008.

[2] Dong, P., *Digital earth and desertification research*. Invited presentation at the 2007 Digital Earth Workshop, Center for Earth Observation and Digital Earth (CEODE), Chinese Academy of Sciences, Beijing, China, November 17-21, 2007.

[1] Dong, P., *GIS education at the University of North Texas*. Invited presentation at the College of Environmental and Earth Sciences, Yunnan University, China. July 3, 2006.

Conference Presentations (Presenters are underlined for papers with multiple authors)

[27] **Dong, P**., 2019. A semi-automated method for extracting channels and channel profiles from LiDAR-derived digital elevation models. Japan Geoscience Union (JpGU) Meeting 2019, Chiba, Japan. May 29, 2019.

[26] Liu, M., **Dong, P.**, Zhong, R., 2019. A new method for calculating angle of repose and volume of grain piles using LiDAR point clouds. Conference paper. The 5th Chinese Symposium on LiDAR Remote Sensing. Xiamen, China. May 25-26, 2019.

[25] **Dong, P**., 2016. Regional GIS Meeting: Automated Building Change Detection Using Zonal Statistics Derived from Multi-Temporal LiDAR Data. Denton Regional GIS Meeting, Denton, Texas. December 7, 2016.

[24] **Dong, P**., 2016. Automated Building Change Detection Using Zonal Statistics Derived from Multi-Temporal LiDAR Data. The Annual Conference of the Southwest Division of the American Association of Geographers (**SWAAG**), Denton, TX. October 21, 2016.

[23] **Dong, P**., 2016. A Review of Airborne LiDAR Data for Morphometric Analysis of Sand Dunes. Digital Earth Summit, Beijing, China. July 7-8, 2016.

[22] Man, Q., Guo, H.D., **Dong, P.**, Liu, G., and Shi, R., 2014. *Support vector machines and maximum likelihood classification for land use classification from hyperspectral imagery*. Presented at the International Geoscience and Remote Sensing Symposium (IGARSS 2014), Québec, Canada. July 13-18, 2014.

[21] Liu, W., **Dong, P.**, Liu, S., and Liu, J., 2014. *A rich Internet application for automated detection of road blockage in post-disaster scenarios*. The 8th International Symposium on Digital Earth.

[20] Liu, H., and **Dong, P.**, *A new method for generating canopy height models from discrete-return LiDAR point clouds*. Presentation at the AAG Annual Meeting, Tampa, FL, April 11, 2014.

[19] **Dong, P.**, Liu, H., Liu, W., and Wang, C., *Automated treetop detection and tree crown discrimination using LiDAR data*. Presented at the 35th International Symposium on Remote Sensing of Environment. Beijing, China, April 22-26, 2013.

[18] Liu, W., and **Dong, P.**, *LiDAR data and volunteered geographic information for automated detection of road blockage in post-disaster scenarios*. Presentation at the Association of American Geographers (AAG) Annual Meeting, New York, February 26, 2012.

[17] **Dong, P.**, *Estimating glacier volume loss using IKONOS images and ASTER GDEM data: a case study of the Gangotri Glacier in the Himalayas*. Presentation at the ASPRS 2011 Annual Conference, Milwaukee, Wisconsin, May 1-5, 2011.

[16] **Dong, P.**, *Automated near real-time assessment of earthquake damage using LiDAR data and volunteered geographic information*. Presentation at the 2011 ESRI Redlands GIS Week. Redlands, CA, February 8-10, 2011.

[15] **Dong, P.**, and Ramesh, S., *Small-area population estimation using LiDAR and high-resolution images*. Presentation at the AAG Annual Conference, Washington, D.C., April 14-18, 2010.

[14] **Dong, P.**, and Nepali, A., *County-level population estimation using knowledge-based image classification and regression models*. Applied Geography Conference, Fort Worth, TX. October 20-23, 2010.

[13] **Dong, P.**, *Characterization of individual tree crowns using three-dimensional shape signatures derived from LiDAR data*. American Geophysical Union (AGU) 2009 Joint Assembly, Toronto, Canada, May 24-27, 2009.

[12] Liu, J., and **Dong, P.**, *Support vector machines (SVM) for hyperspectral image classification*. Presented at the XXIst International Society for Photogrammetry and Remote Sensing (ISPRS) Congress, Beijing, China, July 3-11, 2008.

[11] **Dong, P.**, *Multiresolution analysis of EO-1 Hyperion hyperspectral data for vegetation mapping*. Presentation at the 32nd International Symposim on Remote Sensing of Environment. San Jose, Costa Rica. June 25-29, 2007.

[10] Pan, Y., and **Dong, P.**, *Location competition among chains of supercenters: Wal-mart, Target and Kmart in DFW area*. Presented at the 38th Annual Meeting, Decision Sciences Institute, Phoenix, Arizona, November 18-21, 2007.

[9] **Dong, P.**, *Fractal signatures for multiscale processing of hyperspectral image data*. Presentation at the 36th Committee on Space Research (COSPAR) Scientific Assembly. Beijing, China. July 16-23, 2006.

[8] **Dong, P.**, *Development of a GIS/GPS based emergency response system*. Presentation at the 13th International Conference on Geoinformatics: Coping with Disasters across Continents. Toronto, Canada. August 17-19, 2005.

[7] **Dong, P.**, Spark, R., Williams, P.F., *Mapping rock type and structures within the Monashee Mountains South of Revelstoke, B.C.* Canadian ERS-1 AO Project Summary No. 20. Ottawa, 1996.

[6] **Dong, P.**, and Williams, P.F., *Remotely sensed image texture analysis using fractal signatures*, Presented at the GAC/MAC Annual Meeting, Victoria, B.C., June 2-6, 1995, Canada.

[5] Guo, H.D., Shao, Y., and **Dong, P.**, 1993, *Geological and geomorphological analysis using Shuttle Imaging Radar (SIR-B) and airborne multi-polarization data in Northern China*. Proceedings of the Ninth Thematic Conference on Geologic Remote Sensing, Pasadena, CA, USA.

[4] **Dong, P.**, 1992, *Geomorphological and neotectonic interpretation of Shuttle Imaging Radar (SIR-A) imagery of Yumen, Northwest China*. Album of Shuttle Imaging Radar Applications in China. Institute of Remote Sensing Applications, Chinese Academy of Sciences, Beijing, China.

[3] **Dong, P.**, Li, L., and Guo, H.D., 1991, *An approach of geographic information system toolkit for gold exploration in Haqa area, China*. Proceedings of the Eighth Thematic Conference on Geologic Remote Sensing, Denver, Colorado, USA, April 29 - May 2, Vol. 2, pp. 863-872.

[2] **Dong, P.**, 1991, *Geological dataset analysis supported by geographic information systems*. Presented at the First Conference on Remote Sensing and Geographic Information Systems, Chinese Academy of Sciences, Beijing, China. April 2-4, 1991. (Awarded the second prize in the conference)

[1] **Dong, P.**, 1991, *TM-SAR datasets and GIS Toolkit for alteration mapping in Kalato area, China*. Presented at the IGCP 264 Meet 1991: Geological Application of Remote Sensing - With Emphasis on Spectral Properties. Pune, India, December 2-12, 1991.

Projects/Grants

[21] Principal Investigator (Co-PI: Feifei Pan and Lu Liang), *Multi-source remote sensing for identifying environmentally sensitive areas of Denton.* City of Denton, TX. 2022-2023. $25,000.

[20] Co-Principal Investigator, *Methods and mechanisms for forest biomass retrieval using GLAS and multispectral remote sensing data.* National Natural Science Foundation of China (NSFC). 2012-2016. $119,000. (PI: Xiaohuan Xi)

[19] Co-Principal Investigator, *Extracting leaf area index (LAI) from LiDAR and hyperspectral data.* National Natural Science Foundation of China (NSFC). 2012-2015. $105,000. (PI: Cheng Wang)

[18] Principal Investigator, *Terrestrial LiDAR measurement of earthquake surface rupture zones and neotectonic landforms near active faults*. Digital Earth Open Laboratory Grant, Chinese Academy of Sciences. 01/2014-12/2015. $8,200.

[17] Principal Investigator, *Revealing spatial heterogeneity of three-dimensional tree crown structure using discrete-return LiDAR data.* UNT Faculty Research Opportunity (ROP) Grant. 2013-2014. $10,000.

[16] Principal Investigator, *Integration of LiDAR data and volunteered geographic information (VGI) for rapid disaster response.* UNT Faculty Research Opportunity (ROP) Grant. 2012-2013. $10,000.

[15] Principal Investigator, *Estimating glacier volume loss using remote sensing and GIS; a case study of Gangotri Glacier in the Himalayas*. GeoEye Foundation Grant, 2010-2011. $11,000.

[14] Principal Investigator, *LiDAR data for biomass estimation in mixed forests*. Digital Earth Open Laboratory Grant, Chinese Academy of Sciences. 01/2011-12/2012. $8,000.

[13] Principal Investigator, *Small-area population estimation using high resolution images and LiDAR data.* GeoEye Foundation Grant, 2010-2011. $13,125.

[12] Principal Investigator, *Developing new methods for estimating forest biophysical parameters using multi-sensor data.* UNT Faculty Research Opportunity (ROP) Grant. 2010-2011. $7,500.

[11] Principal Investigator, *Automated building extraction from high resolution satellite images and LiDAR data*. UNT Faculty Research Opportunity (ROP) Grant. 2009-2010. $7,500.

[10] Principal Investigator, *Integration of GPS, Speech Recognition, and Geodatabase for GIS Data Collection*. University of North Texas Junior Faculty Summer Research Grant, 2007. $5,000.

[9] Principal Investigator, *Developing Data Conversion and Geoprocessing Tools. Softwhere Solutions*, Dallas, TX. 2007. $862.

[8] Principal Investigator, Oak Ridge Associated Universities (ORAU) Ralph E. Powe Junior Faculty Enhancement Award: *Developing New Multiscale Approaches to Hyperspectral Image Analysis.* 2006. $10,000.

[7] Principal Investigator, *Multiresolution Analysis of Hyperspectral Images for Land Cover Mapping*. University of North Texas Faculty Research Grant, 2006. $5,000.

[6] Principal Investigator, Upper Trinity River Water District Project: *GIS Mapping of Northeast Denton County*. Co-Investigators: Sam Atkinson, Bruce Hunter. 2005. $24,028.

[5] Principal Investigator, Lacunarity for Hyperspectral Image Analysis. University of North Texas Faculty Research Grant, 2005. $3,000.

[4] Principal Investigator, *Developing Fractal Modeling and Lacunarity Analysis Capabilities for ArcGIS*™. University of North Texas Junior Faculty Summer Research Grant, 2005. $5,000.

[3] GIS modeling research for an NSF Project (PI: Dr. Miguel Acevedo): *Biocomplexity: Integrating models of natural and human dynamics in forest landscapes across scales and cultures* (CNH BCS-0216722). 2005. $5,778.

[2] Travel grant for presentation at Yunnan University. Ministry of Education of China. 2008. $600.

[1] Principal Investigator, *Lacunarity Analysis of Radar Image Texture for Rock Unit Discrimination*. Data grant funded by the Earth Observation Data Sets (EODS) Program, Canada Centre for Remote Sensing (CCRS). 1995.

Declined Grants:

[23] Senior Personnel (PI: Yan Huang. Co-PI: Shengli Fu, Bill Buckles, Armin Mikler. Senior Personnel: Darrel Hull, **Pinliang Dong**, Chetan Tiwari, and Yan Wan), 2015. *NSF: NRT- DESE: Spatiotemporal intelligence for smarter emergency management and beyond.* $2,999,809.

[22] Principal Investigator (Co-Investigator: Cheng Wang), 2014. *Fusion of full-waveform LiDAR and hyperspectral data for forest structure characterization.* The Collaborative Research Grants Program, National Natural Science Foundation of China (NSFC), $32,800. (This program is specifically for PIs who hold a position as an associate professor or higher outside mainland China. The funding rate is about 16%).

[21] Co-PI (PI: Shailesh Kulkarni, other Co-PIs: Zhenhua Huang, and Gary Webb), 2013. *Large-scale integrated supply network planning for seasonal disasters with dynamic information relaying and updating mechanism.* National Science Foundation (NSF), $299,979.

[20] Principal Investigator (Co-Investigators: Bill Buckles, Yan Huang, and Sudha Arlikatti), 2012. *CDI Type II: A framework for automated near real-time assessment of disaster damage using LiDAR data and volunteered geographic information*. National Science Foundation (NSF), $762,374.

[19] Co-PI (PI: X. Yuan, other Co-PIs: J. Liu, and A. Mikler, 2010). *Acquisition of Large Shared-memory, High-performance Computing Infrastructure for Data-intensive Studies in Computational Life Sciences*. National Science Foundation (NSF), $371,370.

[18] Co-PI (PI: B. Buckles, other Co-PIs: K. Namuduri, and P. Guturu), 2010. *From multi-sensor data to neighborhood knowledge – A new approach to urban modeling*. National Science Foundation (NSF), $910,249.

[17] Principal Investigator, 2009. *An integrated framework for characterization of forest structure using LiDAR and high-resolution image data*. National Science Foundation (NSF) Faculty Early Career Development Program (CAREER), $400,000.

[16] Co-PI, 2009. (PI: Xiaohui Yuan, Co-PI's: Pinliang Dong, Kamesh Namuduri). *Innovative algorithms for understanding geospatial patterns using hyperspectral imagery*. National Geospatial Intelligence Agency. $449,843.25

[15] Principal Investigator, 2009. (Co-Investigators, Maggie Forbes, Bruce Hunter, Robert Doyle, Joe Yelderman, and Jeff Back). *A GIS-based framework for monitoring and evaluating functions of geographically isolated wetlands*. Environmental Protection Agency (EPA). $330,000.

[14] Principal Investigator, 2008. *Multiscale analysis of spatial heterogeneity in geography – an integrated research and education plan*. National Science Foundation (NSF) Faculty Early Career Development Program (CAREER). $400,000.

[13] Principal Investigator, 2008. *Characterizing spatial heterogeneity of forest canopy structure using LiDAR data*. UNT Faculty Research Opportunity (ROP) Grant. $5,000.

[12] Co-Investigator, 2008. (PI: Steve Wolverton, Co-Investigators: Jim Kennedy, Pinliang Dong), *Conservation status of freshwater mussels in north Texas*. Texas Parks and Wildlife, $88,237.

[11] Collaborator, 2007. (PI: Patrick Moonan, CDC. Other collaborators: Steve Weis, Joseph Oppong), *Building capacity to integrate geospatial analysis into routine public health practice*. Centers for Disease Control and Prevention (CDC).

[10] Principal Investigator, 2007. *Multiscale dynamic modeling of desertification through coupled biophysical and socioeconomic systems – An integrated research and education plan*. National Science Foundation (NSF) Faculty Early Career Development Program (CAREER), $400,004.

[9] Principal Investigator, 2007. *Multiscale characterization and simulation of geomorphic surfaces.* Texas Advanced Research Program (ARP).

[8] Co-Investigator , 2007. (PI: Joseph Oppong, Co-Investigators: Armin Mikler, Pinliang Dong), *Multi-scale spatiotemporal influenza outbreak model*. Geospatial Intelligence Agency, $295,986.66.

[7] Co-Investigator, 2006. Texas Department of Transportation (TxDOT) Research Project: *Developing a statewide, integrated GIS/GPS data model*. PI: Jianling Li (University of Texas at Arlington). Other Co-Investigators: Siamak Ardekani (University of Texas at Arlington), Gautam Das (University of Texas at Arlington), and Kevin Curtin (University of Texas at Dallas). UNT budget: $15,605.

[6] Principal Investigator, 2006. *Developing a GIS-based traffic accident analysis system*. Yunnan Institute of Transportation. $428,894.

[5] Collaborator, 2006. NASA Terrestrial Hydrology Program (THP): *Linking soil moisture to drainage efficiency in wetland-converted croplands in the Midwest U.S.* PI: Susan Wang (University of Missouri-Columbia). Co-Investigator: Michael Urban (University of Missouri-Columbia).

[4] Principal Investigator, 2005. American Airlines Research Project: *Drive time analysis of three airport pairs in Chicago, Dallas, and Houston.* $5,789.65.

[3] Principal Investigator, 2005. Applied for 10 RADARSAT-2 image scenes through the Science and Operational Applications Research for RADARSAT-2 (SOAR) Program of the Canadian Space Agency. Proposal: *RADARSAT-2 Polarimetric SAR Images for Land Cover Mapping*. Co-Investigators: Miguel Acevedo (UNT), Lin Li (Indiana University – Purdue University Indianapolis, IUPUI).

[2] Principal Investigator, 2005. UNT Faculty Summer Research Grant: *Multiresolution analysis of EO-1 Hyperion images for land cover mapping in the Greenbelt Corridor, Denton, Texas.* $5,000.

[1] Co-Investigator, 2005. NASA Research Announcement (NRA) Soliciting Basic and Applied Research Proposals NNH05ZDA001N-PGG: *Global lunar regolith mixing constrained by compositional mapping and mathematical modeling*. PI: Lin Li (Indiana University – Purdue University Indianapolis, IUPUI). Other Co-Investigators: Andrew Barth (IUPUI), Jeffrey Swope (IUPUI), Yan Huang (UNT). Total budget: $235,397.

Chair of Conference Special Sessions

[4] Chair, Special Session on "Remote Sensing Applications" at the Annual Conference of the Southwest Division of the American Association of Geographers (SWAAG), Denton, TX. October 20-21, 2016.

[3] Chair, Special Session on "*LiDAR Applications in Forestry*" at the 35th International Symposium on Remote Sensing of Environment, Beijing, China, April 22-26, 2013.

[2] Chair, Special Session on "*LiDAR Applications in Urban Environments*" at the Association of American Geographers (AAG) Annual Meeting, New York, NY, February 26, 2012.

[1] Chair, Special Session on "*Natural/Human Responses of Global Climate Change III*" at the American Society for Photogrammetry and Remote Sensing (ASPRS) Annual Conference, Milwaukee, WI, May 4, 2011.

Host of International Visiting Scholars / Post-Doctoral Fellows

[21] Dr. Zhifang Zhao, Yunnan University, Kunming, China. 01/2020 – 05/2020. Research Area: geology.

[20] Mr. Atamyrat Veyisov (Ph.D. student, Fulbright Visiting Scholar), National Institute of Desert, Flora and Fauna. Ashgabat, Turkmenistan. 10/2019 – 10/2020. Research Area: GIS, ecology.

[19] Ms. Meijuan Liu, Capital Normal University, Beijing, China. 11/2019 – 01/2020. Research Area: LiDAR remote sensing.

[18] Ms. Qiong Wu, Capital Normal University, Beijing, China. 12/2018 – 03/2019. Research Area: LiDAR remote sensing.

[17] Ms. Mengying Ma, Yunnan University, Kunming, China. 11/2018 – 12/2018. Research Area: GIS.

[16] Ms. Zhongren Fu, Yunnan University, Kunming, China. 11/2018 – 12/2018. Research Area: Remote sensing.

[15] Dr. Jing Tian, Heilongjiang Institute of Technology, Harbin, China. 09/2018 – 09/2019. Research Area: LiDAR applications in forestry.

[14] Dr. Ruirui Wang, Beijing Forestry University, Beijing, China. 09/2017 – 09/2018. Research Area: LiDAR applications in forestry.

[13] Dr. Yanping Wang, Institute of Disaster Prevention Science and Technology, China. 03/2017 – 09/2017 – 09/2018. Research Area: LiDAR applications in geosciences.

[12] Dr. Cheng Wang, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, China. 03/2017 – 03/2018. Research Area: LiDAR applications in forestry.

[11] Dr. Jinliang Wang, Yunnan Normal University, Kunming, China. 01/2017 – 04/2017. Research Area: LiDAR applications.

[10] Dr. Mehmet Erbas (post-doctoral fellow), Academic Development Branch, Turkish Military Academy, Turkey. 08/2015 – 07/2016. Research Area: GIS/remote sensing/computer programming.

[9] Dr. Zijiang Yang, Yunnan University, Kunming, China. 02/2015 – 02/2016. Research Area: GIS/remote sensing and national parks.

[8] Dr. Shuai Gao, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, China. 12/2014 – 12/2015. Research Area: LiDAR for forest biomass estimation.

[7] Dr. Jisheng Xia (post-doctoral fellow), Yunnan University, Kunming, China. 09/2013 – 09/2014. Research Area: GIS and regional development (post-doctoral fellow).

[6] Mr. Likun Liu (Ph.D. student), Wuhan University, Wuhan, China. 08/2013 – 11/2013. Research Area: LiDAR for urban studies.

[5] Ms. Qixia Man (Ph.D. student), Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, China. 09/2012 – 09/2014. Research Area: LiDAR and hyperspectral data for urban land use classification.

[4] Dr. Cheng Wang, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, China. 01/2012 – 02/2012. Research Area: LiDAR applications.

[3] Mr. Wei Liu (Ph.D. student), Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, China. 11/2010 – 05/2012. Research Area: LiDAR and volunteered geographic information (VGI) for post-earthquake damage assessment.

[2] Mr. Benito Zaragozí (Ph.D. student), Universidad de Alicante, Alicante, Spain. 08/2010 – 12/2010. Research Area: GIS in ecological modeling.

[1] Dr. Shucheng Tang, Yunnan University, Kunming, China. 11/2007 – 04/2008. Research Area: GIS and geosciences.

Media Interview

North Texas Daily: Geospatial Technology, September 20, 2012.
Quartz: LiDAR Technology, January 15, 2021.
American Association of Geographers: Potential Applications of Mobile LiDAR, March 15, 2021.

Teaching (u – undergraduate; g – graduate)

- GEOG 4550/5550: **Advanced GIS** (u/g, Spring), (online, summer)
- GEOG 4590/5590: **Advanced GIS Programming** (u/g, Spring)
- GEOG 4525/5525: **LiDAR Data Analysis in GIS** (u/g, Fall)
- GEOG 4400/5960: **Introduction to Remote Sensing** (u/g, Fall)
- GEOG 4900/5900: **Special Problems** (u/g)
- GEOG 4070/5075: **China Field School** (u/g, Summer) – **Study Abroad Program**
- GEOG 3760: **Geography of China** (u)
- GEOG 5950: **Thesis** (g)

Student Advising (* - graduated)

- Major Professor for the following **9** Ph.D. students:
  -
  - Bashu Bhatta
  - Karrie Kolesar
  - Ehsan Rahimi (co-major professor)
  - Rajshree Rege
  - Samiraalsadadt Saleh
  - Kushendra Shah
  - John South (co-major professor)
  - Wei Liu* (visiting doctoral student, LiDAR, Volunteered Geographic Information – VGI, Disaster Damage)
  - Qixia Man* (visiting doctoral student, LiDAR, Hyperspectral Data, Urban Land Use)

- Major Professor for the following **39** Master's students:
  - Nilanjana (Jui) Bhattacharjee*

- Shwarnali Bhattacharjee
- Shannon Brajer* (Environmental Science)
- Christen Chapman*
- Cai Chen* **(First Place Winner,** 2008 SCAUG) student paper competition)
- Joshua Chlapek*
- Kanan Dave
- Dory Deines*
- Chenxiao Cui*
- Sumant Ganapavarapu*
- Daniel Hendrick*
- Pu Huang*
- Kenny Hudman
- Chieh (Serena) Hung*
- Erin King*
- Mehrdad Koohikamali*
- Haijian Liu*
- Meijuan Liu
- Yang Liu*
- Daniel Michel
- E. Scott Morris*
- Mandla Ndlovu*
- Anjeev Nepali*
- Carmen Oprea*
- Gary Parker*
- Marlana Phillips
- Paula Rafferty*
- Sathya Ramesh* **(First Place Winner,** 2009 SWAAG student paper competition)
- Warangkana (Bink) Ruckthongsook*
- Fariba Sadeghinaeenifard
- Joshua Sales*
- Zongpei Tang*
- Prashant Thapaliya
- Kerra Unal
- Robert Wachal
- Brian Walker*
- Ziquan Yang
- Aykut Yigit*
- Shasha Zheng* (Computational Mathematics)

- Mentor for the following **8** undergraduate students:
  - Zachary Ayer (UNT Honors College)
  - Michelle Wen (TAMS student)
  - Conor Barber* (Undergraduate Research Assistant)
  - Jennifer Ding* (TAMS student, **Semi-finalist** of the **2010 Siemens Science Competition** and the **2011 Intel Science Talent Search**)
  - Chi-Hui (Joyce) Lin* (Undergraduate Research Assistant)
  - Moyu Lin* (Emerald Eagle Scholar)
  - Thiri Mon* (Emerald Eagle Scholar)
  - Zac Jones* (Emerald Eagle Scholar)

- Advisory Committee Member for the following **17** Ph.D. students:
  - Tonda Bone* (Library and Information Science)

- Michael Daniel (Environmental Science)
- Heinrich Goetz* (Environmental Science)
- Amy Hoffman (Environmental Science)
- Carlos Jerez* (Environmental Science)
- Pradeep Khanal (Environmental Science)
- Haijian Liu* (Department of Geography, University of Wisconsin-Milwaukee)
- E. Scott Morris* (Geospatial Information Science Program at University of Texas at Dallas)
- Jennifer Nichols (Environmental Science)
- Sheng Nie (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences)
- Youqin Pan* (Information Technology and Decision Science)
- Zhinan Qiao (Computer Science and Engineering)
- Rajan Rijal* (Environmental Science)
- Janthima Srisombat (Environmental Science)
- Shijun Tang* (Computer Science, **winner of the 2015 UNT Toulouse Dissertation Award**)
- Vivek Thapa* (Environmental Science)
- Shiho Yamamoto* (Environmental Science)

- Advisory Committee Member for the following **33** Master's students:
  - Beatrice Arce
  - Kristin Brooks
  - Debbie Christian
  - Peter Crislip*
  - Lorna Curran*
  - Curtis Denton*
  - Khyati Desai*
  - Amie Dickinson*
  - Patrick Elliott
  - Nick Enwright*
  - Dilcia Figuera*
  - Gaye Gaither*
  - Denice Gallagher
  - Dusty Girard*
  - Brittney Gregory*
  - Kereen Griffith*
  - Arnila Guha
  - Jesse Jones*
  - Erica Lee*
  - Webster Mangham*
  - Sarah McCall*
  - Olumide Omotere*
  - Mohammad Reza Nikfal
  - Alyson Palma* (Environmental Science)
  - Pranav Pokhrel*
  - Lorenda Sarbeng
  - Vaibhav Sarma* (Computer Science and Engineering)
  - Manjul Shrestha*
  - Dana Smith*
  - Jackie Torrecillas
  - Yuen Ting Tsang*
  - Michael Wilson*
  - Monica Yesildirek

Services

- Member, Scientific Freedom & Responsibility Committee, Association of American Geographers (AAG), 2010-2013.
- Member, Research Proposal Review Panel and Technical Assistance Panel, Texas Department of Transportation (TxDOT), 2005 – present.
- Member, GIS Advisory Board, Collin College. 2013 – present.
- Member, Stack Programming Committee, Collin College. 2022 – present.
- Member, Data Visualization Committee, Collin College. 2022 – present.
- Member, Executive Committee, UNT Provost's China Advisory Committee (CAC), 2013 – present.
- Member, UNT Provost's China Advisory Committee (CAC), 2013 – present.
- Member, UNT Research Opportunities Program (ROP) Panel, 2011.
- Member, UNT College of Arts and Sciences Graduate Curriculum Committee, 2005-2008.
- Member, UNT College of Arts and Sciences Science Space Committee, 2008 – present.
- Liaison, UNT Office of Disability Accommodation (ODA), 2005 – present.
- Chair, Promotion and Tenure Committee, Department of Geography and the Environment, 2019 – 2022.
- Chair, Full Professor Promotion Committee, Department of Geography and the Environment, 2018, 2020.
- Chair, Faculty Search Committee, Department of Geography and the Environment, 2017 – 2018.
- Chair, Faculty Search Committee, Department of Geography and the Environment, 2021 – 2022.
- Chair, Faculty Search Committee, Department of Geography and the Environment, 2022 – 2023.
- Chair, Honors and Awards Committee, 2009 – 2018.
- Director of Graduate Studies (2022 – present)
- Coordinator, UNT Graduate GIS Certificate Program, 2011 – present.
- Coordinator, UNT Undergraduate GIS Certificate Program, 2019 – present.
- Coordinator, Professional Master's Program in Geography, 2020 – present.
- Member, Full Professor Promotion Committee, UNT Department of Spanish (2019).
- Member, Full Professor Promotion Committee, UNT College of Information (2019, 2020).
- Member, Faculty Tenure Committee, UNT College of Information (2019, 2020).
- Member, Department Personal Affairs Committee (PAC), 2004 – 2015.
- Member, Department Promotion and Tenure Committee, 2010 – 2015.
- Member, Department Curriculum Committee, 2004 – present.
- Member, Department Committee of the Whole, 2004 – present.
- Member, Department Graduate Admission Committee, 2004 – 2015, 2019.
- Member, Department Faculty Search Committees (2005, 2007, 2008).
- Member, Department Library Committee, 2004 – present.
- Faculty Advisor, UNT Chinese Students and Scholars Association (CSSA), 2007-2008.