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I. Educational Background

- Ph.D., University of Texas at El Paso, Geological Sciences, 2002
M.S., Beijing Research Institute of Uranium Geology and China University of Geosciences (Beijing), Geochemistry, 1993
B.S., East China Institute of Technology, Geology, 1990

II. Professional Employment History

- 2010 – present, *Associate Professor with Tenure*, Geological Sciences Department at UTSA, TX
2004 – 2010, *Assistant Professor*, Geological Sciences Department at UTSA, TX
2002 – 2004, *Postdoctoral Fellow*, New Mexico Tech, NM.
2001 – 2002, *GIS/RS Specialist*, El Paso Water Utilities (EPWU), TX
1999 – 2002, *RA and TA*, Dept. of Geological Sciences at UTEP, TX
1993 – 1998, *Research Associate/Research Scientist*, Beijing Res. Inst. of Uranium Geo., China.

III. Awards and Honors

- 2011 The paper “Xie, H., X. Zhou, E. Vivoni, J. Hendrickx, and E. Small, 2005. *GIS Based NEXRAD Precipitation Database: automated approaches for data processing and visualization*, published in *Computers and Geosciences* named as **The Most Cited Article** 2005-2010 of the Journal.
- 2010 As the thesis advisor of graduate student David Prado who awarded the College of Sciences Dean’s Fund for **Excellence Award** for graduate students.
- 2010 Invited and honored as **guest professor** at Lanzhou University, China for a 3-year term (2010-2013).
- 2009 As the primary advisor of PhD student Burcu Cicek who received the ASPRS Mid-South Student Award (**first place**) for her presentation “Intercomparisons of Antarctic sea ice properties from ship observations, active and passive microwave satellite observations in

- the Bellingshausen Sea”, at the ASPRS/MAPPS Fall Conference, Nov 16-19, San Antonio, TX.
- 2009 As the primary advisor of PhD student Mark Schnur who received the ASPRS Mid-South Student Award (**first place**) for her presentation “Mapping time series root zone soil moisture in a semi-arid region using satellite images”, at the ASPRS/MAPPS Fall Conference, Nov 16-19, San Antonio, TX.
- 2009 As the PI for the project entitled “Antarctic sea ice: thickness, concentration and extent and their changes” approved as European Space Agency (ESA)’s **Category 1 project (6461)** to freely use their Cryosat-2 data (2010-2013).
- 2009 As the primary advisor of PhD student Burcu Cicek who awarded a **University Teaching Fellowship** (academic year 2009-2010) to improve her professional development.
- 2009 As the team co-leader (with my student Burcu Cicek), our **workshop** proposal entitled “Monitoring Arctic and Antarctic sea ice from various satellite products” **approved for implementation** by the International Space Science Institute (ISSI) at Bern, Switzerland. The ISSI will provide expenses for all participants (12-15 persons) except for the air tickets (will be funded by our NASA project). The workshop is planned for the early 2010 at the ISSI.
- 2009 As the PI and project advisor for the **NASA Earth and Space Science Fellowship** (NESSF) awarded to Ms. Penny Wagner (\$90K for three years) for her to continue her doctoral study on Antarctic sea ice.
- 2009 Co-author and co-advisor for **the best poster presentation** given by Dr. Blake Weissling at the Gordon Research Conference Polar Marine Science, Mar 14-19, at Lucca, Italy.
- 2009 As the PI for the project entitled “Antarctic sea ice: thickness, concentration and extent and their changes” approved as European Space Agency (ESA)’s **Category 1 project (6097)** to freely use their ENVISat radar and altimetry data (2009-2012).
- 2008 Invited and honored as **guest professor** at the East China Institute of Technology (FuZhou), where I received my Bachelor degree of Science in Geology in 1990.
- 2007 Xie and his student (Burcu Cicek) awarded **three IOKONS images** (value \$8,141) from GeoEye Foundation to study Antarctic sea ice and Mt. Erebus volcano.
- 2006 Co-author and advisor for **the second place paper presentation** given by Ms. Burcu Cicek at the ASPRS-MAPPS fall 2006 conference, Nov 6-10, San Antonio, TX.
- 2005 Faculty advisor for the Texas Space Grant Consortium **Graduate Fellowship** to Mr. Blake Weissling for studying oak wilt disease using remote sensing tech.
- 2002 **Outstanding** Dissertation Award - Science and Engineering, at University of Texas at El Paso (UTEP).
- 2002 **Outstanding** Ph.D. Dissertation, Department of Geological Sciences (UTEP).
- 2002 **Outstanding** Ph.D. Student in Geological Sciences, College of Science (UTEP).
- 2002 **1st place** oral presentation, for research topic *Examples of application of integrated remote sensing and GIS technologies*, at the Departmental 16th annual student colloquium (UTEP).
- 2001 **2nd place** oral presentation, for research paper *Automatic image registration based on a FFT algorithm and IDL/ENVI*, at the Departmental 15th annual student colloquium (UTEP).
- 1999 China National Nuclear Corporation (CNNC), the **3rd place** prize of Ministerial level, for research project *Methodology Study and Software Development of Ground Objects Frequency Spectrum Abstracted from Remote Sensing Image*.

- 1998 China National Nuclear Corporation (CNNC), the **2nd place** prize of Ministerial level, for research project *Hyperspectral Image Processing and Application in Miaoershan District, South China* .
- 1997 Beijing Geological Society, the **2nd place** award for paper Xie Hongjie and He Jianguo (1997), *Application of Radioactivity Remote Sensing Techniques to Uranium Metallogenic Environment Analyses and Prospective Prognosis in Anshan-Benxi Area, Liaoning Province, China*, "Uranium Geology", Vol. 13, 95-100.
- 1996 Beijing Research Inst. of Uranium Geology, the **1st place** award of annual achievement congress, for academic report *Hyperspectral Image Processing and Application in Miaoershan District, South China*.
- 1996 China National Nuclear Corporation (CNNC), the **2nd place** prize of Ministerial level, for research project *The Formation Mechanism and Prognosis on the Prospect of Pegmatite Type Uranium Deposit in Northern Qinling of China* .
- 1995 China National Nuclear Corporation (CNNC), the **3rd place** prize of Ministerial level, for research project *Application of Radioactivity Remote Sensing Techniques to Uranium Metallogenic Environment Analyses and Prospective Prognosis in Anshan-Benxi Area, Liaoning Province, China*.
- 1993 China Young Geologists Conference on Mineralogy, Petrology and Geochemistry, the **2nd place** award , for academic report *Geochemistry, Petrogenesis and Metallogenesis of the Caledonian Granitic Pegmatite Type Uranium Deposit in Northern Qinling of China* (My Master's Thesis).
- 1990 East China Geological Institute (now East China Institute of Technology), **Outstanding** student and **Outstanding** student leader.

IV. Research/Scholarly/Creative Activities Summary

(* first author my student, **first author postdoc/visiting scholar)

Refereed Publications

- **Journal articles**

55. *Yue, Z., H. Xie, K. Di, and Z. Ouyang, 2012. Mapping lunar olivine using Clementine spectral indices and chemical composition parameters. *ACTA GEOLOGICA SINICA*, Vol. 86 (1): xxx-xxx.
54. **Fan, C., H. Xie, J. Wu, and S. Birnbaum, 2012. Analysis of USGS spectral library of silicate minerals: Implication for remote sensing applications. *Journal of Applied Remote Sensing* (in press)
53. Yu, H., X. Zhang, T. Liang, H. Xie, X. Wang, Q. Feng, and Q. Chen, 2012. A new approach of dynamic monitoring of 5-day snow cover extent and snow depth based on MODIS and AMSR-E data from Northern Xinjiang region. *Hydrological Processes*, doi:10.1002/hyp.8253 ([link](#))

52. Sharif, H. O., S. Chintalapudi, A. Elhassan, H. Xie, and J. Zeitler, 2012. Physically-Based Hydrological Modeling of the 2002 Floods in San Antonio, Texas. *Journal of Hydrological Engineering*. doi:10.1061/(ASCE)HE.1943-5584.0000475 ([link](#))
51. Liang, T, Q. Feng, J. Cao, H. Xie, H. Lin, J. Zhao, and J. Ren, 2011. Changes in global potential vegetation distributions from 1911 to 2000 as simulated by the comprehensive sequential classification system approach. *Chinese Science bulletin*. Vol.56, doi:10.1007/s11434-011-4870-8 ([pdf](#)).
50. *Zhang, G., H. Xie, S. Duan, M. Tian, and D. Yi, 2011. Water level variation of Lake Qinghai from satellite and in-situ measurements under climate change. *Journal of Applied Remote Sensing*. doi:10.1117/1.3601363. ([link](#))
49. *Zhang, G., H. Xie, S. Kang, D. Yi, and S.F. Ackley, 2011. Monitoring lake level changes on the Tibetan Plateau using ICESat altimetry data (2003-2009). *Remote Sensing of Environment*. Vol.115(7): 1733-1742. doi:10.1016/j.rse.2011.03.005 ([link](#))
48. Xie, H., X. Zhang, B. Yu, and H. Sharif, 2011. Performance evaluation of interpolation methods for incorporating rain gauge measurements into NEXRAD precipitation data: A case study in the Upper Guadalupe River Basin. *Hydrological Processes*. Vol 25(24): 3711-3720. doi:10.1002/hyp.8096
47. **Tekeli, A.E., S. Kern, S.F. Ackley, B. Ozsoy-Cicek, **H. Xie**, 2010. Summer Antarctic sea ice as seen by ASAR and AMSR-E and observed during two IPY field cruises: A case study. *Annals of Glaciology* 52(27), 57A091: 327-336.
46. *Ozsoy-Cicek, B., S.F. Ackley, A. Worby, **H. Xie**, and J. Lieser, 2011. Antarctic sea ice extents and concentrations: Comparison of satellite and ship measurements from IPY cruises. *Annals of Glaciology* 52 (57), 57A127: 318-326.
45. *Gao, Y., **H. Xie**, and T. Yao, 2011. Developing snow cover parameters maps from MODIS, AMSR-E and blended snow products. *Photogrammetric Engineering and Remote Sensing*, Vol 77(4):351-361.
44. *Huang, X.D., **H. Xie**, T.G. Liang, D. Yi, 2011. Estimating vertical error of SRTM and map-based DEMs using ICESat altimetry data in eastern Tibetan Plateau. *International J. of Remote Sensing*, Vol 32(18): 5177-5196. DOI: 10.1080/01431161.2010.495092.
43. *Lewis, M. J., Tison, J. L., Weissling, B., Delille, B., Ackley, S. F., Brabant, F., **Xie, H.**, 2011. Sea ice and snow cover characteristics during the winter-spring transition in the Bellingshausen Sea: an overview of SIMBA 2007, *Deep Sea Research II*, Vol.58(9-10): 1019-1038. doi:10.1016/j.dsr2.2010.10.027 ([link](#)).
42. *Ozsoy-Cicek, B., Kern, S., Ackley, S.F., **Xie, H.**, Tekeli, A.E., 2011. Intercomparisons of Antarctic sea ice properties from ship observations, active and passive microwave satellite observations in the Bellingshausen Sea. *Deep Sea Research II*, Vol.58(9-10): 1092-1111. doi:10.1016/j.dsr2.2010.10.031. ([link](#)).
41. **Xie, H.**, S.F. Ackley, D. Yi, H.J. Zwally, P. Wagner, B. Weissling, M. Lewis, K. Ye, 2011. Sea ice thickness distribution of the Bellingshausen Sea from surface measurements and ICESat altimetry. *Deep Sea Research Part II*, Vol.58(9-10): 1039-1051. doi:10.1016/j.dsr2.2010.10.038 ([link](#))
40. *Schnur, M., **H. Xie**, and X. Wang, 2010. Estimating root zone soil moisture at distant sites using MODIS NDVI and EVI in a semi-arid region of southwestern USA. *Ecological Informatics*. Doi: 10.1016/j.ecoinf.2010.05.001 ([link](#))

39. *Yue, Z., **H. Xie**, J. Liu, and Z. Ouyang, 2010. Potential origination of gullies developed on sand dunes and its implications to gullies on crater rims. *Earth Science-Journal of China University of Geosciences*, Vol 35(2): 291-301, doi:10.3799/dqkx.2010.030
38. *Gao, Y., **H. Xie**, T. Yao, and C. Xue, 2010. Integrated assessment on multi-temporal and multi-sensor combination for reducing cloud obscuration of MODIS snow cover products at the Pacific Northwestern USA. *Remote Sensing of Environment*, Vol 114(8): 1662-1675. doi:10.1016/j.rse.2010.02.017
37. Sharif, H. O., A. A. Hassan, S. Bin-Shafique, **H. Xie**, and J. Zeitler, 2010. Hydrologic Modeling of an Extreme Flood in the Guadalupe River in Texas. *J. of American Water Resources Association*, 46(5): 881-891, DOI: 10.1111/j.1752-1688.2010.00459.x.
36. Sharif, H. O., L. Sparks, A. A. Hassan, J. Zeitler, and **H. Xie**, 2010. Application of a distributed hydrologic model to the November 17, 2004 Flood of Bull Creek Watershed, Austin, Texas. *J. of Hydrologic Engineering* Vol 15(8):651-657, DOI: 10.1061/(ASCE)HE,1943-5584.0000228.
35. **Zhu, M, **H. Xie**, and H. Guan, 2010. Algorithm development for Martian atmospheric correction and spatiotemporal variation study of atmospheric profiles. *MARS, The International Journal of Mars Science and Exploration*. Vol 5, 61-67, DOI: 10.1555/mars.2010.0002
34. *Gao, Y., **H. Xie**, N. Lu, T. Yao, and T. Liang, 2010. Toward advanced daily cloud-free snow cover and snow water equivalent products from Terra-Aqua MODIS & Aqua AMSR-E measurements. *Journal of Hydrology*, doi:10.1016/j.jhydrol.2010.01.022 ([link](#)).
33. **Xie**, H., N.B. Chang, A. Daranpob, and D. Prado, 2010. Assessing the long-term urban heat island in San Antonio, Texas based on MODIS Aqua data. *Journal of Applied Remote Sensing*, Vol 4, 043508, doi:10.1117/1.3335611 ([link](#)).
32. **Fan, C., **H. Xie**, D. Schulze-Makuch, S.F. Ackley, 2010. *A formation mechanism for hematite-rich spherules on Mars*. *Planetary and Space Science*, 58(3): 401-410. doi:10.1016/j.pss.2009.11.001 ([link](#)).
31. **Xie**, H., X. Wang, and T. Liang, 2009. *Development and assessment of combined Terra and Aqua snow cover products in Colorado Plateau, USA and northern Xinjiang, China*. *Journal of Applied Remote Sensing*, Vol 3, 033559, doi:10.1117/1.3265996
30. **Guan, H., J.L. Wilson, **H. Xie**, 2009. A cluster-optimizing regression-based approach for precipitation spatial downscaling in mountainous terrain. *Journal of Hydrology*, Vol 375: 578-588, doi:10.1016/j.jhydrol.2009.07.007
29. *Wang, X. and **H. Xie**, 2009. New methods for studying the spatiotemporal variation of snow cover based on combination products of MOIDS Terra and Aqua. *Journal of Hydrology*, Vol 371 (192-200). doi:10.1016/j.jhydrol.2009.03.028.
28. *Weissling, B., S.F. Ackley, P. Wagner, and **H. Xie**, 2009. EISCAM - Digital image acquisition and processing for sea ice parameters from ships. *Cold Regions Science and Technology*, 57(1): 49-60. doi:10.1016/j.coldregions.2009.01.001
27. *Ozsoy-Cicek, B., **H. Xie**, S.F. Ackley, and K. Ye. Antarctic summer sea ice concentration and extent: comparison of ODEN 2006 ship observations, satellite passive microwave and NIC sea ice charts. *The Cryosphere*, Vol.3 (1): 1-9.
26. **Fan, C., D. Schulze-Makuch, **H. Xie**, and N. Lu. Investigation of water signatures at gully-exposed sites on Mars by hyperspectral image analysis. *Planetary and Space Science*, Vol.57 (1): 93-104, doi:10.1016/j.pss.2008.10.011 (in press)

25. *Weissling, B. and **H. Xie**. MODIS biophysical states and NEXRAD precipitation in statistical evaluation of antecedent moisture condition and streamflow. *Journal of the American Water Resources Association*, 45(2): 419-433, DOI: 10.1111/j.1752-1688.2009.00300.x.
24. *Wang, X., **H. Xie**, T. Liang, X. Huang, Comparison and Validation of MODIS Standard and New Combination of Terra and Aqua Snow Cover Products in Northern Xinjiang, China. *Hydrological Processes*, Vol.23 (3): 419-429, doi: 10.1002/hyp.7151.
23. **Guan, H., H. Hsu, O. Makhnin, **H. Xie**, and J. Wilson, 2009. Examination of selected atmospheric and orographic effects on monthly precipitation of Taiwan using the ASOAdEK model. *International Journal of Climatology*, Vol 29 (8): 1171-1181, doi:10.1002/joc.1762.
22. Zhou, X., H. Guan, **H. Xie**, and J.L. Wilson. Analysis and optimization of NDVI definitions and areal fraction models in remote sensing of vegetation. *International Journal of Remote Sensing*, Vol. 30(3): 721-751,doi: 10.1080/01431160802392620.
21. **Xie, H.** 2009. Using remote sensing and GIS technology for an improved decision support: A case study of residential water use in El Paso, Texas. *Civil Engineering and Environmental Systems*, Vol 26(1): 53-63, doi: 10.1080/10286600802003666.
20. *Weissling, B.P. and **H. Xie**, and K. Murray. 2009. Evaluation of NRCS curve number and MODIS time series proxies for antecedent moisture condition. *Civil Engineering and Environmental Systems*, Vol 26(1):85-101, doi: 10.1080/10286600802005356.
19. *Weissling B. and **H. Xie**, 2008. Proximal watershed validation of a remote sensing-based streamflow estimation model. *Journal of Applied Remote Sensing*. Vol. 2, 023549, DOI:10.1117/1.3043664.
18. Qiang, Z. Q. Yao, W. Lejun, Y. Zhao, J. Guao, Z. Zeng, and **H. Xie**, 2008. The annular stress thermal field of satellite thermal infrared prior-earthquakes (in Chinese with English abstract). *ACTA Geoscientica SINICA*, Vol 29: 486-494
17. Liang, T., X. Zhang, **H. Xie**, C. Wu, Q. Feng, X. Huang, and Q. Chen, 2008. Toward improved daily snow cover mapping with advanced combination of MODIS and AMSR-E measurements. *Remote Sensing of Environment*, doi:10.1016/j.rse.2008.05.010.
16. Ackley, S.F., M.J. Lewis, C.H. Fritsen, and **H. Xie**, 2008. Internal melting in Antarctic sea ice: development of "Gap Layers". *Geophysical Research Letters*, 35, L11503, doi:10.1029/2008GL033644.
15. **Xie, H.**, H. Guan, M. Zhu, M. Thueson, S.F. Ackley, and Z. Yue. 2008. A conceptual model for explanation of albedo changes in Martian craters. *Planetary and Space Science*, Vol 56/7: 887-894, doi:10.1016/j.pss.2008.01.012.
14. *Wang, X., **H. Xie**, H. Sharif, and J. Zeitler, 2008. Validating NEXRDA MPE and Stage III precipitation products for uniform rainfall on the Upper Guadalupe River Basin of the Texas Hill Country. *Journal of Hydrology*, Vol. 348(1-2): 73-86, doi: 10.1016/j.jhydrol.2007.09.057.
13. *Wang, X., **H. Xie**, and T. Liang, 2008. Evaluation of MODIS snow cover and cloud mask and its applications in northern Xinjiang, China. *Remote Sensing of Environment*, doi:10.1016/j.rse.2007.05.016.
12. **Guan, H., **H. Xie**, and M. Zhu, 2008. Canopy blockage and scattering effects on apparent soil spectral reflectance and its consequence in spectral mixture analysis of vegetated surfaces. *International Journal of Remote Sensing*, doi:10.1080/01431160701469081

11. *Wang, X., **H. Xie**, H. Guan, and X. Zhou, 2007. Different responses of MODIS-derived NDVI to root-zone soil moisture in semi-arid and humid regions. *Journal of Hydrology*, Vol. 340: 12-24, doi: 10.1016/j.jhydrol.2007.03.022.
10. **Xie, H.**, Y.Q. Tian, J.A. Granillo, G.R. Keller, 2007. Suitable remote sensing method and data for mapping and measuring active crop field. *International Journal of Remote Sensing* Vol. 28(2): 395-411.
9. **Xie, H.**, X. Zhou, J. Hendrickx, E. Vivoni, H. Guan, Y. Tian, and E. Small, 2006. Evaluation of NEXRAD Stage III precipitation data over a semiarid region, *Journal of the American Water Resources Association*, 42(1): 237-256.
8. Zhou, X., **H. Xie**, J. Hendrickx, 2005. Statistical evaluation of MODIS snow cover products with constraints from streamflow and SNOTEL measurement. *Remote Sensing of Environment*, Vol.94 (2), pp214-231.
7. **Xie, H.**, X. Zhou, E. Vivoni, J. Hendrickx, and E. Small, 2005. GIS Based NEXRAD Precipitation Database: automated approaches for data processing and visualization , *Computers and Geosciences*, Vol.31 (1), pp 65-76.
6. **Xie, H.**, G. Randy Keller, and Richard P. Langford, 2004. AIRSAR/TOPSAR Image Processing and Interpretation: an application example in far west Texas, USA. *Geocarto International*, Vol. 19, No. 3, pp. 33-41.
5. **Xie, H.**, N. Hicks, G. R. Keller, H. Huang, V. Kreinovich, 2003. An IDL/ENVI Implementation of the FFT Based Algorithm for Automatic Image Registration , *Computers and Geosciences*, Vol. 29, pp. 1045-1055.
4. **Xie Hongjie**, Li Jianfeng, Liu Dechang, Zhang Yingjun, Huang Shutao, Fen Jie, 1999. Hyperspectral Image Processing and Application Study in Miaoershan District (in Chinese), *Uranium Geology*, Vol.15, pp. 47-54.
3. Rong Jiashu, Feng Minyue, Sun Zhifu, Xu Zhiyang, **Xie Hongjie**, 1997. Pegmatite-type Uranium Mineralization and Regional Zonation of Pegmatite Swarm in North Qinling (in Chinese) , *Geoscience Research*, Vol. 29-30, pp. 76-88 .
2. **Xie Hongjie** , He Jianguo, 1997. Application of Radioactivity-Remote Sensing Techniques to Uranium Metallogenic Environment Analyses and Prospective Prognosis in Anshan-Benxi Area, Liaoning Province, China (in Chinese), *Uranium Geology*, Vol. 13, pp. 95-100.
1. Feng Mingyue, Rong Jiashu, Sun Zhifu, Xu Ziyang, **Xie Hongjie**, 1996. The Formation Mechanism and Prognosis on the Prospect of Pegmatite Type Uranium Deposit in Northern Qinling of China (in Chinese), *China Nuclear Science and Technology Report CNIC-01128 and BRIUG-0034* (Monograph), 9 p.

- **Book/Book Chapters and Other Publications**

3. Liu, D, **H. Xie**, Y. Zhao, J. Zhang, 2008, Hyperspectral data processing and geological application in MiaoErShan area, Guangxi Province (p 97-108), in Liu, D. Study on Post-Remote Sensing Application Technology (in Chinese), ISBN 978-7-80218-244-8, *China Astronautic Publishing House*, 226p.
2. **Xie, H.** and R.G. Keller, 2006, Fusion of Landsat and radar data to enhance the extraction of surface and subsurface information, in Sinha, A.K., ed., *Geoinformatics: Data to Knowledge*, *Geological Society of American Special Paper 397*, p. 141-151, doi:10.1130/2006.2397(10).

1. Feng Mingyue, Rong Jiashu, Sun Zhifu, Xu Ziyang, **Xie Hongjie** , 1996. Pegmatite Type Uranium Deposit of Northern Qinling (in Chinese) , ISBN 7-5022-1591-3, Published by *China Atomic Energy Press*. 144 p.

- **Conference Proceedings**

8. *Zhang, G., H., Xie, and G. Yang, 2011. Seasonal snow cover variations in the Nam Co basin of Tibetan Plateau using MODIS data. *2011 19th International Conference on Geoinformatics*. doi: [10.1109/GeoInformatics.2011.5980902](https://doi.org/10.1109/GeoInformatics.2011.5980902).(link)
7. Zhang, G., H., Xie, and M. Zhu, 2010. Water level changes of two Tibetan lakes Nam Co and Selin Co from ICESat altimetry data. *2010 second IITA International Conference on Geoscience and Remote sensing (IITA-GRS)*, 4p, doi:[10.1109/IITA-GRS.2010.5602644](https://doi.org/10.1109/IITA-GRS.2010.5602644).
6. *Cicek, B. and H. **Xie**, 2006. Elevation and freeboard changes of Ross Sea ice and ice shelf using ICESat. *IEEE IGARSS*, July 31-August 04, Denver, CO. 4 p.
5. Roberto Araiza, **Hongjie Xie**, Scott A. Starks, and Vladik Kreinovich, 2002. Automatic Referencing of Multi-Spectral Images , *Proceedings of 15th IEEE Southwest Symposium on Image Analysis and Interpretation*, April 7-9, Santa Fe, New Mexico. pp. 21-25 .
4. LeMone, D.V., R. L. Dodge, **H. Xie**, R. P. Langford, G. R. Keller, 2002, Remote Sensing Analysis of the Sierra Blanca (Faskin Ranch) Low-Level Radioactive Waste Disposal Site, Hudspeth County, Texas, *Proceedings of 2002 Waste Management*. Tucson, Arizona. 18 p.
3. Srikrishnan, S., R. Araiza, **H. Xie**, S. A. Starks, and V. Kerinovich, 2001, Automatic Referencing of Satellite and Radar Images, *Proceedings of the 2001 IEEE Systems, Man, and Cybernetics Conference*, October 7-10, Tucson, Arizona. pp. 2176-2181 .
2. LeMone, D.V., R. L. Dodge, **H. Xie** , G.R.Keller, 2001, Remote Sensing Analysis of the Fort Hancock Low-Level Radioactive Waste Disposal Site, Hudspeth County, Texas, *Proceedings of 2001 Waste Management*. Tucson, Arizona. 20 p.
1. LeMone, DV, Petr Vaganov, Stanislav Turchenko, Rebecca Dodge, and **Hongjie Xie** , 2000, The Salmi Complex of Karelia, northwestern Russia: Potential High-level Radioactive Waste Repository, *Proceedings of 2000 Waste Management*. Tucson, Arizona. 11 p..

Non-refereed Publications

- **Journals articles**

1. *Weissling, B.P., **H.Xie**, and K.E.Murray, 2007. A multitemporal remote sensing approach to parsimonious streamflow modeling in a southcentral Texas watershed, USA. *Hydrology and Earth System Sciences Discussions*, 4, 1-33 (a discussion paper).

- **Book Chapters and Reports**

4. **Xie, Hongjie**, Mao Yuxian, Liu Dechang, Zhao Yingjun, and Li Jianfeng, 1998. Methodology Study and Software Development of Ground Objects Frequency Spectrum Abstracted from Remote Sensing Image (in Chinese). *Beijing Research Institute of Uranium Geology*. 40 p.

3. **Xie, Hongjie**, Li Jianfeng, Liu Dechang, Huang Shutao, Fen Jie, and Zhao Yingjun, 1997. Hyperspectral Image Processing and Application in Miaoershan District, South China (in Chinese) . *Beijing Research Institute of Uranium Geology*. 59 p.
2. Feng Mingyue, Rong Jiashu, Sun Zhifu, Xu Ziyang, **Xie Hongjie** , 1995, The Formation Mechanism and Prognosis on the Prospect of Pegmatite Type Uranium Deposit in Northern Qinling of China (in Chinese) , *Beijing Research Institute of Uranium Geology*. 164 p.
1. **Xie, Hongjie**, He Jianguo, Liu Dechang, Rui Benshang, Hu Youming, Ouyan Hao, and Fen Jie, 1994, Application of Radioactivity Remote Sensing Techniques to Uranium Metallogenic Environment Analyses and Prospective Prognosis in Anshan-Benxi Area, Liaoning Province, China (in Chinese). *Beijing Research Institute of Uranium Geology*. 59 p.

V. Scholarly Presentations

(* first author my student, **first author postdoc/visiting scholar)

161. *Arricale, A., H. Xie, J. Bolten, G. Zhang, 2011. Analysis of Lake Level and Temperature Variation in the Great Salt Lake using ICESat, MODIS, and In-Situ Data. AGU Fall meeting, San Francisco, CA, December 5-9.
160. *Cardenas, B., H. Xie, 2011. Observations of change in surface characteristics of the Louth crater using HiRISE and CTX images. AGU Fall meeting, San Francisco, CA, December 5-9.
159. *Colby, A., B. Weissling, H. Xie, 2011. Glacial Delineation and Ice Retreat on Pico de Orizaba, Mexico. AGU Fall meeting, San Francisco, CA, December 5-9.
158. *Hassan, A., H. Xie, J. McClelland, H. Sharif, 2011. Simulating surface runoff and water quality in San Antonio river basin using SWAT model from 1/1/2008 to 6/2/2010. AGU Fall meeting, San Francisco, CA, December 5-9
157. *Mazari, N., H. Sharif, H. Xie, J. Zeitler, 2011. Vertical Variability of Radar Reflectivity and its Impact on Radar Rainfall Estimation. AGU Fall meeting, San Francisco, CA, December 5-9.
156. *Perez, T., H. Xie, A. Yun, O. Osidele, 2011. Developing Land-use, Land Cover Maps for the Arroyo Colorado Study Area for 2001 and 2008. AGU Fall meeting, San Francisco, CA, December 5-9.
155. *Prado, D., S. Ackley, H. Xie, 2011. ENVI sat and ASPeCt correlation based on in situ Antarctica Sea Ice measurements. AGU Fall meeting, San Francisco, CA, December 5-9.
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 35. **Xie, H.**, H. Guan, X. Zhou, and J. Wilson, 2005. Relation of below-root-zone soil moisture and surface NDVI from optical remote sensing imagery, ASPRS Annual Conference, March 7-11, Baltimore, Maryland.
 34. **Xie, H.**, E. Vivoni, X. Zhou, and J. Hendrickx, 2005. Rainfall climatology of the monsoon season in New Mexico: Observations from NEXRAD Stage III (1996-2003), AMS Annual Conference (85th), January 9-13, San Diego, California.
 33. B. Scanlon, M. Musgrove, A. Sansom, **H. Xie**, B. Wilcox, J. Sharp, C. Alexander, B. Vieux, R. Jackson, S. Archer, K. Keese, R. Reedy, 2004. Unique Aspects of proposed San Antonio/Guadalupe Hydrologic Observatory in Texas, AGU Fall Meeting, December 13-17, San Francisco, California.
 32. **Xie, H.**, X. Zhou, and J. Hendrickx, 2004, Evaluation of MODIS snow-cover products with constraints from streamflow and SNOTEL data, AGU Fall Meeting, December 13-17, San Francisco, California.
 31. X. Zhou, **H. Xie**, and J. Hendrickx, 2004, Statistical evaluation of MODIS daily and 8-day snow products, EOS Snow and Ice Products workshop, November 16-17, Landover, Maryland.

30. B. Scanlon, M. Musgrove, A. Sansom, H. **Xie**, J. Sharp, Z. Yang, 2004. Potential advances in quantifying water cycle in karst system using hydrologic observatory approach, GSA Annual Conference, November 7-10, Denver, Colorado.
29. **Xie, H.**, G. R. Keller, and X. Zhou, 2004. GIS-based automated time-series remote sensing data conversion and information retrieval, GSA Annual Conference, November 7-10, Denver, Colorado.
28. X. Zhou, H. **Xie**, G. Marshall, and H. Guan, 2004. Spectral signature and emissive characteristics of drought-stressed vegetation - implication for remote sensing of drought stress, ASPRS Annual Conference, May 23-28, Denver, Colorado.
27. **Xie**, Hongjie, Jan Hendrickx, Enrique R. Vivoni, and Xiaobing Zhou, 2004. Estimation of spatial-temporal rainfall frequency during the New Mexico monsoon period using archived, high-resolution NEXRAD radar products , ASPRS Annual Conference, May 23-28, Denver, Colorado.
26. Jan M.H. Hendrickx, Remke L. van Dam, Hongjie **Xie**, and Brian Borchers, 2004. Worldwide evaluation of soil thermal regimes . SPIE conference, April 13-16, Orlando, Florida, USA.
25. **Xie, Hongjie**, Eric Small, Jan Hendrickx, Matt Richmond, and Xiaobing Zhou, 2003, GIS Based NexRAD Precipitation (Stage 3) Database , Proceedings of the ESRI 2003 User Conference, July 7-11, San Diego, CA. 16 p .
24. **Xie , Hongjie**, Jose A. Granillo, and G. Randy Keller, 2003, Classification and Application of Impervious and Pervious Surfaces Using Integrated Remote Sensing and GIS Technologies , Proceedings of the ASPRS 2003 Annual Conference, May 5-9, Anchorage, Alaska. 10 p.
23. Vladik Kreinovich, Hongjie **Xie**, Scott A. Starks, Roberto Araiza, and Roberto Torres , 2003. Algorithms for Geoinformatics: From Image and Data Referencing to Database Cleaning , SIAM (Society for Industrial and Applied Mathematics) Conference on Mathematical & Computational Issues in the Geosciences, March 17-20, Austin, Texas. pp. 64
22. Randy Keller, Hongjie **Xie**, Matthew Averill, 2003, Data Fusion and Joint Inversion as Quantitative Tools for Integrated Analysis of Diverse Data Sets , SIAM (Society for Industrial and Applied Mathematics) Conference on Mathematical & Computational Issues in the Geosciences, March 17-20, Austin, Texas. pp. 69 .
21. **Xie**, Hongjie, Jan Hendrickx, Shirley Kurc, and Eric Small, 2002 , Comparison of Evapotranspiration Estimates from the Surface Energy Balance Algorithm (SEBAL) and Flux Tower Data, Middle Rio Grande Basin , AGU Annual Fall Conference, Dec. 6-10, San Francisco, CA.
20. **Xie**, Hongjie, Granillo, Jose A., Keller, G. Randy, and Langford, Richard, P., 2002, Examples of Applications of Integrated Remote Sensing and GIS Technologies to Water-Related Problems in Far West Texas , GSA abstracts with programs Vol. 34, No. 3, March 2002, GSA Southeastern/North-Central Section Meeting (36th), Alpine, TX.
19. Keller, G.R., **Xie**, H. , Langford, R.P., Quezada, O., and Andronicos, C., 2001 , Geological Motivated Examples of Remote Sensing Data Processing and Fusion , GSA Annual Meeting, November 5-8, Boston, Massachusetts.
18. **Xie, Hongjie**, Nigel Hicks, G. Randy Keller, Haitao Huang, Vladic Kreinovich, 2000, Automatic Image Registration Based on A FFT Algorithm and IDL/ENVI, Proceedings

- of ICORG-2000 International Conference on Remote Sensing And GIS/GPS. Dec. 1-4, Hyderabad, India. Vol. 1, pp. 397-402
17. **Xie, H.**, Keller, G.R., Langford, R., 2000, AIRSAR/TOPSAR Image Processing and Data Fusion with TM Images and Geophysical Data in West Texas, The 14th Applied Geologic Remote Sensing Proceedings, Nov. 6-8, Las Vegas, Nevada. pp. 338
 16. **Xie, H.**, Keller, G.R., Hamlyn, E.J.W., Carranza, H., Kennedy, J., Seeley, J., and Jimenez, A., 2000, The Use of Landsat Images, Digital Elevation Models, Gravity, and Digital Geologic Maps of the El Paso/Cd. Juarez Region as A Tool For Environmental and Water Resource Studies, The 14th Applied Geologic Remote Sensing Proceedings, Nov. 6-8, Las Vegas, Nevada. pp. 342
 15. Turchenko, S.I., Vaganov, P.A., LeMone, D.V., **Xie, H.**, Rodge, R.L., 2000, Remote Sensing Application for Identification of a Stable Geological Block for HLRW Repository Modeling into Precambrian formation of Northwestern Russia, Prague 2000, published on CD-ROM and on Internet. 10 p.
 14. Huang Xianfang, Huang Shutao, Dong Wengming, Pan Wei, Xie Zhidong, Xuan Yanxiu, **Xie Hongjie**, 1998, Application of JERS-1 SAR Data to Uranium Metallogenic Environment, Condition and Prognosis, Microwave Remote Sensing of the Atmosphere and Environment. Microwave Remote Sensing of the Atmosphere and Environment, Sept. 15-17, Beijing, China. pp. 36-44
 13. **Xie Hongjie**, 1996, Review on New Type Sensor Information and Image Analysis Techniques, Annual Congress of Nuclear Industry Geology Bureau's Scientific Research and Management, Beijing, China.
 12. **Xie Hongjie**, 1996, Establishment and Study of the Field Spectrum Library and Spectrum Feature Information Extracting from Hyperspectral Image in Maoershan District, Guanxi Prov., South China, Nuclear Industry Congress of Remote Sensing Applications, Beijing, China.
 11. **Xie Hongjie**, 1996, Study on Hyperspectral Image Processing and Application, Annual Congress of China Remote Sensing Application Association, Kunming, China.
 10. Liu Dechang, He Jianguo, **Xie Hongjie**, and et al, 1995, The New Expansion of Application of Satellite Remote Sensing ImageLight-Energy Spectrum Integrated Image Application to Uranium Resource Exploration, The 9th China Conference of Remote Sensing, Chengdu, China.
 9. Zhao Yingjun, **Xie Hongjie**, He Jianguo, 1995, Lithological Discrimination Model Study using Light-Energy Spertrum Integrated Technique, The 9th China Conference of Remote Sensing, Chengdu, China.
 8. **Xie Hongjie**, He Jianguo, Liu Dechang, and et al, 1995, Study on Continental Crust Evolution and Material Sources and Genesis of Granitic Rock in An-Bei Area of China, The 3rd China Young Geologists Conference on Mineralogy, Petrology and Geochemistry, Chengdu, China.
 7. **Xie Hongjie**, Feng Mingyue, He Jianguo, and et al, 1995, Research and Summary of Evolution and Development on Qinling-Dabie Orogenic Belt, The 3rdChina Young Geologists Conference on Mineralogy, Petrology and Geochemistry, Chengdu, China.
 6. **Xie Hongjie**, He Jianguo, Liu Dechang, and et al, 1995, Light-Energy Spectrum Integrated Technique Application in Detailed Study of Some Geologic Problems, The 9th China Conference of Remote Sensing, Chengdu, China. pp. 106-108

5. Rong Jiashu, Feng Mingyue, **Xie Hongjie**, 1994, Uranium Deposit of Pegmatite Type in Northern Qinling Mountains, The 9th Symposium of International Association on the Genesis of Ore Deposits, Beijing, China. pp. 808-810 .
4. **Xie Hongjie**, Rong Jiashu, Feng Mingyue, and et al, 1993, Pb-Sr-Nd Isotope Tracer Study on Material Sources of Caledonian Granodiorite Batholith in Northern Qinling Mountains, Crust-Mantle Evolution and Isotope Geochemistry of Petrogenesis and Metallogenesis , Seismis Press (in Chinese). pp. 32-33.
3. Feng Mingyue, **Xie Hongjie**, Rong Jiashu, 1993, Metallogenic Condition Analysis of Pegmatite Type Uranium Deposite of Northern Qinling Proceedings of the 5th China Conference of Genesis of Ore Deposits, Geology Press (in Chinese). pp. 500-502.
2. Feng Mingyue , **Xie Hongjie**, Rong Jiashu, 1993, REE and Pb-Sr-Nd Isotope Geochemistry of Pegmatite Type Uranium Deposit of Northern Qinling, pp. 502-504.
1. **Xie Hongjie**, 1993 , Geochemistry, Petrogenesis and Metallogenesis of the Caledoninan Granitic Pegmatite Type Uranium Deposit in Northern Qinling The 2nd China Young Geologists Conference on Mineralogy, Petrology and Geochemistry, Guiyang, China. Proceedings of the 5th China Conference of Genesis of Ore Deposits, Geology Press (in Chinese).

Invited Presentations/Lectures

- 2011, Oct 24**, Xie gave an invited talk at the TAMUK's Environmental Engineering graduate seminar on *Glacier lakes and snow cover dynamics in Tibetan Plateau using field and remote sensing data*
- 2011, Sept 9**, Xie gave an invited talk at the UTSA ESE graduate seminar on *Glacier lakes and snow cover dynamics in Tibetan Plateau using field and remote sensing data*.
- 2011, Sept 1**, Xie gave an invited talk at the UTSA SGS meeting on *Arctic trip in summer 2010*.
- 2011, Jun 22-Jul 28**, Xie visited seven Chinese institutions and universities and gave many talks primarily with title “*Glacier lakes and snow cover dynamics in Tibetan Plateau using field and remote sensing data*”. They were Shanghai Astronomical Observatory (Jun 27), Polar Research Institute of China (Jun 27), Nanjing University (Jun 28-29), Lanzhou University (Jun 30-Jul 12), Cold and Arid Regions Environment and Engineering Research Institute of CAS (Jun 30), Hunan Normal University (Jul 20-21), Institute of Tibetan Plateau Research of CAS (Jul 26).
- 2011, Jun 10**, Xie gave an invited talk at NASA/Goddard Space Flight Center Cryosphere Science Branch (Xie visited there for 1.5 months from May 8-Jun 17). His title was *Sea ice, snow cover and glacier lakes dynamics using field and remote sensing data*.
- 2010, Sept 15**, Xie gave an invited talk at the China University of Geosciences (Beijing). His title was *Overview of the Chinese Arctic Expedition 2010*.
- 2010, Sept 6**, Xie gave an invited talk at the Arctic University Seminar Series during the Chinese Arctic Expedition (Xuelong) 2010. His title was *Remote sensing of sea ice*.
- 2010, Jan 26**, Xie gave an invited talk at the San Antonio Chapter of the IEEE Computer Society's monthly seminar series. His title was *Automated computation and batch processing for remote sensing data and application*.

- 2010, Jan 15**, Xie gave an invited talk on *LRSO (Xie's research lab) current research and opportunities*, at the Environmental Science and Engineering Graduate Seminar, University of Texas at San Antonio, San Antonio, Texas
- 2009, Aug 21-26**, invited by Dr. Tiangang Liang at Lanzhou University (China) and for collaborative research, Xie gave three extensive lectures for a large group of faculty and students: (1) *New progress of remote sensing of snow cover and snow water equivalent based on MODIS and AMSR-E*; (2) *Snow cover spatial and temporal variability across three rivers headstream region of Tibetan Plateau based on MODIS data (2000-2008)*; (3) *ICESat for studying lake level and glacial elevation changes*.
- 2009, Aug 15-20**, invited by Dr. Tandong Yao at Institute of Tibetan Plateau Research, CAS, Xie gave a talk *MODIS and ICESat-based snow cover and glacier changes across three rivers headstream region of Tibetan Plateau*, at the International Workshop on Environmental Change, Glacial and Hydrological Processes, and Related Consequence in the Third Pole Region, Beijing-Lhasa, China.
- 2009, Aug 13**, invited by Dr. Jinping Zhao, Xie gave a talk *Antarctic expeditions and sea ice physical properties from space and field measurements*, at the College of Physical and Environmental Oceanography, Ocean University of China, Qingdao, China.
- 2009, Aug 12**, invited by Dr. Zhijun Li, Xie gave a talk *Antarctic expeditions and sea ice physical properties from space and field measurements*, at the School of Civil and Hydraulic Engineering, Dalian U of Technology, Dalian, China.
- 2009, Aug 6**, *MODIS/Terra-Aqua snow cover products, validation, and applications*, an invited talk given at the SPIE Optics+Photonics: Remote Sensing and Modeling of Ecosystems for Sustainability, San Diego, CA.
- 2009, Apr 7**, *Antarctic expeditions and climate changes*, for Course "Global Change" (CE 6113), Department of Civil and Environmental Engineering at UTSA
- 2008, Oct 15**, *Introduction to Remote Sensing*, for Course "Special topic on water research" (CE 5313), Department of Civil and Environmental Engineering at UTSA
- 2008, Jun 19-21**, invited by Dr. Mingiang Zhu at East China Institute of Technology (FuZhou), Xie gave two extensive lectures for a large group of faculty and students: (1) *Remote Sensing of Snow and Ice: from Land Surface, to Southern Ocean (Antarctic), and to the Mars* and (2) *Current progress on remote sensing on Antarctic and Mars*.
- 2008, Jun 16-18**, invited by Dr. Zuoxun Zeng at China University of Geosciences (Wuhan), Xie gave two extensive lectures for a large group of faculty and students: (1) *Remote Sensing of Snow and Ice: from Land Surface, to Southern Ocean (Antarctic), and to the Mars* and (2) *Current progress on remote sensing on Antarctic and Mars*.
- 2008, Jun 9-15**, invited by Dr. Tiangang Liang at Lanzhou University (China) and for collaborative research, Xie gave four extensive lectures for a large group of faculty and students: (1)(2) *Antarctic expeditions and sea ice physical properties from space and field measurements*; (3) *New progress of remote sensing of snow cover based on MODIS*; and (4) *Remote sensing of rainfall and rainfall-runoff modeling*.
- 2008, Mar 14**, *Precipitation mapping, methods and accuracy*, Environmental Science and Engineering Graduate Seminar, University of Texas at San Antonio, San Antonio, Texas.
- 2007, Sep 28**, *Remote Sensing of Snow and Ice: from Land Surface, to Southern Ocean (Antarctic), and to the Mars*, Environmental Science and Engineering Graduate Seminar, University of Texas at San Antonio, San Antonio, Texas.

- 2007, May 18**, *Global warming from Antarctic to San Antonio*, 2007 Certified GO Green ExpoWorkshopCinema at Live Oak Civic Center, San Antonio, TX.
- 2007, Apr 15**, *Global warming from Antarctic to San Antonio*, Time Warner Cable Education Channel 98.
- 2007, Apr 6**, *Statistic Evaluation of the Improved NEXRAD Precipitation Estimates Using Rain Gauge Measurements*, Graduate seminar of the Department of Management Science and Statistics at UTSA.
- 2007, Jan.19**, *Antarctic expedition on December 8-30, 2006*, the joint MORE Science and UTSA Environmental Science and Engineering graduate seminar series.
- 2006, Nov 13**, *Remote sensing in hydrology: several case studies*, Graduate seminar at the CREST-RESSACA of the Texas A&M at Kingsville.
- 2006, Nov 2**, *LRSO's Mars study and preliminary results*, Texas Space Grant Consortium Annual meeting at Southwest Research Institute.
- 2006, Jul 16-23**, invited by Dr. Tiangang Liang at Lanzhou University (China) and for collaborative research, Xie gave four extensive lectures for a large group of faculty and students: (1) *Introduction to University of Texas (UT) System and Laboratory for Remote Sensing and Geoinformatics (LRSO)*; (2) *Remote sensing of precipitation (rainfall and snow)*; (3) *Remote sensing of Antarctic*; and (4) *Remote sensing of Mars*.
- 2006, Jul 11**, *LRSO at UTSA and preliminary research results on remote sensing of vegetation, hydrology, and Mars*. National Key Lab of Remote Sensing at Beijing Research Institute of Uranium Geology, Beijing, China, where Xie studied and worked for about 10 years before came to USA.
- 2006, Apr 14**, *LRSO at UTSA and preliminary research results on remote sensing of vegetation, hydrology, and Mars*, Department of Geography of Texas State U San Marcos.
- 2006, Feb 21**, *Remote sensing at UTSA*, MORE science seminar series.
- 2006, Jan 23**, *NEXRAD precipitation validation and application*, National Weather Service at New Braunfels Office.
- 2006, Jan 17**, *Remote sensing: present and developing UTSA capabilities*, USGS San Antonio Office.
- 2004, Nov. 23**, *Precipitation of proposed Texas Hydrological Observatory*, 2004, Texas Hydrological Observatory Working Groups Meeting, November 23, Austin, Texas.
- 2004, Oct. 8**, *Remote sensing and its future*, Environmental Science Graduate Seminar, University of Texas at San Antonio, San Antonio, Texas.
- 2004, Sept. 29**, *Improving NEXRAD rainfall estimates for flood prediction and water quality modeling*, SARA water quality focus group meeting, San Antonio River Authority (SARA), San Antonio, TX.
- 2004, Mar. 25**, *Remote sensing in hydrology: ET, snow cover, and rainfall*, Department of Geology, Indiana University-Purdue University Indianapolis, Indianapolis, Indiana.
- 2004, Feb. 19**, *Remote sensing in hydrology: ET, snow cover, and rainfall*, Department of Earth and Environmental Science, University of Texas at San Antonio, San Antonio, Texas.
- 2003, Nov. 24**, *Quality control of NEXRAD precipitation*, NSF EPSCoR/INRAM annual meeting, Macey Center at New Mexico Tech, Socorro, NM
- 2003, Oct. 31 and Nov. 7**, *Radar hydrology and NEXRAD precipitation*, for course "Remote Sensing in Hydrology" (HYD 571), Fall 2003, Department of Earth and Environmental Sciences, New Mexico Tech.

- 2003, Sep 29 and Oct. 7, *Integration of remote sensing and GIS in hydrology*** , for course "Remote Sensing in Hydrology" (HYD 571), Fall 2003, Department of Earth and Environmental Sciences, New Mexico Tech.
- 2003, Apr 23 and 28, *Integration of remote sensing and GIS, and their applications*** , for course "Remote Sensing with Geoscience Applications" (HYD/GEOL/GEOP 434/534), Spring 2003, Department of Earth and Environmental Sciences, New Mexico Tech.
- 2003, Apr 10, *Batch processing of NEXRAD precipitation data to GIS grid format and time-series precipitation retrieval***, Laboratory for Environmental Spatial Analysis (LESA), New Mexico State University.
- 2003, Mar 14, *GIS and its application to geology, agriculture, and hydrology***, Department of Geology and Environmental Geosciences, College of Charleston, Charleston, South Carolina.
- 2003, Mar 3 and 5, *Remote sensing image classifications***, for course "Remote Sensing with Geoscience Applications" (HYD/GEOL/GEOP 434/534), Spring 2003, Department of Earth and Environmental Sciences, New Mexico Tech.
- 2002, Oct 14, *Application of Integrated Remote Sensing and GIS Technologies to Agricultural, Water Use and Environmental Issues in Far West Texas***, Hydrology program seminar, Department of Earth and Environmental Sciences, New Mexico Tech.
- 2002, Feb 15, *AIRSAR/TOPSAR image processing and geological application in West Texas*** , Department of Geology, Southern Illinois University, Carbondale, Illinois.

VI. Granting Activities

22. Co-PI; *Climate change communication: engineering, environmental science, and education*; NASA (2011-2014); \$501,814
21. Institutional PI; *Developing and applying an integrated multi-scale Earth system modeling framework to study the impacts of changing climate, local weather, and land use and watersheds and downstream coastal ecosystems*; NASA (2011-2014); \$119,982 (\$1,655,524 for the entire project, lead PI Zongliang Yang at UT Austin)
20. PI; *Minority Opportunities for Research Experience in Earth Science and Environmental Engineering at the UTSA*; Department of Education (2010-2013); \$561,434
19. PI; *Vertically pointing radar reflectivity and rainfall measurements at different heights and comparison with a tipping bucket rain gauge and WSR-88D Level II reflectivity*; UCAR/COMET program (2010-2011); \$11,934
18. Co-PI; *"Polar and planetary sciences modules for k-12 teachers"*, NASA supplement for education: primary grant NASA NNX08AQ87G; NASA (2010-2011); \$30,000
17. Co-PI; *Collaborative research: the sea ice system in Antarctic summer, Oden southern ocean expeditions (2010-2011)*; NSF (2010-2011); \$340,677
16. PI; *The devolvement of NASA QuickSCAT Scatterometer data to detect sea ice extent and variability in the Antarctic*; NASA (2009-2012); \$89,700 (The money was allowed to take to U Delaware for Ms. Penny Wagner for her PhD study started the fall 2009).
15. Institutional PI; *A collaborative geospatial decision support system for managing coastal river basins*; Agency: NASA (2009-2011); \$24,153 (\$247,439 for the entire project, lead PI Alex Sun at SwRI)

14. PI; *Better understanding NEXRAD level II reflectivity using a network of four double-gauge platforms in a single radar cell*; NCAR/COMET Program (2008-2009); \$10,424
13. Co-PI; *Antarctic sea ice thickness from space: validating estimates from the laser and radar satellite altimeters with ship-based measurements*; NASA (2008-2011); \$585,964
12. PI; *Developing an algorithm for automatically producing multi-day MODIS Terra and Aqua snow cover composite for its better utilities*; USGS/TexasView (2007); \$3,000
11. PI; *Martian surface compositions and H₂O/CO₂ circulation investigations using OMEGA and THEMIS data*; NASA/Texas Space Grant Consortium (2007-2009); \$10,000 (with additional match fund \$10,000 from UTSA)
10. Collaborator; *Imperial marginality and frontier: Kallawayas and Chunchos in the eastern Inka borders*; Agency: NSF (2007-2009); \$154,269
9. Institutional PI; *Using satellite data and fully coupled regional hydrologic, ecological and atmospheric models to study complex coastal environmental processes*; NASA (2007-2010); \$119,982 (\$1,236,979 for the entire project, lead PI Zongliang Yang at UT Austin)
8. Co-PI; *Sea ice mass balance in the Antarctic – SIMBA drift station*; NSF (2006-2010); \$594,980
7. Co-PI; *Enhanced short-term hydrometeorological forecasting*; NOAA (2006-2008); \$99,856
6. PI; *Validating DSP precipitation product using 50 GBRA rain gauge rainfall*; NCAR/COMET Program (2006-2007); \$9,905.5
5. PI; *Validation of remotely sensed precipitation using rain gauge data in Texas Hill Country*; USGS/TexasView (2006); \$5,000
4. PI; *NEXRDA Radar Rainfall Downscaling*; NMT (2006); \$10,000
3. PI; *Minority Opportunities for Research Experience in Earth Science at the UTSA*; US Department of Education (2005-2008); \$281,653
2. Supervising professor; *Early detection of oak wilt using hyperspectral technology*; NASA/Texas Space Grant Consortium (2005-2006); \$5,000
1. PI; *Establishing a Spectral Library of Oak Wilt for Early Detection using Hyperspectral Remote Sensing Approach*; USGS/TexasView (2005); \$5,000

Institutional grants and travel supports

- PI; *Remote sensing urban heat-island phenomenon in four Texas cities: Houston, Dallas-Ft Worth, San Antonio, and El Paso*; UTSA/TRAC (2008-2009); \$22,000
- PI; *Mars Remote Sensing for Determining Mars's Evolution of the Surface and Interior*; UTSA faculty Research Award (2005); \$5,000
- UTSA travel support from the Office of Vice President for Research to attend a NASA workshop (March 2008) on “NASA Research Center for Minority Institutions”, at New Orleans, LA, and developed the NASA Center proposal (\$5 millions for five years) with other 10 co-PIs and 5 collaborators from UTSA and other institutions in USA and foreign countries. Our proposal entitled “NASA Center for Science and Engineering in Extreme Environments” was ranked as two “very good” and one “excellent”, though not funded.*
- UTSA Presidential travel support (January 2005) to attend a conference of American Meteorology Society in San Diego. H. Xie, E. Vivoni, X. Zhou, and J. Hendrickx, 2005.*

Rainfall climatology of the monsoon season in New Mexico: Observations from NEXRAD Stage III (1996-2003), AMS Annual Conference (85th), January 9-13, San Diego, California

Collaborative projects funded by Chinese Agencies:

USA collaborator; *Remote sensing monitoring and early warning system on snow-caused disaster for the pastoral agriculture area in Tibetan Plateau, China*; Chinese Department of Education and Lanzhou University (2009-2012); ¥800,000 RMB (or \$114,286)

USA collaborator; *A digital system for grass and animal management and decision support, in the pastoral agricultural area, Southern Gansu Province*; Chinese High Tech Program (863 program) (2008-2010); ¥500,000 RMB (or \$71,428)

USA collaborator; *Mars Express/OMEGA surface spectra retrieving methods and mineral detection*; Chinese NSF (2008-2010); ¥380,000 RMB (or \$54,286)

USA collaborator; *MODIS and AMSR-E based monitoring and warning system on snow-caused disasters for pastoral agriculture area in Northern Xinjiang Province, China*; Chinese NSF (2006-2008); ¥250,000 RMB (\$35,714)

Other external travel funding:

July-Sept, 2010. NOAA Travel support to participant the Chinese Arctic Expedition from NOAA Climate Research/Sea Ice Outlook Program

Aug 13-17, 2007. NSF travel support to attend the CSIG 2007 (Geoinformatics) workshop at the San Diego Supercomputer Center, UCSD.

June 27-29, 2007, NASA travel support to attend the ICESAT-II workshop in Washington, DC.

Aug 23-24, 2004, NSF travel support for the new investigator workshop on Antarctic Research, Washington, DC.

VII. Teaching Activities

Formal courses taught

I taught eight different courses for undergraduate (course numbers 1000-4999) and graduate (course numbers 5000 -6999) levels in the six years:

- Remote Sensing 5053 (once every fall semester since Fall 2004); cross-listing with undergraduate level course Principles of Remote Sensing 4093 (since Fall 2007);
- Image Processing and Analysis 6973 now 5083 (once every other spring semester since Spring 2005);
- Remote Sensing in Hydrology 6973 now 5093 (once every other semester since Spring 2006);

- Fundamental GIS 2113 (Fall 2006), team-taught with Prof. Ryan Rudnicki;
- Environmental Science and Engineering Graduate Seminar 5981 (fall 2006 and spring 2007), team-taught with Prof. Dibs Sarker;
- Advanced GIS 6513 (once every spring semester since Spring 2007);
- Polar Marine Science Seminar 6491 (Fall 2008), team-taught with Prof. Steve Ackley.

Students/scholars mentored and completed

- **Served as primary advisor for the following graduate students:**

Lani Cabico (MS, 2006), Misti Thueson (MS, 2008), Xianwei Wang (PhD, 2008), Newfel Mazari (MS, 2008), Blake Weissling (PhD, 2008), Mark Schnur (MS, 2009), Beibei Yu (MS, 2009), Penney Wagner (MS, 2009), David Prado (MS, 2010), Burcu Cicek (PhD, 2010), and Mike Lewis (PhD, 2010).

Joined training program: Yang Gao (PhD, China U Geos., Wuhan, 2009), Guoqing Zhang (PhD, China U Geos., Beijing, 2011),

- **Served as committee member for the following graduate students:**

Chaojun Fan (PhD, Washington S. U.), Trevor Budge (PhD, UT Austin), Summer J. Barber (MS, UTSA), John Joseph (PhD, UTSA),

- **Served as chair or committee member for Environment Science/Civil Engineering Master's degree students (non-thesis option):**

Roger Stanley, James Waclawczyk, Noreen Castellano, Yuliya Duliya, Wesley Keller, Amber Patrick, and Miguel Balderas

- **Served as host professor for the following scholars/postdocs:**

Huade Guan (Postdoc), Minqiang Zhu, Chaojun Fan (Postdoc), Zongyu Yue, Lisha Zhou, Xiaodong Huang, Hailton M. Silva, Ning Nu, Ahmet Tekeli (Postdoc), Wenlong Li, Guangmeng Guo.

- **Served as faculty mentor for the following students for gaining research experiences in summer and/or regular semesters, funded by the U.S. Department of Education through the MORE science program:**

Penelope Wagner, Carrie Benson, Austin Jordan, Anne Ji, Beibei Yu, Ben Cardenas, and Anthony Arricate

On-going students/scholars mentoring as primary advisor or co-advisor

Newfel Mazari (dissertation), Almoutaz Abdalla (dissertation), Mark Schnur (dissertation), David Prado (dissertation), Wentao Xia (dissertation), Antony Perez (dissertation), Elizabeth Murphy (thesis), Eze Onwuchekwa (thesis), Eric Kouba (thesis), Yunbo Bi (thesis), Chase Mueller (thesis).

Huajun Wang and Xuelian Zhao (both visiting professor).

VIII. Service Activities

A. Committee assignments

- Chair of Departmental Scholarship Committee (Mar 2006)
- Chair of Graduate Studies Committee in Environmental Science (Aug 2006 –Aug 2007)
- Co-Advisor of Graduate GIS Certificate (Mar 2006 –)
- Member of Departmental Policy Committee (Sep 2006 –Aug 2009)
- Member of Departmental Undergraduate Study Committee (Sep 2007 – Aug 2009)
- Member of Departmental Graduate Study Committee (Sept 2009 -)
- Member of Departmental Committee on Tenure/Promotion (Sept 2010 -)

- Member of College Subcommittee on Research Activities and Sponsorship (June 2007 -)
- Member of College Faculty Development Leaves Committee (November 2007 – September 2009)
- Member of COS Advisory Committee on Limited Submission on proposals (Dec. 2008-May 2009)
- Member of COS Advisory Committee on Tenure/Promotion (Sept 2010 -)

- Member of University Standing Committee on University Libraries (Sep 06 –Aug 2011)
- Member of Doctoral Studies Committee of the joint Environmental Science and Engineering PhD program (Apr 2009-)
- Member of University Graduate Council (Sept 2010 -)
- Member of University Grievance Committee (Sept 2010 – Aug 2011)

B. Invited Manuscript Reviewer

Remote Sensing of Environment, International Journal of Remote Sensing, IEEE Transactions on Geoscience and Remote Sensing, Journal of Environmental Management, Journal of the American Water Resources Association, Photogrammetric Engineering & Remote Sensing, Journal of Geographic Information Sciences, Computer & Geosciences, Journal of Applied Remote Sensing, Journal of Hydrometeorology, Journal of Environmental Management, Environmental Modeling & Assessment, Civil Engineering and Environmental Systems, Water Management, Weather and Forecast, IEEE Transactions on Instrumentation & Measuremen, Journal of Geophysical Research (Atmosphere), Hydrological Processes, Geophysical Research Letter, Journal of Hydrology, IEEE Journal of Selected Topics in Earth Observations and Remote Sensing,

ICARUS (International Journal of Solar System Studies), International Journal of Climatology, Environmental Modeling and Software, International Journal of Applied Earth Observation and Geoinformation, Annals of GIS, Ecological Engineering, International Journal of Digital Earth

Abstract reviewer for World Scientific and Engineering Academy and Society (WSEAS) 2004 Conference Proceedings (Izmir, Turkey)

Paper reviewer for book entitled "Wetland and Water Resource Modeling and Assessment: A Watershed Perspective", 2006

Abstract reviewer for IGARSS meeting since 2007.

C. Editorial board member

International Journal of Applied Environmental Sciences (since 2006)

D. Invited Proposal Reviewer

New Mexico Water Resources Research Institute (2004)

NOAA's Climate Prediction Program for the Americas (CPPA) (2005)

NASA's Global Climate Change Education (GCCE) (2009)

NASA EPSCOR Program (2011)

NSF Office of Polar Program (2010, 2011)

NSF Cyber-Enable Discovery and Innovation (CDI) Panelist (2010).

E. Professional Membership and Service

ASPRS Imaging & Geospatial Information Society (2002-)

-- Faculty advisor for the ASPRS UTSA Chapter (2006-)

American Geophysical Union (AGU) (2002-)

-- Member of AGU Hydrology Remote Sensing Subcommittee (2007-)

IEEE Geoscience & Remote Sensing Society (since 2003-2006)

International Association of Chinese Professionals in Geographic Information Systems (CPGIS), a lifetime member since 2004.

-- Member of Academia and Governmental Subcommittee of CPGIS (2004 - 2005)

-- Chair of Grant Development Sub-Committee of CPGIS (2005-2006)

-- Chair of CPGIS Get Together Committee in AGU (2009-)

-- Member of CPGIS site selection committee (2011-)

American Meteorological Society (AMS) (2005-2009).

UTSA alternate representative for CUAHESI (Consortium of Universities for the Advancement of Hydrologic Science, Inc.), since 2007.

UTSA representative for TexasView Remote Sensing Consortium, member of the AmericaView Remote Sensing Consortium, since 2004.

Co-convenor for the Precipitation of Remote Sensing session at the AGU Joint Assembly at Baltimore, MD, May 2006.

Convener for the Sea Ice IV: Snow on Sea Ice session (C23B) of AGU Fall Meeting in San Francisco, CA, December 2007.

Convener for Applications of Hydrologic Remote Sensing Data of AGU Fall Meeting in San Francisco, CA, December 2009.

Session chair for the Sensors and Systems at the 2008 International Workshop on Earth Observation and Remote Sensing Applications, Beijing, China, July, 2008.

Program Committee member for SPIE international conference on Remote Sensing and Modeling of Ecosystems for Sustainability, San Diego, CA, since 2009.

Session chair for the Ecological Remote Sensing Theory, Techniques, and Applications III, at the SPIE international conference on Remote Sensing and Modeling of Ecosystems for Sustainability, Aug 2-6, 2009, San Diego, CA.

Session chair for the "remote sensing data for hydrological application" at the CPGIS's 19th Geoinformatics conference, Jun 24-26, 2011, Shanghai, China.

Convener for "Arctic and Antarctic sea ice processes" session at the AGU fall meeting, December 5-9, 2011, San Francisco, CA

Co-convenor for "Recent advances in data assimilation and remote sensing for land surface hydrology" session at the AGU fall meeting, December 5-9, 2011, San Francisco, CA.

F. Other Community Service

Volunteer to the Graduate Program Day for College of Science on March 29, 2005;

Faculty advisor of UTSA Chinese Student and Scholar Associate (4/2006-5/2010);

Volunteer to the orientation of new international students on August 15, 2005.

Vice principal for teaching for Chinese School of Culture and Language at the First Chinese Baptist Church at San Antonio (7/2006-5/2008);

Faculty advisor in advising my students/ASPRS student chapter to participate the San Antonio GIS Day in November each year, since 2006, to hundreds of school kids;

Member of executive council of China University of Geosciences Alumni Association of Texas (2005-2008);

Volunteer to the Greater Edwards Aquifer Alliance at the Founder's Day Celebration at San Pedro Springs on Saturday afternoon, October 16, 2004;

Judge for the 2006, 2007, 2008, 2010 EXXON/MOBIL Science and Engineer fair;

Invited speaker for the 10th GO GREEN ExpoWorkshopCinema (2007).

Member of the General Benevolence Committee of the First Chinese Baptist Church at San Antonio (fall 2007-2009)

Council member of the First Chinese Baptist Church at San Antonio (2010-2013)