

## SANJAY SRINIVASAN

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### EDUCATION:

|                                   |                             |      |
|-----------------------------------|-----------------------------|------|
| Stanford University               | Ph.D. Petroleum Engineering | 1999 |
| University of Southern California | M.S. Petroleum Engineering  | 1989 |
| Indian School of Mines, Dhanbad   | B.Tech                      | 1987 |

### PROFESSIONAL EXPERIENCE:

Adjunct Professor, UT Austin 2015 – Current

Professor, UT Austin 2014- 2015  
Program Leader – Geostatistics and Applied Mathematical Modeling (GAMMA) Team  
Focus Area Lead – Center for Subsurface Energy Security, UT Austin

Associate Professor, UT Austin 2008-2014  
Program Leader – Geostatistics and Applied Mathematical Modeling (GAMMA) Team  
Focus Area Lead – Center for Subsurface Energy Security, UT Austin

Assistant Professor, UT Austin 2002-2008  
Program Leader – Geostatistics and Applied Mathematical Modeling (GAMMA) Team

Assistant Professor, University of Calgary 2000-2002  
Program Leader – Reservoir Characterization Research Laboratory  
Director – Center of Excellence for Reservoir Engineering sponsored by Alberta Ingenuity

Senior Systems Engineer, Bechtel Corporation 1989 – 1996  
Designed petroleum product distribution system for Petroleum Authority of Thailand  
Engineering design and construction of offshore petroleum facilities in the Bohai bay, China  
Engineering, procurement and construction management of Bongkot-Erawan-Khanom offshore gas pipeline, Thailand.

### CONSULTING:

Nov.2013 – May 2014 G-W-Systems Inc.: Modeling lithofacies variations in the Tsimin-Xux Carbonate reservoirs

Mar.2011 – Nov. 2012 ENI Corporation – Assessment of In Situ upgrading technologies

Apr. 2007 – Aug. 2009 G-W-Systems Inc.: Geostatistical assessment for Ku Maloob Zaap fields

Jun. 2005 Total/Intera Corporation: Enhance Oil Recovery Benchmarking Review

Jan. 2005 – Mar. 2005. Schlumberger-Doll Research: Review of continuum fracture modeling workflow for naturally fractured reservoirs

**HONORS AND AWARDS:**

- SPE Faculty Pipeline Award, September 2012.
- Cox Visiting Faculty Fellowship – Stanford University, 2010.
- SPE Southwest Region Reservoir Description and Dynamics Award, April, 2009.
- Frank Jessen fellowship awarded by the College of Engineering, University of Texas at Austin, September 2007 – current
- SPE Award for outstanding technical editor, Society of Petroleum Engineering Reservoir Evaluation journal, 2006.
- UT Austin Department of Petroleum and Geosystems Engineering Teaching Excellence award for 2005-2006.
- Oryx Energy Company Centennial Fellowship No. 1 in Petroleum Engineering awarded by the College of Engineering, University of Texas at Austin in September 2005.
- Henry Ramey fellowship for outstanding academic achievement and contributions to the school of Earth Sciences at Stanford University, 1999.
- Frank Miller fellowship for Best Graduate Student in the Petroleum Engineering Department at Stanford University, 1999.
- Centennial Teaching Assistant award (Stanford University), 1999.

**MEMBERSHIP IN PROFESSIONAL AND HONORARY SOCIETIES:****Professional Societies**

International Association for Mathematical Geology

Society of Exploration Geophysicists

INTERPORE Society

International Geostatistics Congress, Organizing Committee

Society of Petroleum Engineers

**Editorial**

Mathematical Geosciences, Associate Editor

Society of Petroleum Engineering Reservoir Evaluations Journal (SPERE), Editorial Review Board

Society of Petroleum Engineering Journal, Chair of Review Committee

**PROFESSIONAL ACTIVITIES**

- Organizer, Frontiers in Subsurface Energy Security, Center for Petroleum and Geosystems Engineering Symposium, University of Texas at Austin, March 2015.
- Organizer, CPGE Research Showcase, Center for Petroleum and Geosystems Engineering Symposium, University of Texas at Austin, November 2014.
- Member, Organizing Committee – 10<sup>th</sup> International Geostatistics Congress, 2016, Valencia, Spain.
- Member, International Scientific Committee – 16<sup>th</sup> IAMG Annual Meeting, New Delhi, India, October 2014.
- Member, Consultative Committee – 9<sup>th</sup> International Geostatistics Congress, Oslo, 2012, Norway

- Member, Organizing Committee – SPE Forum: Novel Techniques for Reservoir Modeling, Santa Fe, New Mexico, November, 2012
- Vice-Chair, Organizing Committee – 12<sup>th</sup> IAMG Annual Meeting, 2009, Stanford University
- Member, Distinguished Lecturer Selection Committee, International Association of Mathematical Geology (IAMG), Sept. 2009 – Current

## PUBLICATIONS:

### A. Referred Archival Journal Publications

1. Leung, J.Y. and Srinivasan, S., “Effects of reservoir heterogeneity on scaling of effective mass transfer coefficient for solute transport,” accepted for publication in *Journal of Contaminant Hydrology*.
2. Jeong, H. and Srinivasan, S., “[Fast Assessment of Flow Characteristics of CO2 plumes Plume Characteristics in Heterogeneous Reservoirs Using a Connectivity Based Proxy](#),” accepted for publication in *International Journal for Greenhouse Gas Control*.
3. Jeong, H. and Srinivasan, S., “Visualizing Uncertainty in CO2 Plume Migration during Sequestration,” accepted for publication in *Bulletin of the Indian Geophysical Union*.
4. Li, Liangping, Srinivasan, S., Zhou, H., and Hernandez, Jaime, “[Two-point or multiple-point statistics? A comparison between the ensemble Kalman filtering and the ensemble pattern matching inverse methods](#),” *Advances in Water Resources*, Volume 86, Part B, December 2015, Pages 297–310.
5. Li, Liangping, Srinivasan, S. and Hernandez, Jaime, (2015) “[A Local-Global Pattern Matching Method for Subsurface Stochastic Inverse Modeling](#),” *Environmental Modeling & Software*, Volume 70, Pages 55-64, August 2015.
6. Fernández-Muñiz, Z., Fernández-Martínez, J.L., Srinivasan, S. and Mukerji, T., “[Comparative analysis of the solution of linear continuous inverse problems using different basis expansions](#),” *Journal of Applied Geophysics*, Volume 113, Pages 92-102, February 2015.
7. Zhang, R., Song, X., Fomel, S., Sen, M.K. and Srinivasan, S., “[Time-lapse pre-stack seismic data registration and inversion for CO2 sequestration study at Cranfield](#)”, *Geophysical Prospecting*, Vol. 62, Issue 3, pages 1028-1039, September 2014.
8. Li, Liangping, Srinivasan, S., Zhou, H. and Gomez-Hernandez, J., “[Simultaneous estimation of both geologic and reservoir state variables within an ensemble-based multiple-point statistic framework](#),” *Mathematical Geosciences*, Vol. 46, pages 597-623, July 2014.
9. Tavakoli, R., Srinivasan, S. and Wheeler, M.F., “[Rapid updating of stochastic models using an ensemble filter approach](#),” *Society of Petroleum Engineering Journal*, Vol. 19, Issue 03, June 2014.
10. Zhang, R., Sen, M.K. and Srinivasan, S., “[A pre-stack seismic basis pursuit inversion](#),” *Geophysics*, Volume 78, Issue 1, 2013.
11. Azom, Nnamdi and Srinivasan, S., “Coupled multiphase flow and heat transfer at the steam chamber interface during the Steam Assisted Gravity Drainage Process,” *Society of Petroleum Engineering Journal*, October 2013.
12. Srinivasan, S. and Barrera, A.E., “[Multi-scale reservoir characterization and history matching within a probabilistic framework](#),” in CLOSING THE GAP Advances in

- Applied Geomodeling for Hydrocarbon Reservoirs Edited by David Garner, Damien Thenin and Clayton V. Deutsch, September 2013.
13. Zhang, R., Sen, M.K. and Srinivasan, S., "[Multi-trace basis pursuit inversion with spatial regularization](#)," *Journal of Geophysics and Engineering*, Volume 10, Number 3, pp. 611-618, September 2012.
  14. Zhang, R., Ghosh, R., Sen, M.K. and Srinivasan, S., "[Time-lapse surface seismic inversion with thin bed resolution for monitoring CO2 sequestration: A case study from Cranfield, Mississippi](#)," *International Journal of Greenhouse Gas Control*, <http://dx.doi.org/10.1016/j.ijggc.2012.08.015>, September 2012.
  15. Zhang, R., Sen, M.K., Phan, S. and Srinivasan, S., "[Stochastic and deterministic seismic inversion methods for thin-bed resolution](#)," *Journal of Geophysics and Engineering*, Volume 9, Number 5, pp. 611-618, September 2012.
  16. Leung, J.Y. and Srinivasan, S., "[Scale-Up of Mass Transfer and Recovery Performance in Heterogeneous Reservoirs](#)," *Journal of Petroleum Science and Engineering*, Volumes 86–87, Pages 71–86, May 2012.
  17. Leung, J.Y. and Srinivasan, S., "[Analysis of Uncertainty Introduced by Scaleup of Reservoir Attributes and Flow Response in Heterogeneous Reservoirs](#)," *SPE Journal*, Volume 16, No.3, September 2011.
  18. Mantilla, C.M., Srinivasan, S. and Nguyen, Q., "[Updating Geologic Models using Ensemble Kalman Filter for Water Coning Control](#)," *Engineering* (Open Access), Vol.3 No.5, May 2011.
  19. Bhowmick, S., Mantilla, C.M. and Srinivasan, S., "[Tracking CO2 Plume Migration during Geologic Sequestration using a Probabilistic History Matching Approach](#)," *Stochastic Environmental Resource Risk Assessment (SERRA)*, Vol. 25, pp. 1085-1090, April 2011.
  20. Eskandari, K. and Srinivasan, S., "[Reservoir Modeling of Complex Geological Systems-A Multiple Point Perspective](#)," *Journal of Canadian Petroleum Technology*, Volume 49, No. 8, August 2010, pp. 59-68.
  21. Sil, S. and Srinivasan, S., "[Fracture mapping by near offset RMO analysis of HTI medium using 2D data](#)," *Geohorizons* (journal of the Society of Petroleum Geophysicists), Vol.14, No.2, December 2009.
  22. Srinivasan, S. and Sen, M.K., "[Stochastic modeling of facies distribution in a carbonate reservoir in the Gulf of Mexico](#)," *Geohorizons* (journal of the Society of Petroleum Geophysicists), Vol.14, No.2, December 2009.
  23. Sil, S. and Srinivasan, S., "[Stochastic simulation of fracture strikes using seismic anisotropy induced velocity anomalies](#)," *Exploration Geophysics*, Volume 40, Number 3, November 2009.
  24. John, A.K., Lake, L.W., Torres-Verdin, C. and Srinivasan, S., "[Seismic-Based Facies Identification and Classification Using Simple Statistics](#)," *Society of Petroleum Engineers Reservoir Evaluation*, Volume 11, Number 6, pp. 984-990, December, 2008.
  25. Wu, X., Pope, G.A., Shook, G.M. and Srinivasan, S., "[Prediction of enthalpy from fractured geothermal reservoirs using partitioning tracers](#)," *International Journal of Heat and Mass Transfer*, Volume 51, March, 2008, pp. 1453-1466.

26. Kashib, T. and Srinivasan, S. "[Iterative Updating of Reservoir Models Constrained to Dynamic Data](#)," *Journal of Canadian Petroleum Technology*, Volume 46, No. 11, November 2007.
27. Merchan, S. and Srinivasan, S. "[Upscaling Using a Non-uniform Coarsened Grid With Optimum Power Average](#)," *Journal of Canadian Petroleum Technology*, Volume 46, No. 7, July 2007.
28. Kashib, T. and Srinivasan, S.: "[A Probabilistic Approach to Integrating Dynamic Data in Reservoir Models](#)," *Journal of Petroleum Science and Engineering*, Volume 50, Issues 3-4, pp. 241-257, March 2006.
29. Zhang, Y. and Srinivasan, S.: "[Markov Chain Monte Carlo for Reservoir Uncertainty Assessment](#)," *Journal of Canadian Petroleum Technology*, March 2005.
30. Lake, L.W. and Srinivasan, S., "[Statistical Scale-Up of Reservoir Properties: Concepts and Applications](#)," *Journal of Petroleum Science and Engineering*, Vol. 44, Issues 1-1, pp. 27-39, October 2004.
31. Srinivasan, S. and Deutsch, C.V., "[Data Sufficiency for Reservoir Development Decision-Making in the Presence of Uncertainty](#)," *Journal of Canadian Petroleum Technology*, Vol. 43, No. 3, pp. 52-60, March 2004.
32. Caers, J. and Srinivasan, S., "[Statistical Pattern Recognition and Geostatistical Data Integration](#)," *Soft Computing for Reservoir Characterization and Modeling*, Eds. Wong, P. et al., Springer Verlag, pp. 355 - 386, 2002.
33. Caers, J., Srinivasan, S., and Journel, A. G., "[Geostatistical Quantification of Geological Information for A Fluvial-Type North Sea Reservoir](#)," *Society of Petroleum Engineers Reservoir Evaluation and Engineering Journal*, Vol. 3, No. 5, October 2000.

#### Refereed Conference Proceedings:

1. Huang, Yu-Chun and Srinivasan, S., "[GrowthSim - Efficient Conditional Simulation of Spatial Patterns Using a Pattern-Growth Algorithm](#)," – *Proceedings of the Ninth International Geostatistics Congress*: Springer-Verlag Quantitative Geology and Geostatistics Series Vol. 17, Abrahamsen, Petter; Hauge, Ragnar; Kolbjørnsen, Odd (Eds.), pp 209-220, ISBN: 978-94-007-4152-2, 2012.
2. Srinivasan, S. and Mantilla, C., "[Uncertainty quantification and feedback control using a model selection approach – application to a polymer flooding process](#)," – *Proceedings of the Ninth International Geostatistics Congress*: Springer-Verlag Quantitative Geology and Geostatistics Series Vol. 17, Abrahamsen, Petter; Hauge, Ragnar; Kolbjørnsen, Odd (Eds.), pp. 197-208, ISBN: 978-94-007-4152-2, 2012.
3. Srinivasan, S. and Anupam, A., "[Multiscale Modeling of Fracture Network in a Carbonate Reservoir](#)," – *Proceedings of the Ninth International Geostatistics Congress*: Springer-Verlag Quantitative Geology and Geostatistics Series Vol. 17, Abrahamsen, Petter; Hauge, Ragnar; Kolbjørnsen, Odd (Eds.), pp 185-196, ISBN: 978-94-007-4152-2, 2012.
4. Erzeybek, S., Srinivasan, S. and Janson, X., "[Multiple-point statistics in a non-gridded domain: Application to karst/fracture network modeling](#)," – *Proceedings of the Ninth International Geostatistics Congress*: Springer-Verlag Quantitative Geology and

Geostatistics Series Vol. 17, Abrahamsen, Petter; Hauge, Ragnar; Kolbjørnsen, Odd (Eds.), pp 221-238, ISBN: 978-94-007-4152-2, 2012.

5. Leung, J.Y. and Srinivasan, S., "[Direct transfer of uncertainty in reservoir models – application to uncertainty estimation due to sub-scale variance](#)," *Proceedings of the Eighth International Geostatistics Congress*, Santiago, GECAMIN, Ortiz, Julian M. and Emery, X. (Eds.), pp. 1065-1070, ISBN: 978-956-8504-17-5, December 2008.
6. Leung, J.Y. and Srinivasan, S., "[Analysis of uncertainty introduced by scale-up of log-derived porosity in carbonate settings](#)," *Proceedings of the Eighth International Geostatistics Congress*, Santiago, GECAMIN, Ortiz, Julian M. and Emery, X. (Eds.), pp. 1059-1064, ISBN: 978-956-8504-17-5, December 2008.
7. Sharma, A. and Srinivasan, S., "Data classification and information cataloging of spatial systems – an application to reservoir datasets," *Proceedings of the Eighth International Geostatistics Congress*, Santiago, GECAMIN, Ortiz, Julian M. and Emery, X. (Eds.), pp. 1149-1154, ISBN: 978-956-8504-17-5, December 2008.
8. Eskandari, K. and Srinivasan, S., "Integration of production data within a multiple-point geological simulation framework," *Proceedings of the Eighth International Geostatistics Congress*, Santiago, GECAMIN, Ortiz, Julian M. and Emery, X. (Eds.), pp. 1113-1118, ISBN: 978-956-8504-17-5, December 2008.
9. Leung, J.Y. and Srinivasan, S.: "[Direct Assessment of uncertainty using stochastic flow simulation](#)," *Proceedings of the Seventh International Geostatistics Congress: Geostatistics Banff 2004*, Springer-Verlag Quantitative Geology and Geostatistics Series Vol. 14, Leuangthong, Oy and Deutsch, Clayton V. (Eds.), XXVIII, pp. 1167, ISBN: 1-4020-3515-2, 2005.
10. Liu, X. and Srinivasan, S., "[Field Scale Stochastic Modeling of Fracture Networks – Combining pattern statistics with geomechanical criteria for fracture growth](#)," *Proceedings of the Seventh International Geostatistics Congress: Geostatistics Banff 2004*, Springer-Verlag Quantitative Geology and Geostatistics Series, Vol. 14, Leuangthong, Oy and Deutsch, Clayton V. (Eds.), XXVIII, pp 1167, ISBN: 1-4020-3515-2, 2005.
11. Barrera, A.E., Ni, J. and Srinivasan, S., "[Multiple point geostatistics: Optimal template selection and implementation in multi-threaded computational environments](#)," *Proceedings of the Seventh International Geostatistics Congress: Geostatistics Banff 2004*, Springer-Verlag Quantitative Geology and Geostatistics Series Vol. 14, Leuangthong, Oy and Deutsch, Clayton V. (Eds.), XXVIII, pp. 1167, ISBN: 1-4020-3515-2, 2005.
12. Lake, L.W., Srinivasan, S. and John, A., "[Statistical Scale-Up: Concepts and Application to Reservoir Flow Simulation Practice](#)," *Proceedings of the Seventh International Geostatistics Congress: Geostatistics Banff 2004*, Springer-Verlag Quantitative Geology and Geostatistics Series Vol. 14, Leuangthong, Oy and Deutsch, Clayton V. (Eds.), XXVIII, pp. 1167, ISBN: 1-4020-3515-2, 2005.
13. Bhowmick, S., Srinivasan, S. and Bryant, S.L., "[Improved Particle Tracking Proxy for Assessing Plume Migration during Geologic Sequestration](#)," *Energy Procedia*, Volume 63, 2014, Pages 3853-3863, November, 2014.

14. Ramachandran, H., Pope, G.A. and Srinivasan, S., "[Effect of Thermodynamic Phase Changes on CO<sub>2</sub> leakage](#)," Energy Procedia, Volume 63, 2014, Pages 3735-3745, November, 2014.

**Other Major Publications:**

1. Han, S. H and Srinivasan, S., "[Investigating the Geochemical Alterations in an Aquifer Due to Long-Term Sequestration of CO<sub>2</sub> Using Time-Lapse Seismic Information](#)," CMTC-169133-MS-MS, Carbon Management Technology Conference held in Sugarland, Texas, USA, 17–19 November 2015.
2. Henry Li, Sanjay Srinivasan, "[Modeling Point Bars Using a Grid Transformation Scheme](#)," SPE 175153-MS, SPE Annual Technical Exhibition and Conference, Houston, Texas, U.S.A., September 28-30, 2015.
3. Elahi-Naraghi, M. and Srinivasan, S., "[Integrating Seismic and Well Data to Characterize Facies Variation in a Carbonate Reservoir - The Tau Model Revisited](#)," EAGE Conference on Petroleum Geostatistics, Biarritz, France, September 8-11, 2015.
4. Elahi-Naraghi, M. and Srinivasan, S., "Reservoir Connectivity Modeling and Uncertainty Quantification using a Discrete Cosine Transform Approach," Annual Conference of the International Association of Mathematical Geology, Freiberg, Germany, September 7-9, 2015.
5. Singh, H., Srinivasan, S., "[Assessing Economic Implications of Complexity in Geological Modeling and Simulation](#)," SPE 169825-MS, presented at the SPE Hydrocarbon Economics and Evaluation Symposium, Houston, Texas, U.S.A., May 19-20, 2014.
6. Singh, H. and Srinivasan, S., "[Scale-up of Reactive-Diffusive Processes in Heterogeneous Media](#)," geoENV 2014, Paris, July 9-11, 2014.
7. **Kumar, D., Murugesu, M. and Srinivasan, S., "[Modeling Effect of Permeability Heterogeneities on SAGD Performance Using Improved Upscaling Schemes](#),"** *SPE 169133-MS* Singh, H. and Srinivasan, S., "[Scale up of Reactive Processes in Heterogeneous Media - Numerical Experiments and Semi-analytical Modeling](#)," *SPE 169133-MS, SPE Improved Oil Recovery Symposium*, held in Tulsa, Oklahoma, USA, 12–16 April 2014.
8. Azom, P.N. and Srinivasan, S., "[Modeling Coupled Heat Transfer and Multiphase Flow during the Expanding Solvent Steam Assisted Gravity Drainage \(ES SAGD\) Process](#)," *SPE 166357, SPE Annual Technical Conference and Exhibition* held in New Orleans, Louisiana, USA, 30 September - 2 October 2013.
9. Kannan, K. and Srinivasan, S., "[Analyzing the Reservoir Performance of an Expanding Solvent – Steam Assisted Gravity Drainage \(ES-SAGD\) Process Using a Semi-analytical Approach](#)," *SPE-169124-MS, SPE Improved Oil Recovery Symposium*, held in Tulsa, Oklahoma, USA, 12–16 April 2014.
10. Hampton, T., Kumar, D., Srinivasan, S. and Azom, N., "[Analysis of Impact of Thermal and Permeability Heterogeneity on SAGD Performance Using a Semi-analytical Approach](#)," *SPE 165565-MS, SPE Heavy Oil Conference Canada*, Calgary, Alberta, Canada, 11–13 June 2013.
11. Azom, Prince N. and Srinivasan, S., "[Modeling the Effect of Permeability Anisotropy for Multi-Layered Steam-Assisted Gravity Drainage \(SAGD\) Processes](#)," *SPE 165495, SPE Heavy Oil Conference Canada*, Calgary, Alberta, Canada, 11–13 June 2013.

12. Azom, Prince N., Kamp, A.M. and Srinivasan, S., "[Characterizing the Effect of Heat Transfer on Multiphase Flow during the Steam-Assisted Gravity Drainage \(SAGD\) Process](#)," *SPE 165494, SPE Heavy Oil Conference Canada*, Calgary, Alberta, Canada, 11–13 June 2013.
13. Singh, H. and Srinivasan, S., "[Reservoir Model Updating and Value of Information using Probabilistic Economic Forecasting](#)," *SPE 164265*, SPE Middle East Oil and Gas Show and Conference, Manama, Bahrain, March 2013.
14. Tavakoli, R., Srinivasan, S. and Wheeler, M.F., "[Rapid updating of stochastic models using an ensemble filter approach](#)," *SPE 163673-MS presented at SPE Reservoir Simulation Symposium*, Houston, February, 2013.
15. Azom, Prince N. and Srinivasan, S., "[Modeling the Effect of Permeability Anisotropy on the Steam-Assisted Gravity Drainage \(SAGD\) Process](#)," *CSUG/SPE 149274 Canadian Unconventional Resources Conference*, Calgary, Alberta, Canada, November 2012.
16. Jeong, H., Srinivasan, S. and Bryant, S.L., "[Uncertainty Quantification of CO<sub>2</sub> Plume Migration Using Static Connectivity of Geologic Features](#)," *Proceedings of the 11th International Conference on Greenhouse Gas Technologies (GHGT-11)* held in Kyoto, Japan, 19-22 Nov. 2012.
17. Bhowmick, S., Srinivasan, S. and Bryant, S.L., "[Prediction of Plume Migration Using Injection Data and a Model Selection Approach](#)," *Proceedings of the 11th International Conference on Greenhouse Gas Technologies (GHGT-11)* held in Kyoto, Japan, 19-22 Nov. 2012.
18. Srinivasan, S. and Jeong, H., "Modeling the Uncertainty in CO<sub>2</sub> Plume Migration During Sequestration Using a Model Selection Approach," proceedings of the *Ninth Conference on Geostatistics for Environmental Applications*, geoENV2012, Valencia, Spain, September 19–21, 2012.
19. Huang, Y. and Srinivasan, S., "[GrowthSim – An Algorithm for pattern classification and reproduction](#)," *Proceedings of IAMG Conference*, Salzburg, September 2011.
20. Erzeybek, S. and Srinivasan, S., "Modeling connected geologic features using multiple-points statistics from non-gridded data," *Proceedings of IAMG Conference*, Salzburg, September 2011.
21. Mantilla, C. and Srinivasan, S., "[Feedback control of polymer flooding process considering geologic uncertainty](#)," *Proceedings of IAMG Conference*, Salzburg, September 2011.
22. Srinivasan, S. and Sen, M.K., "[Mapping of Diagenesis In a Carbonate Reservoir In the Gulf of Mexico By a Stochastic Data Integration Technique](#)," SEG Denver 2010 Annual Meeting, 2010-2361, November 2010.
23. Bhowmick, S., Srinivasan, S. and Bryant, S.L., "[Predicting the Migration of CO<sub>2</sub> Plume Using Injection Data and a Distance-Metric Approach to Reservoir-Model Selection](#)," *SPE Paper 139709* presented at the SPE International Conference on CO<sub>2</sub> Capture, Storage, and Utilization, SPE International Conference on CO<sub>2</sub> Capture, Storage, and Utilization, November 2010.
24. Bhowmik, S., Srinivasan, S. and Bryant, S., "[Inferring migration of CO<sub>2</sub> plume using injection data and a probabilistic history matching approach](#)," Proceedings of the 10th International Conference on Greenhouse Gas Technologies (GHGT-10) held in Amsterdam, The Netherlands, on 19-23 Sept. 2010. *Energy Procedia* 4, pp. 3841-3848, 2011. DOI: 10.1016/j.egypro.2011.02.320.



25. Leung, J. Y., Srinivasan, S., Huh, C. "[Accounting for heterogeneity in scale-up of apparent polymer viscosity for field scale application](#)," *SPE Paper 129878* presented at the 2010 SPE Improved Oil Recovery Symposium, Tulsa, Oklahoma, USA, April 24–28, 2010.
26. Sharma, A. and Srinivasan, S., "[Classification of Oil and Gas Reservoirs Based on Recovery Factor: A Data-Mining Approach](#)," *SPE Paper 130257-MS* presented at the SPE Annual Technical Conference and Exhibition, Florence, 2010.
27. Leung, J.Y., Srinivasan, S. and Huh, C., "[Accounting for Heterogeneity in Scale-Up of Apparent Polymer Viscosity for Field Scale Application](#)," *SPE Paper 129798-MS* presented at the SPE Improved Oil Recovery Symposium, Tulsa, Oklahoma, 2010.
28. Mantilla, C., Srinivasan, S., Cross, E. and Bryant, S.L., "[Inexpensive Assessment of Plume Migration During CO<sub>2</sub> Sequestration](#)," in *Proceedings of SPE International Conference on CO<sub>2</sub> Capture Storage and Utilization*, 2009.
29. Leung, J. Y., Srinivasan, S., "[Scale-up of hydrocarbons recovery processes in heterogeneous reservoirs](#)," *International Association of Mathematical Geology Annual Meeting*, Stanford, California, USA, August 23-28, 2009.
30. Barrera, A.E. and Srinivasan, S., "[History Matching by Simultaneous Calibration of Reservoir Geological Models at Pore-Level and Field Scales](#)," *SPE Paper 124939-MS* presented at the SPE Annual Technical Conference and Exhibition, New Orleans, 2009.
31. Azom, P. and Srinivasan, S., "[Mechanistic Modeling of Emulsion Formation and Heat Transfer During the Steam-Assisted Gravity Drainage \(SAGD\) Process](#)," *SPE Paper 124930-MS* presented at the SPE Annual Technical Conference and Exhibition, New Orleans, 2009.
32. Sil, S., Srinivasan, S., Sen, M.K., Lopez, J.J.R., Vidal, M.M., Rusic, A. and Gonzalez, M., "[Markov Bayes Simulation for structural uncertainty estimation](#)," SEG Annual Meeting, Las Vegas, November 2008.
33. Sen, M.K. and Srinivasan, S., "[Reservoir Modeling Accounting For the Scale And Precision of Seismic Data - Application to a Carbonate Reservoir](#)," SEG 2008-3533, *SEG Annual Meeting*, Las Vegas, November 2008.
34. Lawal, A.A., Srinivasan, S. and Lake, L.W., "[Sensitivity Analyses of Production and Recovery Forecasts Using Variance-Based Methods](#)," *SPE Paper 110846-MS* presented at the SPE Western Regional and Pacific Section, Bakersfield, March 2008.
35. Govind, P.A. and Srinivasan, S., "[Accurate Numerical Simulation of Reaction-Diffusion Processes for Heavy Oil Recovery](#)," *SPE Paper 117792-MS* presented at the SPE/PS/CHOA International Thermal Operations and Heavy Oil Symposium, Calgary, October 2008.
36. Govind, P.A., Das, S., Srinivasan, S. and Wheeler, T.J., "[Expanding Solvent SAGD in Heavy Oil Reservoirs](#)," *SPE Paper 117571-MS* presented at the SPE/PS/CHOA International Thermal Operations and Heavy Oil Symposium, Calgary, October 2008.
37. Kim, Y., Srinivasan, S. and Bryant, S.L., "[Efficient Region Decomposition for Parallel Simulation Accounting for Uncertainty in the Reservoir Model](#)," *SPE 116752* presented at the 2008 SPE Annual Technical Conference and Exhibition, Denver, Colorado, USA, Sept. 21-24, 2008.
38. Sharma, A., Leung, J., Srinivasan, S., & Kim, Y., "[An integrated approach to reservoir uncertainty assessment: case study of a Gulf of Mexico reservoir](#)," *SPE Paper 116351* presented

- at the 2008 SPE Annual Technical Conference and Exhibition, Denver, Colorado, USA, Sept. 21-24, 2008.
39. Yamali, N., Nguyen, Q. and Srinivasan, S., "[Optimum Control of Unwanted Fluid Production in Stratified Gas Reservoirs](#)" SPE 106640-MS, *Proceedings of the SPE Production and Operations Symposium*, 31 March-3 April 2007, Oklahoma City, Oklahoma, U.S.A.
  40. Eskandari, K. and Srinivasan, S. "[Integrating dynamic data in reservoir models – a multiple point perspective](#)" Paper 1239, *Proceedings of ECMOR X, Amsterdam*, September, 2006.
  41. Srinivasan, S. and Srinivasan, S. "[Direct spatiotemporal interpolation of reservoir flow responses](#)," Paper 1218, *Proceedings of ECMOR X, Amsterdam*, September, 2006.
  42. Rmaileh, R., Barrera, A., Srinivasan, S. and Huh, C. "[Conditioning sedimentary models to well log data – an application of ensemble Kalman filter](#)", *Proceedings of ECMOR X, Amsterdam*, September, 2006.
  43. Reinlie, S.T. and Srinivasan, S. "Rapid stochastic updating of reservoir models incorporating dynamic data – an evaluation of the p-field approach," *Proceedings of ECMOR X, Amsterdam*, September, 2006.
  44. Srinivasan, S. and Srinivasan, S. "Space-time kriging for direct interpolation of pressure responses in a reservoir," *Proceedings of XIth International Congress for Mathematical Geology*, Liege, Belgium, September, 2006.
  45. Rmaileh, R., Barrera, A., Srinivasan, S. and Huh, C. "Sequential conditioning of sedimentary process models using ensemble Kalman filter," , " *Proceedings of XIth International Congress for Mathematical Geology*, Liege, Belgium, September, 2006.
  46. Wu, X., Pope, G.A., Shook, M. and Srinivasan, S., "[A Semi-Analytical Model to Calculate Energy Production in the Single Fracture Geothermal Reservoirs](#)", *Geothermal Research Council Meeting*, September, 2005.
  47. Wu, X., Pope, G.A., Shook, G.M. and Srinivasan, S., "[A method for analyzing tracer data to calculate swept pore volume in fractured geothermal reservoirs under two-phase flow conditions](#)," *Proceedings of the Thirtieth Workshop on Geothermal Reservoir Engineering*, Stanford University, Stanford, California, January 31-February 2, 2005.
  48. Yadav, S., Srinivasan, S., Bryant, S.L. and Barrera, A.: "[History Matching Using Probabilistic Approach in a Distributed Computing Environment](#)," SPE 93399, *Proceedings of the SPE Reservoir Simulation Symposium*, Houston, Texas, January 31<sup>st</sup> – February 2, 2005.
  49. Liu, X. and Srinivasan, S.: "[Merging Outcrop Data and Geomechanical Information in Stochastic Models of Fractured Reservoirs](#)," SPE 90643, *Proceedings of the 2004 SPE International Petroleum Conference*, Puebla, Mexico, November 8-9, 2004.
  50. Srinivasan, S. and Bryant, S.L.: "[Integrating Dynamic Data in Reservoir Models using a Parallel Computational Approach](#)," SPE 89444, *Proceedings of the 2004 SPE/DOE Thirteenth Symposium on Improved Oil Recovery*, Tulsa, Oklahoma, April 17 - 21, 2004.
  51. Kashib, T. and Srinivasan, S.: "[Iterative Integration of Dynamic Data in Reservoir Models](#)," SPE 84592, *Proceedings of the SPE Annual Technical Conference and Exhibition*, Denver, Colorado, October 5-8, 2003.
  52. Liu, X., Srinivasan, S., and Wong, D., "[Geological Characterization of Naturally Fractured Reservoirs Using Multiple Point Geostatistics](#)," SPE 75246, *Proceedings of the Society of Petroleum Engineers, Inc. Society of Petroleum Engineers/Department of Energy (SPE/DOE) Thirteen Improved Oil Recovery Symposium*, Tulsa, Oklahoma, April 13-17, 2002

53. Merchan, S. A., Srinivasan, S., and Meyer, R., "[Characterization of Estuary-Shoreface Type Reservoir Using Outcrop Analogue and Modeling of Flow Using a Nonuniform Coarsened Grid](#)," *Proceedings of the Society of Petroleum Engineers, Inc. Society of Petroleum Engineers/Department of Energy (SPE/DOE) Thirteen Improved Oil Recovery Symposium, Tulsa, Oklahoma., April 13-17, 2002*
54. Caers, J. and Srinivasan, S.: "A fast Markov chain Monte Carlo simulation method for conditioning reservoir models to dynamic data", Presented at the *7th European Conference on Mathematics of Oil Recovery*, Baveno, Lago Maggiore, Italy, Sept 5-8 2000.
55. Srinivasan, S. and Caers, J.: "[Conditioning reservoir models to dynamic data – A forward modeling perspective](#)", SPE 62941, *SPE Annual Technical Conference and Exhibition*, Dallas, Texas, October 2000.
56. Srinivasan, S. and Journel, A.G.: "[Simulation of permeability field conditioned to well test data](#)", SPE paper 49289, *SPE Annual Technical Conference and Exhibition*, New Orleans, Louisiana, 1998.
57. Deutsch, C.V., Srinivasan, S. and Mo, Y.: "[Geostatistical reservoir modeling accounting for precision and scale of seismic data](#)", SPE paper 36497, *SPE Annual Technical and Exhibition*, Denver, Colorado, 1996.
58. Srinivasan, S. and Deutsch, C.V.: "[Improved reservoir management through ranking stochastic reservoir models](#)", SPE paper 35411, *SPE/DOE Tenth Symposium on Improved Oil Recovery*, Tulsa, Oklahoma, 1996.

**Books, Chapters of Books; Editor of Books:**

1. Srinivasan, S., "Uncertainty Assessment Through Application of Geostatistics – An Illustration of Key Concepts," *Petroleum Society of Canadian Institute of Mining, Metallurgy and Petroleum Monograph on Petroleum Reserves Assessment*, 2004.
2. Caers, J. and Srinivasan, S., "Combining geological information with seismic and production data" In: *Soft computing and intelligent data analysis in oil exploration*, Nikraves, M, Aminzadeh, F and Zadeh, L. (eds.), Elsevier Publishers, 2001.
3. Caers J, Srinivasan S (2002) Statistical pattern recognition and geostatistical data integration. In: *Soft computing for reservoir characterization and modeling*, eds. Wong, P. et al., Springer Verlag, 355---386

**Technical Reports:**

1. Srinivasan, S., "Area 2: Inexpensive Monitoring and Uncertainty Assessment of CO2 Plume Migration using Injection Data," Final report submitted to Department of Energy – NETL for the project period: 1 Oct 2010 – 31 Sept 2014.
2. Final Report: Littlepage, J., Henke, B., Wood, L., Dunbar, D. and Srinivasan, S., 2011, "Early Appraisal of Ultra-Deepwater Resources," Research Partnership for Secure Energy America (RPSEA).
3. Final Report: Erzeybek, S., Anupam, A. and Srinivasan, S., 2008, "Stochastic modeling of facies distribution in Jurassic intervals of the Akal block of the Cantarell field," PEMEX Exploración y Producción, Activo Integral Cantarell.

4. Final Report: Sharma, A., Kim, Y., Leung, J, Sil, S., Srinivasan, S. and Sen, M., 2008, "Uncertainty Assessment of geologic reservoir models", PEMEX Exploración y Producción, Activo Integral Ku-Maalob-Zaap.
5. Final Report: McKenna, S.A. S. Srinivasan, K. Klise, E. Vugrin, K. Vugrin, 2008, LDRD Project Summary Report: Rapid Updating of Stochastic Models Using Sensor Information, June 2005 through September 2007, SAND2007-6660, Sandia National Laboratories, Albuquerque, New Mexico, 54 pp.
6. Bryant, S.L., Srinivasan, S., Barrera, A. and Kim, Y., "History Matching in Parallel Computational Environments," Annual Report October 1, 2005 - September 30, 2006, submitted to U.S. Department of Energy (USDOE) on Contract # DE-FC-03NT15410, October 2005, through the Center for Petroleum and Geosystems Engineering, University of Texas, Austin, TX.
7. Madueke, N. and Srinivasan, S., "Statistical Analysis of Water Quality Variability in Distribution Networks," submitted to Sandia National Laboratories for Project # 370337, Sandia National Laboratory pass-through U.S. Department of Energy.

#### **Invited Keynote Speeches & Oral Presentations:**

1. Srinivasan, S., "Feedback control of EOR processes accounting for uncertainty in geologic models," presented at Statoil Corporation, Austin, March 2015.
2. Srinivasan, S., "Assimilation of dynamic data into reservoir models using a model selection approach," presented at INTERA Corporation, Austin, May 2015.
3. Srinivasan, S., "Reservoir modeling of Carbonate Features: An excursion into mp Geostatistics and new data integration paradigms," presented at Saudi Aramco Corporation, Houston, May 2015.
4. Srinivasan, S., "BIG Data Analytics for solving production problems," presented to BP Corporation, Austin, November 2014.
5. Srinivasan, S., "Some Perspectives on "Big Data" Analytics," presented at the Center for Petroleum Asset Risk Management Annual affiliates meeting, UT Austin, December 2014.
6. Srinivasan, S., "Scale up of Flow and Transport in Heterogeneous Media – Implications for Uncertainty Quantification, presented at the Center for Subsurface Modeling annual affiliates meeting, UT Austin, November 2014.
7. Srinivasan, S., "Inexpensive Monitoring and Uncertainty Assessment of CO2 Plume Migration," presented at the Carbon Storage R&D Project Review Meeting - Developing the Technologies and Infrastructure for CCS, DOE-NETL, Pittsburgh, August 12 – 14, 2014.
8. Srinivasan, S., "Assimilation of dynamic data into reservoir models using a model selection approach," presented at the SEG/SPE/AAPG/SPWLA/EAGE Summer Research Workshop: Multi-disciplinary Static and Dynamic Reservoir Modeling, San Deigo, CA, August 2014.
9. Srinivasan, S., "Feedback control of polymer flooding accounting for uncertainty in geologic models," Annual Affiliates Meeting of Center for Subsurface Modeling, University of Texas at Austin, October 28<sup>th</sup>, 2013.
10. Srinivasan, S., "Integrating Statistics, Geomechanics & Geophysics for Identifying Natural Fractures in Tight Gas Reservoirs," 3rd Annual Reserve Estimation Unconventionals REU Houston, organized by Hanson-Wade Corporation, September 16<sup>th</sup>, 2013.
11. Srinivasan, S., "Patterns, Proxies and Predictions: Some perspectives in geology, flow and uncertainty quantification," Graduate Seminar, Department of Energy and Mineral Engineering, PennState University, April 29<sup>th</sup>, 2014.

12. Srinivasan, S., "Subsurface Storage Security: Long-term predictions of CO<sub>2</sub> geologic storage at the field scale," Invited Speaker, Science for our Nation's Energy Future, Energy Frontiers Research Centers PI Meeting and Forum, Washington DC, July 2013.
13. Srinivasan, S., "Water Efficient Heavy Oil Extraction," ConocoPhillips Corporation, April, 2013.
14. Srinivasan, S., "Multi-Scale characterization of CO<sub>2</sub> sequestration processes," Invited Speaker Indo-Norwegian Symposium on CO<sub>2</sub> sequestration, Hyderabad, India, November 21<sup>st</sup>-23<sup>rd</sup>, 2012.
15. Srinivasan, S., "Characterization and Modeling of Paleokarst Reservoirs Using Multiple-Point Statistics on a Non-Gridded Basis," Invited Speaker, Reservoir Characterization Research Laboratory Annual Affiliates Meeting, October 2012.
16. Srinivasan, S., "Stochastic characterization of Natural Fracture Networks," Invited Speaker STATOIL Research Summit, Trondheim, Norway, Oct. 14-17, 2012.
17. Srinivasan, S., "Real time Updating of Reservoir Models using a Probability Perturbation Approach," Invited Speaker Symposium on Reservoir Surveillance organized by Xi'an University, Beijing, China, August 2012.
18. Srinivasan, S., "Stochastic Reservoir Characterization – some perspectives," Invited Speaker Indian Institute of Sciences, Center for Earth Sciences, Bangalore, India, June 2<sup>nd</sup>, 2012.
19. Srinivasan, S. and Barrera, A.E., "History matching by simultaneous calibration of flow functions," Invited Speaker INTERPORE Conference, Lafayette, Indiana, May 21-24, 2012.
20. Srinivasan, S., "Some perspectives in multiple point statistical simulation – indicator basis functions," Annual Meeting of the Stanford Center for Reservoir Forecasting, May 5<sup>th</sup>-9<sup>th</sup>, 2012
21. Srinivasan, S., "Field scale characterization of CO<sub>2</sub> sequestration process," *DOE-EFRC Annual Review Meeting*, Jan. 10-11, 2012.
22. Srinivasan, S., "Reservoir Characterization of Carbonates using multiple point Geostatistics," ExxonMobil Corporation, November, 2011.
23. Srinivasan, S., "A stochastic approach to characterizing turbidite reservoirs," ConocoPhillips Corporation, October, 2011.
24. Srinivasan, S. and Barrera, A.E., "Multiscale reservoir characterization using production data," Invited Speaker *Gussow Conference, Canadian Society of Petroleum Geologists*, Banff, Canada, Oct. 9-11, 2011.
25. Srinivasan, S., "A stochastic feedback control paradigm for managing enhanced oil recovery processes," *SPE Bay Area Section*, June, 2010.
26. Srinivasan, S., "Geostatistical characterization of CO<sub>2</sub> sequestration," Invited Speaker, Workshop on Advancing the Science of Geologic Carbon Sequestration, Ohio State University, June 2010.
27. Invited keynote talk at the Society of Petroleum Geophysicists Annual meeting, Hyderabad, Jan. 14 – 16, 2008 "Geostatistical tools for data integration and uncertainty assessment".
28. Srinivasan, S., "Stochastic modeling of fracture networks," ExxonMobil Corporation, July, 2008.
29. Srinivasan, S., invited speaker, "Reservoir Characterization – Recent Trends," ENAEP National Oil & Energy meeting, Quito, Ecuador, August, 2007.
30. Srinivasan, S., invited speaker, "Stochastic modeling of fracture networks," Conoco-Phillips Corporation, Houston, Texas, May, 2007.

31. Srinivasan, S., invited speaker, "Stochastic modeling of subsurface geology and flow - The challenge of data integration," ExxonMobil Corporation, Clinton, New Jersey, June, 2007.
32. Srinivasan, S., invited seminar speaker, "Direct interpolation of reservoir flow responses," University of Tulsa, October, 2006.
33. Srinivasan, S., invited speaker, "Pro-HMS: History Matching in a Probabilistic Framework," Exxon-Mobil Corporation, August 22, 2006.
34. Srinivasan, S., invited speaker, "Improved Power Average Approximations and Multi-Point Proxy Expansions for Up-scaling Permeability Fields," Marathon Upscaling Symposium, Houston, Texas, July 23-26, 2006.
35. Srinivasan, S., invited lecture short course titled "Spatial Statistics: Understanding through Applications," Sandia National Laboratory, Albuquerque, New Mexico, June 26, 2006-July 7, 2006.
36. Srinivasan, S., invited seminar titled "Data integration in reservoir models: Application of parallel computation and sequential updating," Stanford University, February 26<sup>th</sup>, 2006
37. Srinivasan, S., "Introducing more physics into stochastic reservoir characterization," Exxon-Mobil Upstream Research Center, Houston, July 2005.
38. Srinivasan, S., "Applied geostatistics and simulation for petroleum reservoir modeling," invited speaker - China National Petroleum Corporation- Alberta Petroleum Council, Beijing, July 2005
39. Srinivasan, S., "Scale up, upscaling and integration of dynamic information in reservoir models," invited speaker - Society of Petroleum Engineers Applied Technology Workshop on Integrating Geosciences and Engineering for Reservoir Characterization Models, Veracruz, Mexico, June, 2005.
40. Srinivasan, S., "Data Integration Accounting for Scales: An Excursion into Statistical Averaging, Power Averaging and Multiple Point Approximations," Society of Petroleum Engineers Advanced Technology Workshop on Integrating Geosciences and Engineering for Reservoir Characterization Models, Veracruz, Mexico, June 6-8, 2005.
41. Srinivasan, S., invited seminar titled "Reservoir Characterization - A compendium of research ideas," Texas A & M University, February 2004.
42. Srinivasan, S. and Bryant, S.: "History Matching in Parallel Environments," presentation to the Department of Energy, October 3, 2003.
43. Srinivasan, S., "Reservoir Characterization: A Compendium of Research Ideas," presentation to Reservoir GeoSciences Group of Conoco-Phillips Corporation, October 2, 2003.
44. Srinivasan, S., "Reservoir Characterization: A Compendium of Research Ideas," presentation to Reservoir Engineering Business Unit of Shell-Canada Corporation, July 29, 2003.
45. Srinivasan, S., "Stochastic methods for characterizing naturally fractured reservoirs," presentation to EnCana Corporation, Calgary, Canada, July 25, 2003.

46. Srinivasan, S., "Reservoir Characterization: A Compendium of Research Ideas," presentation to Geologic Modeling Section of ExxonMobil Upstream Research Company, Houston, TX, July 8, 2003.

**Presentations at Conferences and Technical Meetings:**

1. Srinivasan, S., "Some perspectives on Scale-up of Flow and Transport in Heterogeneous Media," at the Gussow 2014 conference: *Closing the Gap II – Advances in Applied Geomodeling for Hydrocarbon Reservoirs*, held September 22-24 at the Rimrock Hotel in Banff.
2. Srinivasan, S., "Deepwater Reservoir Performance Prediction Using Lobster Data," RPSEA 2014 UDW Technology Conference, September 2014.
3. Srinivasan, S. and Huang, Y-C., "Reservoir modeling using a pattern-growth approach," 9<sup>th</sup> Geostatistics Congress, Oslo, Norway, June 5-10, 2012.
4. Srinivasan, S. and Anupam, A., "Hierarchical modeling of fracture reservoirs," 9<sup>th</sup> Geostatistics Congress, Oslo, Norway, June 5-10, 2012.
5. Srinivasan, S. and Mantilla, C., "Feedback control of the polymer flooding process," *International Association of Mathematical Geology Annual Meeting*, Salzburg, Austria, September 6-9, 2011.
6. Srinivasan, S. and Huang, Y-C., "A pattern growth paradigm for multiple point simulation," *International Association of Mathematical Geology Annual Meeting*, Salzburg, Austria, September 6-9, 2011.
7. Srinivasan, S. and Sen, M.K., "Modeling diagenetic pathways in a carbonate reservoir using seismic data," Society of Exploration Geophysicists Annual Meeting, Las Vegas, October, 14-16, 2010.
8. Barrera, A.E. and Srinivasan, S., "History Matching by Simultaneous Calibration of Reservoir Geological Models at Pore-Level and Field Scales," *SPE Paper 124939-MS* presented at the SPE Annual Technical Conference and Exhibition, New Orleans, 2009.
9. Eskandari, K. and Srinivasan, S., "Growthsim – A Multiple Point Framework for Pattern Simulation," *Proceedings of the EAGE Conference on Petroleum Geostatistics*, Cascais, Portugal, September 10-14, 2007.
10. Barrera, A., and Srinivasan, S., "History Match by Simultaneous Calibration of Flow Functions" *Proceedings of the EAGE Conference on Petroleum Geostatistics*, Cascais, Portugal, September 10-14, 2007.
11. Eskandari, K. and Srinivasan, S. "Integrating dynamic data in reservoir models – a multiple point perspective" Paper 1239 presented as ECMOR X, Amsterdam, September, 2006.
12. Srinivasan, S. and Srinivasan, S. "Direct spatiotemporal interpolation of reservoir flow responses," Paper 1218 presented at ECMOR X, Amsterdam, September, 2006.
13. Rmaileh, R., Barrera, A., Srinivasan, S. and Huh, C. "Conditioning sedimentary models to well log data – an application of ensemble Kalman filter", presented at ECMOR X, Amsterdam, September, 2006.
14. Reinlie, S.T. and Srinivasan, S. "Rapid stochastic updating of reservoir models incorporating dynamic data – an evaluation of the p-field approach," presented at ECMOR X, Amsterdam, September, 2006.
15. Srinivasan, S. and Srinivasan, S. "Space-time kriging for direct interpolation of pressure responses in a reservoir," presented at XI<sup>th</sup> International Congress for Mathematical Geology, Liege, Belgium, September, 2006.

16. Rmaileh, R., Barrera, A., Srinivasan, S. and Huh, C. "Sequential conditioning of sedimentary process models using ensemble Kalman filter," presented at XIth International Congress for Mathematical Geology, Liege, Belgium, September, 2006.
17. Liu, X. and Srinivasan, S., "Merging Outcrop Data and Geomechanical Information in Stochastic Models of Fractured Reservoirs," Society of Petroleum Engineers (SPE) International Petroleum Conference, Puebla, Mexico, November 8, 2004.
18. Lake, L.W., Srinivasan, S. and John, A., "Statistical Scale-Up: Concepts and Application to Reservoir Flow Simulation Practice," Seventh International Geostatistics Congress: Geostatistics Banff 2004.
19. Liu, X. and Srinivasan, S.: "Improved characterization of naturally fractured reservoirs using well logs and multipoint geostatistics," Annual meeting of the Center of Excellence in Formation Evaluation (CEFE), University of Texas at Austin, August 22, 2003.
20. Srinivasan, S., "Improved Fracture Characterization by Combining Pattern Recognition Techniques and Geomechanical Criteria for Fracture Propagation," Fraccity Consortium Industrial Affiliates Meeting, Jackson-Hole, WY, July 21-22, 2003.
21. Srinivasan, S., "Calibration of information in reservoir production data," Society of Petroleum Engineers Applied Technology Workshop: Innovative Technology in Reservoir Characterization: Bridging Between Measurements and Modeling Conference, Dubai, United Arab Emirates, December 12-14, 2002.

#### RESEARCH SUPERVISION – IN PROGRESS:

##### Ph.D. STUDENT SUPERVISION

|                     |       |   |
|---------------------|-------|---|
| Kumar, Devesh       | Ph.D. | Energy and Mineral Engineering, PennState |
| Udegbe, Egbadon     | Ph.D. | Energy and Mineral Engineering, PennState |
| Ghosh, Mousumi      | Ph.D. | Energy and Mineral Engineering, PennState |
| Malife, Chukwudiuto | Ph.D. | Energy and Mineral Engineering, PennState |
| Chandna, Akshat     | Ph.D. | Energy and Mineral Engineering, PennState |
| Singh, Manik        | Ph.D. | Energy and Mineral Engineering, PennState |
| Naraghi, Morteza    | Ph.D. | Petroleum & Geosystems Engineering, UT    |
| Jeong, Hoonyoung    | Ph.D. | Petroleum & Geosystems Engineering, UT    |

##### MS STUDENT SUPERVISION

|                |    |                        |
|----------------|----|------------------------|
| Raina, Arindam | MS | Petroleum & Geosystems |
|----------------|----|------------------------|

##### POST-DOCTORAL FELLOWS SUPERVISION

Min, Baehyun – Multi-objective Optimization applied to Subsurface problems, UT Austin

#### RESEARCH SUPERVISION - COMPLETED/GRADUATED

##### A. Ph.D.

- Singh, Harpreet      Ph.D.    Engineering    Petroleum & Geosystems      2012



“Scale up of reactive transport processes in porous media”

- Bhowmick, Sayantan Ph.D. Engineering Petroleum & Geosystems 2013  
“Particle tracking proxies for prediction of CO<sub>2</sub> plume migration within a model selection framework”
- Azom, Prince Ph.D. Engineering Petroleum & Geosystems 2012  
“Improved Modeling of the Steam Assisted Gravity Drainage (SAGD) Process”
- Erzeybek, Selin Ph.D. Engineering Petroleum & Geosystems 2012  
“Characterization and Modeling of Paleokarst Reservoirs Using Multiple-Point Statistics on a Non-Gridded Basis”
- Mantilla, Cesar. Ph.D. Engineering Petroleum & Geosystems 2011  
“Feedback Control of Polymer Flooding Process Considering Geologic Uncertainty”
- Leung, Juliana. Ph.D. Engineering Petroleum & Geosystems 2010  
“Reservoir modeling accounting for scale up of static and dynamic flow characteristics”
- Eskandari, Kiomars Ph.D. Engineering Petroleum & Geosystems 2009  
“Growthsim: A Complete Framework for Integrating Static and Dynamic Data into Reservoir Models”
- Barrera, Alvaro E. Ph.D. Engineering Petroleum & Geosystems 2007  
“History matching by simultaneous calibration of flow functions”
- Reinlie, Shinta Ph.D. Engineering Petroleum & Geosystems 2006  
“Analysis of continuous monitoring data and rapid stochastic updating of reservoir models”
- Wu, Xingru Ph.D.Co-Supervised w/G.Pope Petroleum & Geosystems 2006  
“An investigation of partitioning tracers for characterizing geothermal reservoirs and predicting enthalpy production”

#### B. M.S.

- Olaluna, Oladeji MS Engineering Petroleum & Geosystems  
“Stochastic Modeling of Channel Meanders and Resultant Point Bars”
- Murugesu, Mayuri MS Engineering Petroleum & Geosystems  
“Improved Upscaling Scheme for Steam Assisted Gravity Drainage (SAGD) and Semi-analytical Modeling of the SAGD Rising Phase”
- Nwachukwu, Azor MS Engineering Petroleum & Geosystems  
“Model Selection for Co<sub>2</sub> Sequestration Using Surface Deflection and Injection Data”
- Han, Sang Hyon MS Engineering Petroleum & Geosystems  
“Investigating the Geochemical Alterations in an Aquifer due to Long-term Sequestration of CO<sub>2</sub> using Time-Lapse Seismic Information”
- Choi, James MS Engineering Petroleum & Geosystems  
“Quantification of Production Recovery using Probabilistic Approach and Semi-analytical Model for Unconventional Oil Reservoirs”
- Li, Henry MS Engineering Petroleum & Geosystems  
“Modeling of Point-bar Geology using a Grid Transformation Scheme and Geostatistics”

- 
- Kannan, Krupa MS Engineering Petroleum & Geosystems  
“Predicting and Optimizing the Performance of the Expanding Solvent Steam Assisted Gravity Drainage (ES-SAGD) Process Using an Improved Semi-Analytical Proxy Model”
  - Kumar, Dhananjay MS Engineering Petroleum & Geosystems  
“Modeling Steam Assisted Gravity Drainage in Heterogeneous Reservoirs Using Different Upscaling Techniques”
  - Hampton, Travis MS Engineering Petroleum & Geosystems  
“Seismic and Sparse Data Integration through the use of Direct Sampling”
  - Naraghi, Morteza MS Engineering Petroleum & Geosystems  
“Geostatistical Data Integration in Complex Reservoirs”
  - Punase, Aarti MS Engineering Petroleum & Geosystems  
“Assessing the effect of reservoir heterogeneity on CO<sub>2</sub> plume migration using pressure transient analysis”
  - Singh, Harpreet M.S. Engineering Petroleum & Geosystems  
“Assessing Reservoir Performance and Modeling Risk Using Real Options”
  - Kim, Young M.S. Engineering Petroleum & Geosystems  
“Investigation of CO<sub>2</sub> Seeps at the Crystal Geyser Site Using Numerical Modeling with Geochemistry”
  - Bhowmick, S. M.S. Co-Supervised w/S. Bryant Petroleum & Geosystems  
“Predicting plume displacement during CO<sub>2</sub> sequestration using injection data”
  - Mantilla, Cesar M.S. Engineering Petroleum & Geosystems  
“Proposal for Rapid Model Updating and Feedback Control Scheme of Polymer Flooding Processes
  - Kilmartin, Donovan M.S. Engineering Petroleum & Geosystems  
“Loss functions for Reservoir Modeling”
  - Forster, Louis M.S. Engineering Petroleum & Geosystems  
“Numerical Modeling of the VAPEX Process in Heterogeneous Media”
  - Pradeep, Ananth M.S. Engineering Petroleum & Geosystems  
“Accurate numerical simulation of reaction-diffusion processes for heavy oil recovery”
  - Sharma, Aviral M.S. Co-Supervised w/L. Lake Petroleum & Geosystems  
“Classification of Hydrocarbon Recovery Factor Based on Reservoir Databases”
  - Kim, Yonghwee M.S. Co-Supervised w/S. Bryant Petroleum & Geosystems  
“Probabilistic Framework-based History Matching Algorithm Utilizing Sub-domain Delineation and software 'Pro-HMS”
  - Madueke, Nnaemeka M.S. Engineering Petroleum & Geosystems  
“Statistical analysis of water quality in distribution networks”
  - Srinivasan, Shekhar M.S. Engineering Petroleum & Geosystems  
“Direct spatiotemporal statistical modeling of pressure responses in heterogeneous reservoirs”
  - Revana, Karthik M.S. Co-Supervised w/G.Pope Petroleum & Geosystems  
“Optimization study of the in-situ thermal desorption to remediate contaminated soils using numerical reservoir simulation,”

- 
- Yadav, Sharad M.S. Co-Supervised w/S.Bryant Petroleum & Geosystems  
“History Matching using Probabilistic Approach in a distributed computing environment”
  - Leung, Juliana Y. M.S. Engineering Petroleum & Geosystems  
“A New Analog for Numerical Flow Simulations Application To Direct Assessment of Reservoir Flow Performance Uncertainties”
  - Liu, Xiaohaun M.S. Engineering Petroleum & Geosystems  
“Geostatistical Characterization of Naturally Fractured Reservoir”
  - Zhang, Yunxiang M.S. Engineering Chemical & Petroleum  
“Markov Chain Monte Carlo for Modelling Permeability Variations in Reservoirs”
  - Kashib, Tarun M.S. Engineering Chemical & Petroleum  
“Iterative Integration of Dynamic Data in Reservoir Models”
  - Merchan, Sergio M.S. Engineering Chemical & Petroleum  
“Characterization Of Estuary-Shoreface Type Reservoir Using Outcrop Analogue And Modeling Of Flow Using A Nonuniform Coarsened Grid”

### C. POST-DOCTORAL FELLOWS

- Zhou, Haiyan - Novel Techniques for Field Scale Stochastic Characterization of CO<sub>2</sub> Sequestration Processes – Center for Subsurface Energy Security (CFSES)
- Li, Liangping – A Model Selection Approach for CO<sub>2</sub> Plume Monitoring using Injection Data – DOE Plume Monitoring Project with Dr. Steven Bryant (co-PI)
- Zhang, Rui – Improved Seismic Characterization of CO<sub>2</sub> sequestration process – Center for Subsurface Energy Security (CFSES) with Dr. Mrinal Sen (co-PI)
- Titeaux, Marc-Olivier – Modeling cave collapse in karst systems – with Dr. Xavier Janson (BEG)