

## CURRICULUM VITAE

**Liangping Li, Ph.D.**

Assistant Professor

Department of Geology and Geological Engineering

South Dakota School of Mines

### EDUCATION

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- Ph. D., Civil Engineering (groundwater), Technical University of Valencia, Spain, 2007-2011  
Thesis: "Upscaling and Inverse Modeling of Groundwater Flow and Mass Transport in Heterogeneous Aquifers." (Advisor: Prof. Jaime Gomez-Hernandez)
- M.S., Hydraulic Engineering, Technical University of Valencia, Spain, 2007-2009  
Thesis: "Three-Dimensional Groundwater Flow Modeling with Full Tensor Conductivities." (Advisor: Prof. Jaime Gomez-Hernandez)
- M.S., Environmental Engineering, China University of Geosciences, China, 2003-2006
- B.S., Environmental Engineering, Hebei University of Geology, China, 1999-2003

### PROFESSIONAL EXPERIENCE

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- 2015- Assistant Professor in Geological Engineering  
Department of Geology and Geological Engineering, South Dakota School of Mines
- 2012-2015 Postdoctoral Research Associate in Petroleum Engineering  
Department of Petroleum and Geosystems, The University of Texas at Austin
- 2010 Visiting Research Scientist in Hydrogeology  
Institute of Bio- and Geosciences, Julich Research Center, Germany
- 2007-2011 Research/Teaching Assistant in Hydrogeology  
Technical University of Valencia, Spain

### RESEARCH INTEREST

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- Subsurface Flow and Transport Modeling
- Upscaling (Flow and Transport upscaling)
- Geostatistics, multiple-point statistics
- History matching, Inverse Modeling, Data Assimilation
- Ensemble Kalman Filter, Ensemble Smoother

## **PROFESSIONAL ORGANIZATION MEMBERSHIPS**

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- Member, American Geophysical Union, 2012-present
- Member, International Association of Mathematical Geosciences 2013-present
- Member, The International Association of Hydrogeologists 2015-2019
- Associate Editor, Hydrogeology Journal (IF:2.0) 2015-2019
- Associate Editor, Stochastic Environmental Research and Risk Assessment (IF: 2.6) 2015-present
- Guest Editor, Geofuids Journal (IF: 2.3) 2018  
Special Issue: *Gas-Water-Rock Interactions and Implications for Geoenvironmental Issues*
- Editor Board, Geofluids Journal (IF:2.3) 2018-present
- Organization Committee Member, Annual Western South Dakota Hydrology Meeting 2016-present
- Organization Committee Co-Chair, 20th Annual Conference of the International Association for Mathematical Geosciences 2019
- Scientific Committee Member, 10th International Geostatistic Congress 2016
- Scientific committee Member, 18th annual conference of International Association of Mathematical Geosciences 2017

## **PROFESSIONAL HONORS AND AWARDS**

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- International Association of Mathematical Geology Student Research Award 2013
- Chinese Government Award for Outstanding Students Abroad 2012
- Best PhD Dissertation Award of Technical University of Valencia 2012

## **MEDIA APPEAANCES**

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- [October 16, 2018] SDSMT news. SD Mines Researchers Explore Hydraulic Fracturing to Expand Geothermal Energy

## **RESEARCH EXPERIENCE**

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Assistant Professor 2015-2019

*Department of Geology and Geological Engineering, South Dakota School of Mines*

- Develop NS-ES for dealing with non-Gaussianity in data assimilation
- Calibrating land subsidence modeling by EnKF
- Coupling Ensemble Smoother with multiple-point geostatistics
- Compare EnKF with Ensemble Smoother

Postdoctoral Research Associate (with Dr. Sanjay Srinivasan) 2012-2015

Department of Petroleum and Geosystems, The University of Texas at Austin

- Develop an ensemble pattern based inverse method
- Compare ensemble pattern based method with ensemble Kalman filter
- Improve ensemble pattern method by coupling it with pilot points

Research Assistant (with Dr. J. Jaime Gomez-Hernandez) 2007-2011

Department of Civil and Hydraulic Engineering, Technical University of Valencia

- Develop a groundwater flow simulator with hydraulic conductivity full tensor
- Develop transport upscaling method using multi-rate mass transfer
- Compare a range of upscaling methods for MADE site
- Evaluate the performance of NS-EnKF for data assimilation in channelized aquifer
- Coupling EnKF and upscaling for data assimilation

## **RESEARCH GRANTS**

### Active Research Grants

- |   |       |                     |           |
|---|-------|---------------------|-----------|
| 1. National Science Foundation  | PI    | 10/1/2018-9/30/2020 | \$211,356 |
| Title: <i>R11 Track-4: Inverse Methods of Hydraulic Fracturing for Enhanced Geothermal Systems in a Deep Mine</i> |       |                     |           |
| 2. South Dakota Board of Regents  | PI    | 8/22/2018-8/21/2019 | \$25,000  |
| Title: <i>Inverse Methods of Hydraulic Fracturing in Geothermal Applications (Year 2)</i>                         |       |                     |           |
| 3. USGS 104b  | Co-PI | 3/1/2019-2/28/2020  | \$10,000  |
| Title: <i>Assessment and Improvement of Performance of Septic Systems in Cold Climates</i>                        |       |                     |           |
| 4. SD Mines Mobile Computing  | PI    | 7/1/2018-6/30/2019  | \$29,500  |
| Title: <i>An Active Online Learning Module for Introducing Well Tests in Groundwater Education and Research</i>   |       |                     |           |

### Pending Research Grants

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|---|-------|-------------------------|--------------|
| 1. NSF EPSCoR Track-2   | Co-PI | 08/01/2019 – 07/31/2023 | \$6 millions |
| Title: <i>Collaborative Center for Data-Driven Multidisciplinary Research in Regulatory Compliance for the Oil and Gas Industry</i> |       |                         |              |

### Completed Research Grants

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|--|----|--------------------|----------|
| 1. RESPEC Undergraduate Research (Faculty Advisor)   |    | 8/2018-7/2019      | \$8,000  |
| Title: <i>Role of Hydraulic Conductivity Connectivity for Modeling Contaminant Plume Migration in Fluvial Deposits</i> |    |                    |          |
| 2. SD NASA EPSCoR RIG  | PI | 1/1/2018-9/30/2018 | \$46,000 |
| Title: <i>Detection and monitoring of brine spills in rangeland using remote sensing</i>                               |    |                    |          |

3. SD NASA EPSCoR Tribal Collaboration Grant PI 1/1/2018-9/30/2018 \$15,000  
Title: *Groundwater and Surface Water Interactions Modeling along the White River near Oglala, South Dakota*
4. South Dakota Board of Regents PI 8/22/2017-8/21/2018 \$25,000  
Title: *A Novel Method for Geologically-Consistent History Matching Using Multiple-Point Geostatistics in Oil Reservoir Simulation*
5. SD Mines' Nelson Research Grant PI 3/2016-2/2017 \$3,000  
Title: *Developing a Novel Tool for Production Data Inversion Using Multiple-Point Geostatistics in Oil Reservoir Modeling*
6. SD Mines' Nelson Research Grant Co-PI 3/2017-2/2018 \$5,000  
Title: *Development of a Tool for Predicting Fate and Transport of Organic Wastewater Constituents during Wastewater Infiltration*
7. SD NASA EPSCoR Travel Grant PI 2017 \$1,300
8. IAMG Student Research Grant. PI 2012-2013 \$2,250  
Title: *A Hybrid Multiple-point Statistics Approach to Integrate Dynamic Data into Geological Model*

## TEACHING

	Course Title/Credit Hours	# Students	Excellent Teacher (5 pt scale)	Excellent Course (5 pt scale)
<b>2018 Spring</b>				
GEOE 475	Groundwater , 3 credits	19	4.6	4.4
<b>2017 Fall</b>				
GEOE 766/L	Applied Groundwater and Transport Modeling ( <b>new prep.</b> ), 3 credits	6	4.6	4.6
GEOE 475	Groundwater, 3 credits	23	4.8	4.6
<b>2017 Spring</b>				
GEOE 475	Groundwater , 3 credits	11	4.6	4.6
<b>2016 Fall</b>				
GEOE 475	Groundwater, 3 credits	22	4.8	4.8
GEOE 764/L	Advanced Groundwater ( <b>new prep.</b> ), 3 credits	4	4.8	4.8
<b>2016 Spring</b>				

GEOE 475	Groundwater, 3 credits	11	4.9	4.8
<b>2015 Fall</b>				
GEOE/CEE 475/L	Groundwater ( <b>new preparation</b> ), 3 credits	23	3.8	4.0

## **MENTORING**

### Ph.D. Students

Fleford Redoroza (Subsurface modeling)	Thesis Committee, Chair	2019-Present
Curtis Prise (Hydrology)	Thesis Committee, Chair	2018-Present
John Eylander (Atmosphere Science)	Thesis Committee	2018-Present
Ali Shoajeizadeh (Civil Engineering)	Thesis Committee	2018-Present
Hasan Sazadul (Civil Engineering)	Thesis Committee	2018-Present
Michael Baranowski (Geology)	Thesis Committee	2018-Present
Jennifer Bednar (Geology)	Thesis Committee	2018-Present
Scyller Borglum (Geological Engineering)	Thesis Committee	2017-2018

### Master Students

Todd Anderson (Groundwater)	Thesis Committee, Chair	2018-Present
Fleford Redoroza (Groundwater)	Thesis Committee, Chair	2017-2019
	<ul style="list-style-type: none"> <li>○ Thesis: <i>Well Placement Design Using Extremal Optimization</i></li> <li>○ Outstanding Student Presentation Award, AGU 2018 (top 5% student participants)</li> <li>○ 2<sup>nd</sup> place, student poster presentation, western South Dakota Hydrology meeting, 2018</li> </ul>	
Colton Medler (Geophysics)	Thesis Committee, Chair	2017-2019
	<ul style="list-style-type: none"> <li>○ Thesis: <i>Time-Lapse Seismic Imaging of Induced Hydraulic Fractures at Sanford Underground Research Facility Using Continuous Active Source Seismic (CASSM) Techniques</i></li> <li>○ Kate Simmons Teskey Fellowship \$7,200, 2017-2018</li> <li>○ Kate Simmons Teskey Fellowship \$7,200, 2018-2019</li> </ul>	
Ryan Puzel (Groundwater)	Thesis Committee, Chair	2017-2019
	<ul style="list-style-type: none"> <li>○ Thesis: <i>Examination of Groundwater-Streamflow Interaction along White River, Pine Ridge Reservation, South Dakota</i></li> <li>○ MGWA Gil GAbanski Scholarship, 2018</li> </ul>	
Zhendao Cao (Groundwater)	Thesis Committee, Chair	2017-2018
	<ul style="list-style-type: none"> <li>○ Thesis: <i>Bridging iterative Ensemble Smoother and multiple-point geostatistics for better flow and transport modeling</i></li> </ul>	

- Outstanding graduate student in GGE, 2018
- Ivanhoe fellowship award \$3,849, 2016-2017

Patrick Kozak (Atmosphere Science)	Thesis Committee, Chair	2017-2018
Erik Smith (Groundwater)	Thesis Committee, Chair	2015-2016
	○ Thesis: <i>Comparative Analysis of Iron-Loaded Limestone, Titanium Dioxide, and Granular Ferric Hydroxide for Removal of Arsenic from Water</i>	
Joseph Wilder (Civil Engineering)	Thesis Committee	2017-2018
Asif Hassan (Electrical Engineering)	Thesis Committee	2017-2018
Caleb Ubl (Groundwater)	Thesis Committee	2017-present
Raul Vasquez (Civil Engineering)	Thesis Committee	2017-2019
Alvar Marin (Mining Engineering)	Thesis Committee	2018-2019
William Eldridge (Groundwater)	Thesis Committee	2015-2016

### Undergraduate Students

Wyatt Tatge (Geological Engineering)		2018-2019
	○ RESPEC Undergraduate Research Grant \$8,000 2018-2019	
Jordan Mason (Groundwater)		2017-2018
Trevor Mount (Groundwater)		2017-2018
Noah Brubaker (Computer Science)		2017-2018
Manasi Paste (Computer Science)		2017-2018
Elisha YellowThunder (Geology)		2018
Zhendan Cao (Groundwater)		2016-2017
Thomas Stasiak (Groundwater)		2016-2017
Sarah Watson (Groundwater)		2016-2017
Amanda Geersen (Interdiscipline Science)		2016

## **ACADEMIC SERVICES**

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### International

- Israel Science Foundation, Peer Reviewer, 3/2018  
Invited by Dr. Benjamin Geiger
- German Research Foundation, Panel Reviewer, 5/2017  
Invited by DFG for multiple projects about 2.4 million €
- Canadian Centre for Clean Coal/Carbon and Mineral Processing Technologies  
Peer Reviewer, 12/2016  
Invited by Dr. Qingxia (Chad) Liu

National

- University of Wisconsin Water Resources Institute Peer Reviewer, 1/2019  
Invited by Dr. Jennifer Hauxwell
- Poster Judge, AGU Fall Meeting 12/2017
- Water Resources and Mathematical Geosciences Journals 2011-2019  
Reviewed > 70 manuscripts from 14 journals, including  
*Water Resources Research*  
*Advances in Water Resources*  
*Journal of Hydrology*  
*Hydrogeology Journal*  
*Mathematical Geosciences*  
*Computers & Geosciences*  
*Stochastic Environmental Research and Risk Assessment*  
*Computational Geosciences*  
*Groundwater*  
*Engineering Geology*  
*Environmental Modeling & Software*  
*Green Gas: Science and Technology*  
*Science in the Total Environment*  
*Environmental Earth Science*

SD Mines Service

- GEOE BS Program Committee 2015-present
- GEOE Grad Application Screening Committee 2015-present
- GGE Graduate Recruiting Committee 2015-present
- GGE Computer Committee 2017-2018
- CEE faculty Search Committee 2016-2017
- University Research Committee 2017- present
- GGE Seminar Coordinator 2016-2017
- Judge, Undergraduate Research Symposium 2017, 2018
- Engineering-Week 2016-present

**JOURNAL PUBLICATIONS (\$ corresponding)**

1. Z, Cao, Li, L<sup>\$</sup>, and K. Chen (2018) Bridging iterative ensemble smoother and multiple point geostatistics for better flow and transport modeling. *Journal of Hydrology*, doi.org/10.1016/j.jhydrol.2018.08.023
2. Li, L<sup>\$</sup>, M. Zhang, and M. Zhang, "Gas-Water-Rock Interactions and Implications for Geoenvironmental Issues," *Geofluids*, vol. 2018, Article ID 6847392, 4 pages
3. Huang, G., Zhang, M., Liu, C., Li, L., & Chen, Z. (2018). Heavy metal (loid) s and organic contaminants in groundwater in the Pearl River Delta that has undergone three decades of

- urbanization and industrialization: Distributions, sources, and driving forces. *Science of the Total Environment*, 635, 913-925.
4. Li, L. <sup>§</sup>, Stetler, L., Cao, Z., and Davis, A., (2017) An Iterative Normal-Score Ensemble Smoother for Dealing with non-Gaussianity in Data Assimilation, *Journal of Hydrology*, doi.org/10.1016/j.jhydrol.2018.01.038
  5. Huang, G., Liu, C., Sun, J., Zhang, M., Jing, J., & Li, L. (2018). A regional scale investigation on factors controlling the groundwater chemistry of various aquifers in a rapidly urbanized area: A case study of the Pearl River Delta. *Science of the Total Environment*, 625, 510-518.
  6. Li, L. <sup>§</sup>, Puzel, R., and Davis, A., (2017) Data Assimilation in Groundwater Modeling: Ensemble Kalman Filter versus Ensemble Smoothers, *Hydrological Processes*, doi.org/10.1002/hyp.13127
  7. Li, L. <sup>§</sup>, Zhang, M., and Katzenstein, K (2017). Calibration of a land subsidence model using InSAR data via the ensemble Kalman filter, *Groundwater*, 55(6): 871-878
  8. Li, L. <sup>§</sup>, and M. Zhang (2017) Inverse modeling of interbed parameters and transmissivity using land subsidence and drawdown data, *Stochastic Environmental Research and Risk Assessment*, doi:10.1007/s00477-017-1396-x
  9. Li, L. <sup>§</sup>, Huang, G., (2016) Groundwater level mapping using multiple-point geostatistics, *Water*, 8(9), 400
  10. Li, L. <sup>§</sup>, S. Srinivasan, Zhou.H, and Gomez-Hernandez J.J. (2015) Two-point or multiple-point statistics? A comparison of the ensemble Kalman filtering and the ensemble pattern matching inverse methods. *Advances in Water Resources*, doi.org/10.1016/j.advwatres.2015.05.014
  11. Li, L. <sup>§</sup>, S. Srinivasan, Zhou.H, and Gomez-Hernandez J.J. (2015) A local-global pattern matching methodology for subsurface stochastic inverse modeling. *Environmental Modelling & Software*, Vol 70, 55-64
  12. Zhou, H., Gómez-Hernández, J. J., and Li, L., (2013) Inverse methods in hydrogeology: evolution and recent trends. *Advances in Water Resources*, Volume 63, January 2014, Pages 22–37
  13. Li, L. <sup>§</sup>, S. Srinivasan, Zhou.H, and Gomez-Hernandez J.J. (2013) A pilot point guided pattern matching approach to integrate dynamic data into geological modeling, *Advances in Water Resources*, Volume 62, Part A, December 2013, Pages 125–138.
  14. Li, L. <sup>§</sup>, S. Srinivasan, Zhou.H, and Gomez-Hernandez J.J. (2013) Simultaneous estimation of both geologic and reservoir state variables within an ensemble-based multiple-point statistic framework. *Mathematical Geosciences*, doi:10.1007/s11004-013-9504-z.
  15. Xu, T., Gómez-Hernández, J. J., Zhou, H., and Li, L., (2013) The power of transient piezometric head data in inverse modeling: an application of the localized normal-score EnKF with covariance inflation in heterogeneous bimodal hydraulic conductivity field. *Advances in Water Resources*, Volume 54, April 2013, Pages 100–118
  16. Xu, T., Gómez-Hernández, J. J., Li, L., and Zhou, H., (2013) Parallelized Ensemble Kalman Filter for Hydraulic Conductivity Characterization. *Computers & Geosciences*, vol. 52, March 2013, 42-49, doi:10.1016/j.cageo.2012.10.007.
  17. Zhou, H., Li, L., and Gómez-Hernández, J. J (2012) Characterizing curvilinear features using the Localized Normal-Score Ensemble Kalman Filter. *Abstract and applied analysis*, article ID 805707, 18 pp., doi:10.1155/2012/805707.
  18. Li, L. <sup>§</sup>, Zhou, H., Hendricks Franssen, H.J., and Gómez-Hernández, J.J., (2012) Groundwater flow inverse modeling in non-multiGaussian media: performance assessment of the normal-score Ensemble Kalman Filter. *Hydrology and Earth System Sciences*, 16, 573–590.



19. Zhou, H., Gómez-Hernández, J. J., and Li, L., (2012) A pattern search based inverse method. *Water Resources Research*, vol. 48, W03505, 17 pp., doi:10.1029/2011WR011195.
20. Li, L. <sup>§</sup>, Zhou, H., Hendricks Franssen, H.J., and Gómez-Hernández, J.J., (2012) Jointly mapping hydraulic conductivity and porosity by assimilating concentration data via Ensemble Kalman Filter. *Journal of Hydrology*, vol. 428-429, 152–169.
21. Li, L. <sup>§</sup>, Zhou, H., and Gómez-Hernández, J. J., (2011) Transport upscaling using multi-rate mass transfer in three-dimensional highly heterogeneous porous media. *Advances in Water Resources*, 34(4), 478-489.
22. Li, L. <sup>§</sup>, Zhou, H., and Gómez-Hernández, J. J., (2011) A comparative study of three-dimensional hydraulic conductivity upscaling at the MADE site, Columbus air force base, Mississippi (USA). *Journal of Hydrology*, 404(3-4), 278-293.
23. Li, L. <sup>§</sup>, Zhou, H., Hendricks Franssen, H.J., and Gómez-Hernández, J.J., (2011) Modeling transient groundwater flow by coupling Ensemble Kalman Filtering and upscaling. *Water Resources Research*, doi: 10.1029/2010WR010214
24. Zhou, H., Li, L., Hendricks Franssen, H.J., and Gómez-Hernández, J.J., (2011) Pattern recognition in a bimodal aquifer by normal score Ensemble Kalman Filter. *Mathematical Geosciences*. doi: 10.1007/s11004-011-9372-3
25. Li, L. <sup>§</sup>, Zhou, H., and Gómez-Hernández, J. J., (2011) A comparative study of three-dimensional hydraulic conductivity upscaling at the macrodispersion experiment (MADE) site, Columbus air force base, Mississippi (USA). *Journal of Hydrology*, 404(3-4), 278-293.
26. Zhou, H., Gómez-Hernández, J.J., Hendricks Franssen, H.J., and Li, L., (2011) An approach to handling non-Gaussianity of parameters and state variables in Ensemble Kalman Filtering. *Advances in Water Resources*, 34(7), 844-864.
27. Li, L. <sup>§</sup>, Zhou, H., and Gómez-Hernández, J. J., (2011) Transport upscaling using multi-rate mass transfer in three-dimensional highly heterogeneous porous media. *Advances in Water Resources*, 34(4), 478-489.
28. Zhou, H., Li, L., and Gómez-Hernández, J. J., (2010) Three-dimensional hydraulic conductivity upscaling in groundwater modeling. *Computers & Geoscience*, 36 (10), 1224-1235.
29. Li, L. <sup>§</sup>, Zhou, H., and Gomez-Hernandez, J. J., (2010) Steady-state groundwater flow modeling with full tensor conductivities using finite differences. *Computers & Geosciences* 36 (10), 1211-1223.
30. Zhou H., Zhou X., Chai R., Yu L., Liu C., and Li, L., (2008) Occurrence and evolution of the Xiaotangshan hot spring in Beijing, China. *Environmental Geology*. 53 (7), 1483-1489.

## CONFERENCE POSTERS

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1. Cao, Z., and Li, L. Coupling Iterative Ensemble Smoother and Multiple-Point Geostatistics for Dynamic Data Assimilation. AGU, 2018.
2. Redolosa, F., and Li, L. Well Placement Design Using Extremal Optimization for Aberdeen, SD. AGU, 2018. (***Outstanding Student Presentation Award***)
3. Puzel, R., Li, L. and J. Foster. Examining streamflow losses along White River near Oglala, South Dakota, South Dakota Western Hydrology Conference, April 20, 2018.

4. Kozak, P., **Li, L.**, Bruggeman, S., Capehart, W., Stone, J., and Sieverding, H., Determination of the Potential for Detection and Monitoring of Brine Spills in Rangeland Using Remote Sensing. South Dakota Western Hydrology Conference, April 20, 2018.
5. Redoloza, F., and **Li, L.** Development of a Groundwater Management Plan for Aberdeen, SD. South Dakota Western Hydrology Conference, April 20, 2018. (**2<sup>nd</sup> place, poster presentation**)
6. Cao, Z., and **Li, L.** Modeling Groundwater Flow by Coupling Iterative Ensemble Smoother and Multiple-Point Geostatistics. South Dakota Western Hydrology Conference, April 20, 2018.
7. Kozak, P., **Li, L.**, Bruggeman, S., Capehart, W., Stone, J., and Sieverding, H., Determination of the Potential for Detection and Monitoring of Brine Spills in Rangeland Using Remote Sensing. 9th Student Research Symposium, SD Mines, April, 2018.
8. Cao, Z., and **Li, L.**, A Pilot Point Guided Ensemble Smoother for Data Integration in Groundwater Modeling. 9th Student Research Symposium, Rapid City, April, 2018.
9. Redoloza, F., and **Li, L.**, Development of a Groundwater Management Plan for the City of Aberdeen, SD. 9th Student Research Symposium, Rapid City, April, 2018.
10. Medler, C., Roggenthen, B., and **Li, L.**, Time-Lapse Seismic Imaging of Hydraulic Fractures at Sanford Underground Research Facility Using Continuous Active Source Seismic (CASSM) Techniques. 9th Student Research Symposium, SD Mines, April, 2018.
11. Stasiak, T., and **Li, L.**, A Comparative Study of Heterogeneity Characterization for Contaminant Migration in the Madison Aquifer, near Rapid City Area. South Dakota Eastern Hydrology Conference, November 8, 2017.
12. Cao, Z., and **Li, L.** Inverse Modeling of Groundwater Flow and Transport Using Ensemble Kalman Filter. South Dakota Western Hydrology Conference, April 6, 2017.
13. Stasiak, T., and **Li, L.**, Risk Assessment of Groundwater Contamination in the Madison Aquifer, near Rapid City Area. South Dakota Western Hydrology Conference, April 6, 2017.
14. **Li, L.** Cao, Z., and Zhou, H., Ensemble Kalman Filter versus Ensemble Smoother for Data Assimilation in Groundwater Modeling. AGU Fall Meeting, 2017
15. **Li, L.** and Zhang. M. Calibration of Land Subsidence Model Using Well Head and InSAR Data: Parameter Estimation and Uncertainty Assessment, AGU Fall Meeting, 2016.
16. **Li, L.** Zhang. M, and Zhou.H. Calibration of subsidence modeling using the EnKF, 10th International Geostatistical Congress, 2016
17. **Li, L.** Zhou.H, Gomez-Hernandez J.J. and Srinivasan, S. A comparison of EnKF and EnPAT inverse methods, 10th International Geostatistical Congress, 2016
18. **Li, L.** S. Srinivasan, Zhou.H, and Gomez-Hernandez J.J. Bridging Multiple-point Geostatistics and Parameter Estimation for Better Flow and Transport Modeling, AGU Chapman Conference, 2015.
19. **Li, L.** S. Srinivasan, Zhou.H, and Gomez-Hernandez J.J. Gaussian or Non-Gaussian? A comparison between the EnKF and EnPAT inverse modeling methods, EGU, 2015.
20. **Li, L.** S. Srinivasan, Zhou.H, and Gomez-Hernandez J.J. A local-global pattern matching approach for dynamic data integration, AGU, 2014.
21. **Li, L.** S. Srinivasan, Zhou.H, and Gomez-Hernandez J.J. Aquifer characterization and uncertainty assessment: an ensemble-based pattern matching inverse method, AGU, 2013.
22. Zhou. H, S. Srinivasan, **Li, L.** and S. Bryant, An efficient method to recognize geologic structures by analyzing the pressure data with wavelet transform, AGU, 2013.

23. Gómez-Hernández, J. J., Xu, T., Zhou, H., and **Li, L.** When Steady-State Is Not Enough, IAMG, Madrid, 2013
24. **Li, L.** S. Srinivasan, and Zhou.H, An ensemble based approach for real time data assimilation based on direct pattern search, Poster in CSM affiliates meeting, 2012, University of Texas at Austin.
25. **Li, L.** Zhou.H, S. Srinivasan, and Gomez-Hernandez J.J. Simultaneously estimate parameter and state: a multiple point perspective, Abstract in GeoENV2012, Valencia, Spain.
26. Xu, T., Gómez-Hernández, J. J., **Li, L.** and Zhou, H. Parallelized Ensemble Kalman Filter for Hydraulic Conductivity Characterization, Abstract in GeoENV2012, Valencia, Spain.
27. Zhou. H, S. Srinivasan, S. Bryant and **Li, L.** Application of multi-point geostatistics in recognizing reservoir heterogeneity, Poster in DOE Carbon Storage Meeting, Pittsburgh, USA.
28. **Li, L.** S. Srinivasan, S. Bryant and Zhou. H, Tools and methods for the plume characterization during the sequestration, Poster in DOE Carbon Storage Meeting, Pittsburgh, USA.
29. J. J. Gómez-Hernández, H. Zhou, **Li, L.** and Hendricks Franssen. H.J Marginally non-Gaussian Inverse Stochastic Modeling, Abstract of Book in GEostatistics congress 2012, Oslo, Norway.
30. J. J. Gómez-Hernández, H. Zhou, **Li, L.** and Hendricks Franssen. H.J Abnormal Inverse Stochastic Modeling, Abstract of Book in IAMG 2011, Salzburg, Austria.
31. H. Zhou, J. J. Gómez-Hernández, and **Li, L.** Performance of modified ensemble Kalman filter in non-Gaussian heterogeneous media, Abstract of Book in GeoENV 2010, Gent, Belgium.
32. **Li, L.** H. Zhou, and J. J. Gómez-Hernández, Transport upscaling using multirate mass transfer in three-dimensional highly heterogeneous porous media. Abstract of Book in GeoENV 2010, Gent, Belgium.
33. **Li, L.** H. Zhou, and J. J. Gómez-Hernández, A comparative study of threedimensional hydraulic conductivity upscaling at the macrodispersion experiment (MADE) site, on Columbus Air Force Base in Mississippi (USA). Abstract of Book in GeoENV 2010, Valencia, Spain
34. H. Zhou, J. J. Gómez-Hernández, and **Li, L.** Evaluation of Gaussian assumption in Ensemble Kalman Filter, Abstract of Book in IAHR 2010, Valencia, Spain
35. **Li, L.** H. Zhou, and J. J. Gómez-Hernández, Transport upscaling in threedimensional highly heterogeneous porous media using multi-rate mass transfer. Abstract of Book in IAHR 2010, Valencia, Spain
36. **Li, L.** H. Zhou, and J. J. Gómez-Hernández, An alternative approach for hydraulic conductivity upscaling, a case study at the macrodispersion experiment (MADE) site, on Columbus Air Force Base in Mississippi (USA). Abstract of Book in IAHR 2010, Valencia, Spain
37. **Li, L.** J. J. Gómez-Hernández, and H. Zhou, Modeling 3D groundwater flow with full tensor conductivities. CD-Rom of IAMG 2009. Stanford University.
38. H. Zhou, J. J. Gómez-Hernández, and **Li, L.** Upscaling, flow, tensors, CD-Rom of IAMG 2009. Stanford University.
39. **Li, L.** J. J. Gómez-Hernández, and H. Zhou, What do you do with a fully tensorial 3D upscaled hydraulic conductivity model? CD-Rom of EGU 2009.
40. H. Zhou, J. J. Gómez-Hernández, and **Li, L.** Fully tensorial 3D upscaling of hydraulic conductivities, CD-Rom of EGU 2009.