

## **KEYNOTE SPEAKER, INVITED LECTURES & SEMINARS (Partial List)**

1. "Revisiting the methodology of stochastic upscaling: In search of Prometheans?" Invited seminar, NSF Meeting on Applications of Modern Tools of Mathematics and Physics to Subsurface Hydrology, Purdue University, Lafayette, August 11-15, 2003.
2. "Killing time: Adventures in a spatiotemporal parallel world". Invited seminar, National Center for Atmospheric Research (NCAR), Boulder, Colorado, USA, June 5, 2003.
3. "Spatiotemporal mapping for multi-disciplinary knowledge synthesis". Invited seminar, Lamont-Doherty Earth Observatory, Columbia University, Palisades, N.Y., USA, October 18, 2002.
4. "The emergence of Parmenidean knowledge synthesis in spatiotemporal modelling", Invited Talk, Joint Statistical Meeting of the American Statistical Association, New York, N.Y., USA, August 11-15, 2002.
5. "Conceptual frameworks of physical knowledge synthesis in uncertain environments". Keynote speaker, ModelCARE'2002, Prague, Czech Republic, June 17-20, 2002.
6. "Representation and prediction in terrestrial sciences", Invited Seminar, Topographic Engineering Center, Army Corps of Engineers, Washington DC, USA, May 6, 2002.
7. "Assimilation modelling in the light of physical knowledge synthesis", Invited Seminar, Dept. of Civil & Environmental Engin., Duke Univ., USA, April 29, 2002.
8. "Bayesian and Non-Bayesian conditionalization in assimilation modelling". Invited lecture, Department of Statistics, University of Granada, Spain, April 18, 2002.
9. "A Parmenidean knowledge synthesis framework of spatiotemporal statistics". Plenary talk, Conference of the Spanish Society for Statistics & Operations Research (SEIO), Ubeda, Spain, November 6-9, 2001.
10. "Towards an information-theoretic approach to environmental risk assessment". Invited lecture, Russian Academy of Sciences, Nuclear Safety Institute, Moscow, Russia, September 11, 2001.

11. "The role of uncertainty in developing a realistic environmental modelling approach". Invited lecture, National Technical University of Athens, Athens, Greece, August 27, 2001.
12. "Physical knowledge synthesis in environmental engineering". Invited lecture, Department of Environmental Engineering, Yale University, New Haven, CT, USA, December 13, 2000.
13. "Aristotle, his wives' teeth and the fate of stochastic modelling". Invited speaker, Department of Mathematics, Duke University, NC, USA, March 8, 2000.
14. "Sherlock Holmes' insight and the case of informativeness vs. probabiliorism in random field prediction". Invited speaker, Department of Mathematics, M.I.T., Cambridge, Mass, USA, February 9, 2000.
15. "Towards an epistemic characterization of environmental phenomena, and the prediction of particulate matter distribution in Eastern US". Invited speaker, U.S. EPA, Research Triangle Park, NC, USA, October 12, 1999.
16. "The 'Citizen Kane effect' on spatiotemporal analysis and mapping". Invited speaker, Dept. of Statistics, North Carolina State Univ., Raleigh, N.C., USA, Oct. 1, 1999.
17. "Modelling and prediction of space/time natural processes using a BME approach". Invited speaker, Center for Geophysical Investigation of the Shallow Subsurface, Boise State Univ., USA, June 23, 1999.
18. "The holistochastic character of environmental health statistics". Invited speaker, 1999 Lukacs Symp., Bowling Green State Univ., OH, USA, April 25, 1999.
19. "The future of environmental health engineering - Opportunities and challenges". Invited lecture, School of Engineering, Vanderbilt University, Nashville, Tennessee, USA, May 4, 1999.
20. "Spatiotemporal ozone variation and its impact on human populations." Invited speaker, XXIV European Geophysical Society General Assembly, The Hague, The Netherlands, April 19, 1999.

21. "The role of holistic modelling in spatiotemporal exposure-health effect analysis". Invited lecture, School of Public Health, Univ. of Alabama at Birmingham, Alabama, USA, January 12, 1999.
22. "New perspectives in environmental engineering: The search for 'Rosebud' ". Invited lecture, Department of Civil and Environmental Engineering, Washington Univ., St. Louis, Missouri, USA, January 20, 1999.
23. "While God is raining brains are we holding umbrellas? The role of modern geostatistics in spatiotemporal analysis and mapping". Keynote Speaker, International Conference on Time-Space Systems in Environmental Sciences. Ischia, Italy, October 5-9, 1998.
24. "Computational experiments of multiphase flow and transport in hierarchical porous media: Questions of concept vs. questions of fact". Invited lecture, Los Alamos National Lab, NM, USA, March 1998.
25. "Bayesian prediction and the incorporation of entropic measures." American Statistical Association □ Joint Statistical Meeting, Anaheim, CA, USA, August 1997.
26. "Spatiotemporal random field modelling and its application in the analysis of large spatially and temporally varying data sets such as ERBE and ISCCP data-Variations of clouds and earth radiation processes." Invited talk, NASA, Norfolk, USA, April 1997.
27. "Multiphase flow in heterogeneous porous media: A stochastic differential geometry approach". Invited speaker, Army Research Office Workshop, Panama City, FL, USA, January 1997.
28. "Stochastic analysis of spatiotemporal natural processes." Invited speaker, Amer. Soc. of Agronomy/Crop Sci. Soc. of Amer./Soil Sci.Soc. of Amer. Conference, Indianapolis, IN, USA, 1996.
29. "Space-time characterization and risk analysis of hazardous waste sites using indicator parameters." Invited lecture, The University of South Carolina, SC, USA, November 1996.

30. "Multiphase flow and contaminant transport modelling in heterogeneous porous formations." Invited, seminar, Dept. of Civil & Environmental Engineering, Duke University, Durham, NC, USA, May 1996.
31. "The role of stochastic indicators in site characterization, risk assessment, and remediation analysis." Invited speaker, Society of Risk Analysis, Raleigh, NC, August 1996
32. "The atmospheric data assimilation cycle: New tools of objective analysis." Invited seminar, Topographic Engineering Center, Department of Defense, Alexandria, VA, USA, 1995.
33. "Diagrammatic perturbation analysis of stochastic groundwater flow." Invited speaker, SIAM Conference on Applied Mathematics, San Antonio, Texas, USA, Feb. 8-10, 1995.
34. "Ab initio analysis of scale dependence in porous formations," Invited seminar, American Geophysical Union Confer., San Francisco, USA, 1994.
35. "New directions in subsurface pollution modelling and prediction." Invited seminar, Lawrence Berkeley Laboratory, Berkeley, CA, USA, 1994.
36. "Stochastic partial differential equations of contaminant transport in heterogeneous porous media". Invited speaker, Gordon Conference on Flow in Permeable Media, Proctor Academy, Andover, NH, USA, 1994.
37. "Revisionistic tools in the study of intermittent processes." Invited speaker, Office of Naval Research, Marine Boundary Layers Accelerated Research Initiative Workshop, Monterey, CA, USA, 1992.
38. "Global warming-related uncertainties: the new challenge for stochastic analysis experts." Invited seminar, Southern Regional Council, Flatroch, NC, USA, June 13-17, 1992.
39. "Certain emerging environmental exposure problems: To be or not to be stochastic?" Invited speaker, European Economic Community (EEC) Joint Research Center Ispra, Varese, Italy, 1991.

40. "Stochastic solutions to environmental problems." Invited seminar, Dept. of Civil, Mechanical and Environmental Engineering, George Washington University, Washington DC, USA, 1991.
41. "Certain results on spatiotemporal random fields, and their applications in environmental health research". Invited seminar, NATO Advanced Studies Institute, Castelvecchio Pascoli (Lucca), Italy, 1991.
42. "Site exploration: The synthesis of random field representations and multiobjective optimization." Invited seminar, Dept. of Statistics, Univ. of North Carolina, Chapel Hill, NC, USA, 1991.
43. "Some applications of the Bayesian maximum-entropy concept in Geostatistics." Invited lecture, Dept. of Physics & Astronomy, Univ. of Wyoming-Laramie, WYO, USA, 1990.
44. "Recent results on random fields and certain engineering applications." Invited seminar, Dept. of Mathematics & Computer Sciences, University of Kansas, Kansas, USA, 1987.
45. "Random field simulation using the Radon transform." Invited speaker, Department of Pure Mathematics & Mathematical Statistics, University of Cambridge, UK., Oct., 1987.
46. "Nonlinear estimation of factorable random processes." Invited seminar, Dept. of Electrical Engineering, Imperial College of Science & Technology, London, U.K., Oct., 1987.