

CURRICULUM VITAE

George Christakos, Ph.D, ScD, PE

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EDUCATION

- *Harvard University*, Cambridge, MA, USA: Ph.D. in Applied Sciences, 1990.
- *National Technical University of Athens*, Athens, Greece: Sc.D. in Mineral Resources, 1986.
- *Massachusetts Institute of Technology*, Cambridge, MA, USA: M.S. in Civil & Environmental Engineering, 1982.
- *University of Birmingham*, Birmingham, UK: M.Sc. in Geoscience, 1980.
- *National Technical University of Athens*, Greece: Diplom (Honors) in Civil Engineering, 1979.

FOREIGN LANGUAGES

- *Greek, French, German* (Grundst. Dipl.)

ACADEMIC APPOINTMENTS

2006-Present:

Distinguished Professor
Steven and Mary Birch Endowed Chair

Department of Geography, Environmental Health & Medical Geography Program, San Diego State University, San Diego, California, U.S.A.

Teaching and research activities focus on science-based modeling and prediction of interdisciplinary natural systems; environmental health; pollution monitoring and control; risk analysis and decision making; scientific reasoning and knowledge synthesis; spatiotemporal random fields theory and uncertainty assessment; space-time statistics and geostatistics; temporal-GIS; space-time epidemiology and medical geography.

2011-Present:

Adjunct Scholar.

School of Public Health, University of North Carolina, Chapel Hill, N.C., U.S.A.

1990-2005:

- 1999-2005: *Director*, Center for the Integrated Study of the Environment (CISE).
- 1998-2005: *Professor*.
- 1999-2002: *Director*, Environmental Modeling Program (EMP).
- 1994-1997: *Associate Professor*.
- 1990-1993: *Assistant Professor*.

Department of Environmental Science and Engineering, School of Public Health, University of North Carolina, Chapel Hill, N.C., U.S.A.

2001-2005:

Adjunct Professor

Department of Statistics and Operations Research, University of North Carolina, Chapel Hill, N.C., U.S.A.

OTHER APPOINTMENTS

Honorary Professorships:

2014-2019:

Chair Professor

Chinese Ministry of Education
Beijing, China.

2011-2013:

Yongqian Chair Professor

College of Environmental Sciences & Natural Resources, Zhejiang University, Hangzhou, China.

Visiting Professor:

- Department of Statistics, Universidad de Granada, Granada, Spain (Sept 2012).
- College of Environmental Sciences & Natural Resources, Zhejiang University, Hangzhou, China (June 2007).
- Unite d'Environnement et de Geomatique, Universite Catholique de Louvain-la-Neuve, Louvain la Neuve, Belgium (May 2003).
- Department of Mineral Resources, National Technical University of Athens, Athens, Greece (Jan-Apr 2003).
- Department of Engineering & Applied Mathematics, Universidad Politecnica de Catalunya, Barcelona, Spain (Nov 2001-Apr 2002).
- Dipartimento di Scienze Economiche e Matematico-Statistiche, Universita' di Lecce, Lecce, Italy (Oct 2001).
- Russian Academy of Sciences, Nuclear Safety Institute, Moscow, Russia (Aug-Sept 2001).
- Department of Petroleum Engineering, Stanford University, Stanford, CA, USA (1993-1994).

Visiting Research Fellow:

Department of Applied Mathematics & Theoretical Physics, University of Cambridge, Cambridge, UK (1987).

Visiting Scientist:

Advanced Projects Section, Kansas Geological Survey, Lawrence, KS, USA (1986 & 1988).

Research Associate:

- Institute of Geology & Mineral Exploration, Athens, Greece (1985-1986).
- Centre de Geostatistique et de Morphologie Mathematique, Ecole des Mines de Paris, Fontainebleau, France (1982-1983).

PhD Fellow:

Division of Applied Sciences, Harvard University, Cambridge, MA, USA (1988-1990).

Research Assistant:

- Department of Civil & Environmental Engineering, Massachusetts Institute of Technology (MIT), Cambridge, MA, USA (1980-1982).
- Soil Mechanics Laboratory, University of Birmingham, Birmingham, UK (1979-1980).

EDITORIAL POSITIONS

1998-Present: Editor-in-Chief

Journal of Stochastic Environmental Research & Risk Assessment

<http://link.springer.de/link/service/journals/00477/index.htm>

2014-Present: Review Editorial Board

Frontiers in Interdisciplinary Climate Studies

http://www.frontiersin.org/news/Nature_Publishing_Group_and_Frontiers_form_alliance_to_further_open_science/266

2014-Present: Editorial Board Member

Journal of Social Sciences

<http://www.scirp.org/journal/jss>

2011-Present: Associate Editor

Journal of Environmental Informatics

<http://www.iseis.org/JEI>

2009-Present: Advisory Editor

Chilean Journal of Statistics (ChJS)

<http://chjs.soche.cl>

2008-Present: Associate Editor

Water Quality, Exposure and Health

<http://www.springer.com/environment/water/journal/12403>

1992-Present: Editorial Board

Journal of Environmental & Ecological Statistics

<http://www.springerlink.com/content/1573-3009/>

1997-2007: Editorial Board

Advances in Water Resources

http://www.elsevier.com/wps/product/cws_home/422913

1994-1997: Associate Editor

Journal of Stochastic Hydrology & Hydraulics

PUBLIC DOMAIN COMPUTER LIBRARIES

- SEKS-GUI (Spatiotemporal Epistematics Knowledge Synthesis software library and Graphic User Interface). See: Kolovos A., Yu H-L, and Christakos G., 2006. *SEKS-GUI v.0.6 User Manual*. Dept. of Geography, SDSU, San Diego, CA.
- STARBME (Space-time Analytics & Rendering Bayesian Maximum Entropy software toolbox).
- BMElib (Bayesian Maximum Entropy software library).
- SANlib (Stochastic Analysis software library).

SCIENTIFIC PUBLICATIONS

I. Books:

Wu J., He J. and Christakos, 2020. *Quantitative Analysis and Modeling of Earth and Environmental Data: Space-Time and SpaceTime Considerations*. Elsevier, Amsterdam, the Netherlands. In press.

Christakos G., 2017. *Spatiotemporal Random Fields: Theory and Applications*. Elsevier, Amsterdam, Netherlands.

Christakos G., Wang J.F. and Wu J., 2014. *Stochastic Medical Reasoning and Environmental Health Exposure*. Imperial College Press, London, UK.

Christakos G., 2012. *Modern Spatiotemporal Geostatistics*. New Edition, Dover Publ. Inc., Mineola, NY.

Christakos G., 2010. *Integrative Problem-Solving in a Time of Decadence*. Springer-Verlag, New York, NY.

Christakos G., Olea R.A., Serre M.L., Yu H-L and Wang L-L., 2005. *Interdisciplinary Public Health Reasoning and Epidemic Modelling: The Case of Black Death*. Springer-Verlag, New York, NY.

Christakos G., 2005. *Random Field Models in Earth Sciences*. New Edition, Dover Publ. Inc., Mineola, NY.

Christakos G., Bogaert P. and Serre M.L., 2002. *Temporal GIS*. With CD-ROM. Springer-Verlag, New York, NY.

Christakos G., 2000. *Modern Spatiotemporal Geostatistics*. Oxford University Press, New York, NY (Out of Print.).

Christakos G. and Hristopulos D.T., 1998. *Spatiotemporal Environmental Health Modelling: A Tractatus Stochasticus*. Kluwer Academic Publ., Boston, MA.

Christakos G., 1992. *Random Field Models in Earth Sciences*. Academic Press, San Diego, CA (Out of Print.)

Christakos G., Clark I., David M., Journel A.G., Krige D.G. and Olea R.A. (ed.), 1991, *Geostatistical Glossary and Multilingual Dictionary*. Oxford University Press, Oxford, UK (Out of Print).

II. Book Chapters:

Christakos G., 2013. Space-Time “Stochastic Modelling in Human Exposure,” in *Encyclopedia of Environmetrics*, A.-H. El-Shaarawi and W. Piegorsch (eds), John Wiley & Sons Ltd, Chichester, UK.

DOI: 10.1002/9780470057339.vas059.pub2. Published online 1/15/2013.

Yu H-L, Wang C-H, Christakos G., and Wu Y-Z, 2011. "Spatiotemporal Analysis of PM_{2.5} Population Exposure in Taipei (Taiwan) by Integrating PM₁₀ and TSP observations". Chapter 24 (pp. 473-492) of *Geospatial Analysis of Environmental Health-Geotechnologies and the Environment 4*, Maantay J. and McLafferty S. (eds.), Springer, New York, NY.

Christakos G., 2008. "Bayesian Maximum Entropy". *Advanced Mapping of Environmental Data: Geostatistics, Machine Learning, and Bayesian Maximum Entropy*-Chapter 6: 247-306, Kanevski M. (ed.), J. Wiley & Sons, New York, NY.

Yu H-L, Christakos G. and Bogaert P. 2010. "Dealing with Spatiotemporal Heterogeneity: The Generalized BME Model". In *Progress in Spatial Analysis: 75-91*, Páez A., Le Gallo J., Buliung R.N. and Dall’Erba S. (eds.), Springer Series on “Advances in Spatial Sciences”, Springer, New York, NY.

Christakos G., 2008. "Spatiotemporal Statistics and Geostatistics". *Positive Definite Functions: From Schoenberg to Space-Time Challenges*-Chapter 5: 117-153, Mateu, J. and Porcu E. (eds.), UJI Publ., Castello de la Plana, Spain.

Modis K., Yu H-L, Christakos G., Stewart R. and Papantonopoulos G., 2007. “BME-generated temperature maps of the Nea Kessani geothermal field”, Invited chapter, In *Geothermal Energy Research Frontiers: 3-7*, Ueckermann H.I. (ed.), Nova Science Publ., Inc., Hauppauge, NY.

Yu H-L, Christakos G. and Chen J-C, 2007. “Spatiotemporal air pollution modeling and prediction in epidemiologic research”. *Invited chapter*. In *Air Pollution Research Trends: 57-75*, Bodine C.G. (ed.), Nova Science Publishers, Inc., Hauppauge, NY.

III. Entries in Encyclopedias:

Christakos G., 2012. "Space-Time Stochastic Modelling of Human Exposure". In *Encyclopedia of Environmetrics-Second Edition*, El-Shaarawi A.H. and Piegorsch W. (eds.), J. Wiley & Sons Ltd, Chichester, UK, pp.2530-2535.

DOI: 10.1002/9780470057339.vas059.pub2.

Christakos G., 2008. "Bayesian Statistics in Spatial Analysis". In *Encyclopedia of Geography: 187-189*. Warf B. (ed.), Sage Publ. Inc., Thousand Oaks, CA.

Christakos G., 2006. "Modelling with Spatial and Temporal Uncertainty". In *Encyclopedia of Geographical Information Science (GIS): 1189-1194*, Springer, New York, NY.

Christakos G., 2004. "The Study of Uncertainty in Life Support Systems". In *Encyclopedia of Life Support Systems*. UNESCO, London, UK.
[On-line: <http://www.eolss.net/>].

Christakos G., 2001. "Stochastic Modelling of Human Exposure". In *Encyclopedia of Enviromentrics 3*: 1290-1296, El-Shaarawi A.H. and Piegorsch W.W. (eds.), J. Wiley & Sons, Chichester, UK.

IV. Papers in Refereed Scientific Journals:

Environmental Science & Technology (IF=7.15):

Yang Y., Christakos G., 2015. "Spatiotemporal characterization of ambient PM_{2.5} concentrations in Shandong Province (China)." **49**(22): 13431-8. DOI: 10.1021/acs.est.5b03614.

Kolovos A., Skupin A., Jerrett M., Christakos G., 2010. "Multi-perspective analysis and spatiotemporal mapping of air pollution monitoring data." **44**(17): 6738-6744.
Doi: 10.1021/es1013328.

Christakos G., 2003. "Critical conceptualism in environmental modelling and prediction." **37**: 4685-4693.

Environmental Health Perspectives (IF=8.05):

Yu H-L, Chen J-C, Christakos G., Jerrett M., 2009. "BME estimation of residential exposure to ambient PM₁₀ and ozone at multiple time-scales". **117**: 537-544.

Journal of Environmental Management (IF=4.18):

Jiang Q., Feng C., Din J, Bartley E., Lin Y., Fei J., Wu S., Zhou J., Ye G., Christakos G., 2020. "The decade long achievements of China's marine ecological civilization construction (2006-2016)". Accepted.

Regional Environmental Change (IF=3.48):

Hempattarasuwan N., Untong A., Christakos G., Jiaping Wu J., 2020. "Wetland Changes and their Impact on the Economy, Socio-cultural Tradition, and Ecology of Livelihoods: A Case Study of Chiang Saen Valley in Chiang Rai Province, Thailand" Submitted.

PLoS-Neglected Tropical Diseases (IF=4.49):

He J., Christakos G., Wu J., Jankowski P., Langousis A., Wang Y., Yin W. and Zhang W., 2019. "Probabilistic logic analysis of the highly heterogeneous HFRS incidence distribution in Heilongjiang province (China) during 2005-2013". <https://doi.org/10.1371/journal.pntd.0007091>.

He J. and Christakos G., Wu J., Cazelles B., Qian Q., Mu D., Wang Y., Yin W., Zhang W., 2018. "Spatiotemporal variation of the association between climate dynamics and HFRS outbreaks in East China during 2005-2016 and its geographic determinants". **12**(6): e0006554. <https://doi.org/10.1371/journal.pntd.0006554>.

Wang J-F, Wang Y., Zhang J., Christakos G., Sun J-L, Liu X., Lu L., Fu X-Q, Shi Y-Q, Li X-M, 2013. "Spatiotemporal transmission and risk determinants of Typhoid and Paratyphoid fever in Hongta District, Yunnan Province, China." **7**(3): e2112. Doi: 10.1371/journal.pntd.0002112.

PLoS-One (IF=2.78):

Wu J., Xiao R., Jiang D., Fei X., Christakos G., 2016. "Soil landscape pattern changes in response to rural anthropogenic activity across Tiaoxi watershed, China". **11**(11): e0166224. Doi:10.1371/journal.pone.0166224.

Fei X., Lou Z., Christakos G., Liu Q., Ren Y., Wu J, 2016. "A Geographic analysis about the spatiotemporal pattern of breast cancer in Hangzhou from 2008 to 2012". **11**(1): e0147866. Doi:10.1371/journal.pone.0147866

Fei X., Wu J, Kong Z., Christakos G., 2015. "Urban-rural disparity of breast cancer and socioeconomic risk factors in China". **10**(2): e0117572. Doi:10.1371/journal.pone.0117572.

Angulo J.M., Yu H-L, Langousis A., Kolovos A., Wang J-F, Madrid D., Christakos G., 2013. "Spatiotemporal infectious disease modeling: a BME-SIR approach". **8**(9): e72168. Doi:10.1371/journal.pone.0072168

Wang J-F, Hu M-G, Xu C-D, Christakos G, Zhao Y., 2013. "Estimation of citywide air pollution in Beijing." **8**(1) e53400. Doi:10.1371/ journal.pone.0053400.

Wang J-F, Reis B.Y., Hu M-G, Christakos G., Yang W-Z, Sun Q, Li Z-J, Li X-Z, Lai S-J, Chen H., 2011. "Area Disease Estimation Based on Sentinel Hospital Records." **6**(8): e23428. Doi:10.1371/journal.pone.0023428.

Scientific Reports (IF=4.12):

Lou Z., Fei X., Christakos G., Ren Y., Liu Q., Wu J., 2017. "Improved Breast Cancer Prediction using the Spatiotemporal Projection Technique". **7**: 3188 Doi:10.1038/s41598-017-03524-z .

Yang Y., Christakos G., Huang W., Lin C., Fu P., Yang Mei Y., 2016. "Uncertainty assessment of PM2.5 contamination mapping using spatiotemporal sequential indicator simulations and multi-temporal monitoring data." **6**: 24335. Doi: 10.1038/srep24335.

Fei X., Christakos G., Lou Z., Ren Y., Liu Q., Wu J., 2016. "Spatiotemporal co-existence of female Thyroid and Breast Cancers in Hangzhou, China." **6**: 28524. Doi: 10.1038/srep28524 .

Journal of Environmental Informatics (IF=5.56):

Xiao L., Christakos G., He J., Lang Y., 2017. "Space-time ground-level PM2.5 distribution at the Yangtze river delta: A comparison of Kriging, LUR, and combined BME-LUR techniques". **36**(1): 33-42.

Christakos G., Yang Y., Huang W., Lin C., Zhang C., Mei Y., Liao X., Liu Y., 2020. "BME prediction of soil heavy metal by assimilating ICP and X-RAY data." Accepted-In press.

- Liu X., Wang J-F, Christakos G., 2019. "China population distributions at multiple geographical scales and their correlates". **34**(1): 15-27 Doi:10.3808/jei.201900414
- Christakos G., Angulo J.M., Yu H-L, Wu J., 2017. "Space-time metric determination in environmental modeling." **30**(1): 29-40. Doi: 10.3808/jei.201700365.
- Yang Y., Zhang CT, Zhang R., Christakos G., 2015. "Improving BME Prediction of continuous attributes by assimilating auxiliary variables". **26**(2): 91-105. Doi: 10.3808/jei.201500316.

CATENA (IF=3.85):

- Yang Y., Yang X., He M., Christakos G., 2020. "Beyond mere pollution source identification: Determination of land covers emitting soil heavy metals by combining PCA/APCS, GeoDetector and GIS analysis". Vol **185**, February 2020, 104297. doi.org/10.1016/j.catena.2019.104297

Environmental Pollution (IF=5.71):

- He J., Christakos G., 2018. "Space-time PM_{2.5} mapping in the severe haze region of Jing-Jin-Ji (China) using a synthetic approach." **240**: 319-329.
- Yang Y., Christakos G., Yang X., He J., 2018. "Spatiotemporal characterization and mapping of PM_{2.5} concentrations in southern Jiangsu Province, China." **234**: 794-803. Doi: 10.1016/j.envpol.2017.11.077.
- Yang Y., Christakos G., Guo M., Xiao L., Huang W., 2017. "Space-Time Quantitative Source Apportionment of Soil Heavy Metal Concentration Increments." **223**: 560-566. Doi: 10.1016/j.envpol.2017.01.058

Ecological Indicators (IF=4.49):

- Fei X., Xiao R., Christakos G., Langousis A., Ren Z., Tian Y., Lv X., 2019. "Comprehensive assessment and source apportionment of heavy metals in Shanghai agricultural soil with different fertility levels." DOI: [10.1016/j.ecolind.2019.105508](https://doi.org/10.1016/j.ecolind.2019.105508)
- Christakos G., Yang Y., Wu J., Zhang C., Mei Y., He J., 2018. "Improved space-time mapping of PM_{2.5} Distribution using a domain transformation method." **85**: 1273-1279. <https://doi.org/10.1016/j.ecolind.2017.08.007>
- Yang Y., Wu J., Christakos G., 2015. "Prediction of soil heavy metal distribution using spatiotemporal Kriging with trend model." **56**: 125-133.

J. of Exposure Analysis & Environmental Epidemiology (IF=2.93):

- Choi K-M, Serre M.L., Christakos G., 2003. "Efficient mapping of California mortality fields at different spatial scales." **13**(2): 120-133.
- Christakos G., Serre M.L., 2000. "A spatiotemporal study of exposure-health effect associations." **10**(2): 168-187.
- Christakos G., Kolovos A., 1999. "A study of the spatiotemporal health impacts of ozone exposure." **9**(4): 322-335.

Ecotoxicology and Environmental Safety (IF=4.53):

- Jiang Q., He J., Ye G., Christakos G., 2018. "Heavy metal contamination assessment of surface sediments of the East Zhejiang coastal area during 2012-2015". **163**:444-455. Doi: 10.1016/j.ecoenv.2018.07.107.

Science of the Total Environment-STOTEN (IF=5.59):

- He J, Chen G, Jiang Y, Runjie Jin, Shortridge A, Agusti S, He M, Wu J, Duarte CM, Christakos G, 2020. "Comparative infection modeling and control of COVID-19 transmission patterns in China, South Korea, Italy and Iran". *Science of the Total Environment* **747**(10): 141447 doi.org/10.1016/j.scitotenv.2020.141447.
- Fei X., Christakos G., Xiao R., Ren Z., Xiaonan Lv X., 2019. "Improved heavy metal mapping and pollution source apportionment in Shanghai City soils using auxiliary information". **661**: 168-177. <https://doi.org/10.1016/j.scitotenv.2019.01.149>
- Fei X., Lou Z., Christakos G., Yan J., Wu J., 2018. "Contribution of industrial density and socioeconomic status to the spatial distribution of Thyroid Cancer risk in Hangzhou, China." **613-614**: 679–686. <https://doi.org/10.1016/j.scitotenv.2017.08.270>
- Li X, Xie Y-F, Wang J-F, Christakos G, So J, Zhao H, Ding Y, Li J, 2013. "Influence of planting patterns to Fluoroquinolone Residues in Soil." **458-460**: 63–69. <http://dx.doi.org/10.1016/j.scitotenv.2013.04.002>
- Xie Y-F, Li X-W, Wang J-F, Christakos G., Hu M-G, An L-H, Li F-S, 2012. "Spatial estimation of antibiotic residues in surface soils of a typical intensive vegetable cultivation area in China." **430**: 126-131.

Environmental Monitoring & Assessment (IF=1.96):

- Yang Y., Christakos G., 2015. "Uncertainty assessment of heavy metal soil contamination mapping using spatiotemporal sequential indicator simulation with multi-temporal sampling points." 187: 571. <https://doi.org/10.1007/s10661-015-4785-y>
- Kolovos A., Angulo J.M., Modis K., Papantonopoulos G., Wang J.-F., Christakos G., 2012. "Model-driven development of covariances for spatiotemporal environmental health assessment." 185: 815. <https://doi.org/10.1007/s10661-012-2593-1>

Atmospheric Environment (IF=4.01):

- Xiao L., Lang Y., Christakos G., 2018. "High spatial and temporal resolution estimation of PM_{2.5} concentrations at mainland China using the combined BME-GWR technique". **173**: 295-305.
- Bogaert P., Christakos G., Jerrett M., Yu H-L, 2008. "Spatiotemporal modelling of ozone distribution in the state of California." **43**: 2471-2480.
- Christakos G., Serre M.L., 2000. "BME analysis of spatiotemporal particulate matter distributions in North Carolina". **34**(20): 3393-3406.
- Christakos G., Vyas V., 1998. "A composite spatiotemporal study of ozone distribution over Eastern United States". **32**(16): 2845-2857.

Vyas V., Christakos G., 1997. "Spatiotemporal analysis and mapping of sulfate deposition data over the conterminous USA". **31**(21): 3623-3633.

Christakos G., Hristopulos D.T., 1996. "Characterization of atmospheric pollution using stochastic indicators". **30**(22): 3811-3823.

Christakos G., Thesing G.A., 1993. "The intrinsic random field model and its application in the study of Sulfate Deposition data". **27A**(10): 1521-1540.

Air Quality, Atmosphere & Health (IF=2.30):

Jiang Q., Christakos G., 2017. "Space-Time mapping of ground-level PM_{2.5} and NO₂ concentrations in heavily polluted Northern China during Winter using the Bayesian maximum entropy technique with satellite data". **11**: 23-33. 10.1007/s11869-017-0514-8

Environmental Geochemistry and Health (IF=3.25):

Fei X., Lou Z., Christakos G., Ren Z., Liu Q., Lv X., 2018. "The association between soil heavy metal pollution and stomach cancer: a case study in Hangzhou City, China". **40**(6): 2481-2490. Doi: 10.1007/s10653-018-0113-0

Risk Analysis (IF=2.90):

Serre M.L., Kolovos A., Christakos G., Modis K., 2003. "An application of the holistochastic human exposure methodology to naturally occurring arsenic in Bangladesh drinking water". **23**(3): 515-528.

Environmetrics (IF=1.35):

Lang Y., Christakos G., 2018. "Ocean pollution assessment by integrating physical law and site-specific data". e2547. DOI: 10.1002/env.2547.

Marchant C., Leiva V., Christakos G., Fernanda Cavieres M., 2018. "Monitoring urban environmental pollution by bivariate control charts: new methodology and case study in Santiago, Chile". Doi: [10.1002/env.2551](https://doi.org/10.1002/env.2551).

Pang W., Christakos G. and Wang J-F, 2009. "Comparative spatiotemporal analysis of fine Particulate Matter pollution." **21**(3-4): 305-317. Doi: 10.1002/env.1007.

Mateu J., Porcu E. and Christakos G., 2007. "Fitting negative spatial covariances to geothermal field temperatures in Nea Kessani (Greece)." **18**(7): 759-773. DOI: 10.1002/env.871.

Atmospheric Pollution Research (IF=2.92):

Zhang Z-H, Hu M, Ren J, Zhang Z-Y, Christakos G, Wang J-F, 2017. "Probabilistic assessment of high concentrations of Particulate Matter (PM₁₀) in Beijing, China." **8**(6): 1143-1150. <http://dx.doi.org/10.1016/j.apr.2017.04.006>.

Atmosphere (IF=1.70):

Shi T., Yang X., Christakos G., Wang J-F, Liu L., 2015. "Spatiotemporal interpolation of rainfall by combining BME theory and satellite rainfall estimates." **6**: 1307-1326. Doi: 10.3390/atmos60191307.

Epidemiology (IF=4.72):

Yu, H-L, Wang C-H, Chen J-C, Christakos, G., 2008. "Accuracy assessment of long-term exposure estimation using modern geostatistics." **19**(6): S243.

J. Public Health (IF=2.3):

Wang J.F., Christakos G., Han W.G., and Meng B., 2008. "Data-driven exploration of 'spatial pattern-time process-driving forces' associations of SARS epidemic in Beijing, China." **122**: 1-11. Doi:10.1093/pubmed/fdn023.

Christakos G., Olea R.A. and Yu H-L, 2007. "Recent results on the spatiotemporal modelling and comparative analysis of Black Death and bubonic plague epidemics". **121**: 700-720.

Choi K-M, Christakos G. and Wilson M.L., 2006. "El Niño effects on influenza mortality risks in the State of California". **120**: 505-516.

J. of Sexually Transmitted Infections (IF=3.35):

Law D.G., Serre M.L., Christakos G., Leone P.A., Miller W.C., 2004. "Spatial analysis and mapping of sexually transmitted diseases to optimize intervention and prevention strategies." **80**: 294-299.

Frontiers-Applied Mathematics and Statistics:

He J., Christakos G., Zhang W., Wang Y., 2017. "Space-time study of hemorrhagic fever with renal syndrome and its association with climate in Heilongjiang Province, China". 07 August 2017. Doi: 10.3389/fams.2017.00016.

Social Science & Medicine D: Medical Geography (IF=2.73):

Christakos G., Vyas V., 1998. "A novel method for studying population health impacts of spatiotemporal ozone distribution." **47**(8): 1051-1066.

Christakos G., Lai J., 1997. "A study of the breast cancer dynamics in North Carolina." **45**(10): 1503-1517.

BMC Public Health (IF=2.42):

Wang J.F., Liu X., Christakos G., Liao Y-L, Gu X., Zheng X-Y, 2009. "Assessing local determinants of neural tube defects in the Heshun region, Shanxi province, China." **10**: 52 Doi: 10.1186/1471-2458-10-52.

Human Biology (IF=0.86):

Olea R.A., Christakos G., 2005. "Duration of urban mortality for the 14th century Black Death epidemic". **77**(3): 291-303.

Biometrical Journal (IF=1.15):

Yu H-L, Angulo J.M., Cheng M-H, Wu J., Christakos G., 2014. "An online spatiotemporal prediction model for dengue fever epidemic in Kaohsiung (Taiwan)." **56**:
DOI: 10.1002/bimj.201200270.

International J. of Health Geographics (IF=2.86):

Wang J-F, Guo Y-S, Christakos G, Yang W-Z, Liao Y-L, Li Z-J, Li X-Z, Lai S-J, Chen H-Y, 2011. "Hand, foot and mouth disease: Spatiotemporal transmission and climate." **10**(25). <http://www.ij-healthgeographics.com/content/10/1/25>

Yu H-L, Christakos G., 2006. "Spatiotemporal modelling and mapping of the bubonic plague epidemic in India." **5**(12) <http://www.ij-healthgeographics.com/> *Top 5 Most Accessed Papers*, 2006.

Reviews of Geophysics (IF=13.53):

Christakos G., 2005. "Recent methodological developments in geophysical assimilation modelling". **43**: 1-10.

J. of Geophysical Research-Solid Earth (IF=3.59):

Yu H-L, Christakos G., Modis K. and Papantonopoulos G., 2007. "A composite solution method for physical equations and its application in the Nea Kessani geothermal field (Greece)". *Solid Earth* **112**(B6): B06104. Doi: 10.1029/2006JB004900.

J. of Geophysical Research-Atmosphere (IF=3.63):

Christakos G., Serre M.L. and Kovitz J., 2001. "BME representation of particulate matter distributions in the state of California on the basis of uncertain measurements." **106**(D9): 9717-9731.

Bogaert P. and Christakos G., 1997. "Spatiotemporal analysis and processing of thermometric data over Belgium." **102**(D22): 25,831-25,846.

J. of Geophysical Research-Oceans (IF=3.24):

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Christakos G., Kolovos A., Serre M.L. and Vukovich F.M., 2003. "Generating high spatial resolution analyses of SBUV stratospheric ozone for calculating the tropospheric ozone residual (TOR)". In Proceedings of *International Geoscience & Remote Sensing Symposium (IGARSS2003)*, 21-25 July, 2003, Toulouse, France.

International Association for Mathematical Geology:

Bogaert P. and Christakos G., 1998. "Stochastic analysis of space/time processes using a multicomponent regressive model". *4th Annual Confer.* **1**: 85-90, Buccianti A., Nardi G. and Potenza R. (eds.), De Frede Editore, Naples, Italy.

Serre M.L., Bogaert P. and Christakos G., 1998. "Computational investigations of Bayesian maximum entropy spatiotemporal mapping". *4th Annual Conference* **1**: 117-122, Buccianti A., Nardi G. and Potenza R. (eds.), De Frede Editore, Naples, Italy.

Choi K-M., Christakos G. and Serre M.L., 1998. "Recent developments in vectorial and multi-point BME analysis". *4th Annual Conf.* **1**: 91-96, Buccianti A., Nardi G. and Potenza R. (eds.), De Frede Editore, Naples, Italy.

Christakos G., 1998. "While God is raining brains, are we holding umbrellas? The role of Modern Geostatistics in spatiotemporal analysis and mapping." *Keynote lecture.*

4th Annual Conf. 1: 33-53 Buccianti A., Nardi G. and Potenza R. (eds.), De Frede Editore, Naples, Italy.

Bogaert P., Serre M.L. and Christakos G., 1999. "Efficient computational BME analysis of non-Gaussian data in terms of transformation functions". *5th Annual Conf. 1*: 57-62, Trodheim, Norway.

Christakos G., Hristopoulos D.T. and Serre M.L., 1999. "BME studies of stochastic differential equations representing physical laws-Part I". *5th Annual Conf. 1*: 63-68, Trodheim, Norway.

Serre M.L. and Christakos G., 1999. "BME studies of stochastic differential equations representing physical laws-Part II". *5th Annual Conf. 1*: 93-98, Trodheim, Norway.

Computational Methods in Water Resources (CMWR):

Christakos G., 2004. "The cognitive basis of physical modelling". In Proc. CMWR04, June 13-17, 2004, Chapel Hill, NC.

Application of Statistics & Probability in Soil & Structural Engineering:

Christakos G., 1987. "Stochastic approach and expert systems in the quantitative analysis of soils". *5th International Confer. 2*: 741-748, Vancouver, Canada.

Modelling & Simulation:

Christakos G., 1984. "The space transformations and their applications in systems modelling and simulation". *12th International Conference, AMSE 1(3)*: 49-68, Athens, Greece.

VII. National & International Conferences¹:

International Groundwater Forum:

Christakos G., 2007. "An evolutionary model for the integrated study of environmental systems." Invited talk, *Nanjing University of Science & Technology*, June 22-23, Nanjing, China.

European Geophysical Union Meeting:

Yu H-L, Christakos G., Tartakovsky D., Modis K. and Papantonopoulos G., 2007. "Composite Stochastic Solution of a 3-D Geothermal Model in Nea Kessani (Greece)", EGU-A-01040, April 02-07, 2007, Vienna, Austria.

American Physical Society Meeting:

Hristopoulos D.T. and Christakos G., 1998. "Variational calculation of effective parameters in random porous media," Los Angeles, CA, March 1998. Abstract in *BAPS 43(1)*: 339.

American Association of Geographers:

¹ Abstracts, Oral Presentations, Posters: Partial List

Yu H-L and Christakos G., 2007. "Integrated spatiotemporal modelling and mapping of natural systems." *American Assoc. of Geographers (AAG) Annual Meeting*, San Francisco, California, April 17-21, 2007.

Rieckermann J. and Christakos G., 2007. "Can In-Sewer Measurements Improve Our Understanding of Local Drug Use Patterns?" *American Assoc. of Geographers (AAG) Annual Meeting*, San Francisco, California, April 17-21, 2007.

Computational Methods in Water Resources:

Lee S.J., Serre M.L. and Christakos G., 2004. "Improving spatial mapping of subsurface Arsenic using pH data: Synthetic examples and case study in New England groundwater". Invited talk, International Conference, June 13-17, 2004, Chapel Hill, NC, USA.

Christakos G., Serre M.L., Kolovos A. and Hristopulos D.T., 2004. "New classes of non-separable spatiotemporal covariance models". International Confer., June 13-17, 2004, Chapel Hill, NC.

Arsenic in New England-A Multidisciplinary Conference:

Serre M.L., Kolovos A. and Christakos G., 2002. "A model-based framework for the spatiotemporal assessment of the health impact of naturally occurring Arsenic in the environment." May 29-31, Cambridge, MA.

Society of Industrial & Applied Mathematics (SIAM):

Serre M.L., Christakos G. and Hristopulos D.T., 1997. "Using the space transform method in geosciences". *4th Confer. in Computational & Mathematical Issues in Geosciences*, Albuquerque, NM.

Superfund Basic Research Program Annual Meeting:

Kolovos A., Christakos G. and Serre M.L., 2000. "Investigations on the numerical implementation of physical laws incorporation in the BME framework", Chapel Hill, NC, December 12-14.

Choi K-M., Christakos G. and Serre M.L., 2000. "Space/time analysis the mortality rate in California as a health indicator at small spatial scale using the BME method", Chapel Hill, NC, December 12-14.

Augustinraj R., Nienhueser I., Serre M.L. and Christakos G., 2000. "Spatiotemporal exploratory data analysis of collected contaminant measurements for some NPL and non-NPL sites", Chapel Hill, NC, December 12-14.

Kolovos A., Serre M.L. and Christakos G., 2001. "Spatial mapping of arsenic in groundwater and associated population health effects." Nov 5, 2001, Chapel Hill, NC.

Augustiraj R., Serre M.L. and Christakos G., 2001. "Modelling the spatiotemporal distribution of subsurface heavy metal contamination at the Cherrypoint, North Carolina Superfund site". Nov. 5, 2001, Chapel Hill, NC.

Kolovos A., Christakos G., and Serre M.L., 2001. "BME mapping of pollutants governed by advection-reaction." Nov. 5, 2001, Chapel Hill, NC.

ICAM 91:

Christakos G., 1991. "The study of nonstationary time series by means of generalized random functions". Washington DC.

Christakos G., 1991. "Developing spatiotemporal random field models for space-time natural processes". Washington DC.

American Geophysical Union-EOS Transactions:

Christakos G. and Sophocleous M., 1987. "Real-time estimation of nonlinear hydrologic systems". 1267, San Francisco, CA.

Killam R.B. and Christakos G., 1992. "Stochastic sampling design for hydrologic contaminant level". May 12-16, Montreal, Canada, 1992.

Iliev P. and Christakos G., 1992. "Towards the stochastic analysis of hydrologic and water quality assessments: The Danube river basin case study." May 12-16, Montreal, Canada.

Christakos G., Miller C.T. and Oliver D.L., 1993. "Analysis of Methods for Closure of the Stochastic Groundwater Flow Equation". 171, San Francisco, CA.

Christakos G., Hristopoulos D.T., Oliver L.D. and Miller C.T., 1993. "Stochastic analysis of flow in saturated porous media systems". 251, San Francisco, CA.

Vyas V.M., Christakos G., and Miller C.T., 1993. "An application of the BME approach for the estimation of spatial hydrologic processes". 157, Baltimore, MD.

Oliver D.L., Christakos G., and Miller C.T., 1993. "New results on the diagrammatic approach to stochastic steady-state saturated flow modeling." 157, Baltimore, MD.

Thesing G., Christakos G. and Miller C.T., 1993. "Analysis and local estimation of spatial data under the intrinsic hypothesis of random fields." Baltimore, MD.

Killam B., Christakos G., and Miller C.T., 1993. "Spatial sampling design for contaminant hydrologic level using classification criteria and stochastic annealing". 157, Baltimore, MD.

Raghu V. and Christakos G., 1994. "Space-time analysis of water quality data using random fields". 271, San Francisco, CA.

Oliver L.D., and Christakos G., 1994. "A comparison of analytic stochastic flow results with two-dimensional numerical results." 255, San Francisco, CA.

Christakos, G., Raghu V.R. and Bogaert P., 1995. "Stochastic analysis of spatiotemporal water quality data". San Francisco, CA.

Christakos G. and Hristopoulos D.T., 1995. "Stochastic Characterization of Contaminated Sites". Baltimore, MD.

Hristopoulos D.T. and Christakos G., 1995. "Modeling of Nonlocality and Nonhomogeneity in the Hydraulic Conductivity". Baltimore, MD.

Raghu V. and Christakos G., 1995. "Spatiotemporal analysis of sulfate deposition data over the conterminous United States". Baltimore, MD.

- Christakos G., Hristopulos D.T. and Li X., 1996. "Stochastic path analysis of multiphase flow systems: A differential geometry approach." San Francisco, CA.
- Hristopulos D.T. and Christakos G., 1996. "Nonlocal kernels and upscaling of effective parameters". San Francisco, CA.
- Hristopulos D.T. and Christakos G., 1996. "Nonlocal kernels and upscaling of effective parameters". American Geophysical Union Fall Meeting, San Francisco, CA. December 1996. 77(46): F277.
- Christakos G. and Hristopulos D.T., 1996. "Stochastic path analysis of multiphase flow systems: a differential geometry approach" San Francisco, CA. December 1996. Abstracts Vol. 77(46): F243.
- Vyas V.M. and Christakos G., 1997. "Estimation and health impact assessment of tropospheric ozone concentrations over the Eastern US". San Francisco, CA.
- Kolovos A., Christakos G. and Serre M.L., 2000. "Incorporation of physical laws and other forms of knowledge in spatiotemporal prediction of hydrologic processes". San Francisco, CA.
- Christakos G., 2003. "Deriving spatiotemporal fractal and wavelet models in terms of the generalized random field theory", Dec. 8-12, San Francisco, CA.
- Serre M.L., Christakos G., Kolovos A. and Vukovich F., 2003. "Imaging ozone distributions across space-time using satellite data and physical information", Dec. 8-12, San Francisco, CA.
- Kolovos A., Christakos G., Serre M.L. and Hristopulos D.T., 2003. "Visual representations of non-separable spatiotemporal covariance models", Dec. 8-12, San Francisco, CA.
- Christakos G., 2004. "Developments in spatiotemporal modelling". Western Pacific Geophysics Meeting, August 16-20, Honolulu, Hawaii.

Environmetrics:

- Christakos G., 1991. "Some developments in the study of environmental processes". *3rd Intern. Confer.*, Madison-Wisconsin.

*Statistical & Applied Mathematics Studies Institute/Geophysical Statistics Project
Spatiotemporal Statistics Workshop 2003:*

- Serre M.L. and Christakos G., 2003. "Scientific air pollution mapping across space and time: Dealing with data uncertainties and the integration of physical laws". Jun 1-5, Boulder, CO.

American Institute of Hydrology:

- Serre M.L. and Christakos G., 2000. "Stochastic mapping in subsurface hydrology using soft information and physical laws: A review of some BME case studies", 2000 Annual Meeting & International Confer, Nov. 5-8, Research Triangle Park, NC.

Medical Geography:

Christakos G., 1998. "Spatiotemporal distribution of breast cancer incidence". *8th International Symposium*, 27, July 13-17, Baltimore, Maryland.

National Sexually Transmitted Diseases Prevention Conference:

Law D.G., Miller W.C., Christakos G., Blue K., Smurzynski M., Fox K.K. and Leone P.A., 2000. "Deriving a surface of Chlamydial infection rates using geostatistics." Proceedings, Dec. 4-7, Milwaukee, Wisconsin.

Committee on Space Research-35th Scientific Assembly:

Christakos G., 2004. "Multidisciplinary knowledge synthesis for human health assessment on Earth and in Space". July 18-25, Paris, France.

Stanford Center for Reservoir Forecasting:

Oliver L.D. and Christakos G., 1994. "Stochastic flow solutions without numerical flow simulation". Proceed., Stanford, CA.

VIII. Research Center Publications²:

Center for Multiphase Research News:

Hristopulos D.T., Christakos G. and Miller C.T., 1994. "Stochastic modelling of heterogeneity in groundwater flow and transport systems". **1**(2): 1-4.

Oliver L.D. and Christakos G., 1994. "A diagrammatic technique for stochastic flow modelling". **1**(2): pp. 5-13.

Christakos G. and Raghu V.R., 1994. "Modelling and estimation of space/time water quality parameters". **11**(2): 14-22.

Hristopulos D.T. and Christakos G., 1997. "Stochastic models and the scale-up problem in heterogeneous porous media," **13**(1).

Hristopulos D.T. and Christakos G., 1998. "Renormalization and upscaling analysis: From a grain of sand to complex heterogeneities." **2**.

Advanced Projects Section, Kansas Geological Survey:

Christakos G., 1986. "Recursive parameter estimation of nonlinear state-nonlinear observation systems, Part 1: On-line data". **OF.86-29**: 85p., Lawrence, KS.

Christakos G., 1986. "Nonstochastic functional estimation of nonstationary spatial functions". **OF.86-28**: 31p., Lawrence, KS.

Institute of Geology & Mineral Exploration:

Christakos G. and Pantelias E., 1985. "Geostatistical analysis and estimation of data from the mine of Lavrion". 25p., Athens, Greece.

Christakos G., 1986. "Space transformations: An approach for studying spatial functions in geosciences". 20p., Athens, Greece.

² Partial List

Christakos G., 1986. "The stochastic approach in the quantitative analysis of soil data". 43p., Athens, Greece.

University of Birmingham Research Reports:

Christakos G., 1980. "Soil-structure interaction, Part 1: Theoretical results". 158p, Foundation Engineering, Birmingham, UK.

Christakos G., 1980. "Soil structure interaction, Part 2: A laboratory apparatus for studying the behavior of soils under dynamic loading". Laboratory of Materials, 91p, Birmingham, UK.

Superfund Basic Research Program News:

Christakos G., 1998. "Stochastic pollutokinetic modelling". *SBRP News* 2: 1-5.

National Technical University of Athens Research Reports:

Christakos G., Tsakmakidis Ch., Tsekouras D. and Daskalopoulos P., 1979. "Slope stability". Technical Report (In Greek with English abstract), 269p. Department. of Civil Engineering, Athens, Greece.

Center for the Advanced Study of the Environment News:

Kolovos A., Christakos G. and Serre M.L., 2003. "Visualization of non-separable spatiotemporal covariance models". 2(1): 20-24.

Harvard University-Div. of Applied Sciences:

Christakos G., 1989. "Certain Aspects of Interest in the Decision Analysis Context": *Environmental Systems Program*, MA, USA, 15p, 1989.

Rogers P., Quinn J.T. and Christakos G., 1989. "Notes on Time Series and Kriging of Rainfall Records in the Ganges-Brahmaputra Basin". 21p. *Environmental Systems Program*, MA.

Christakos G., 1989. "Posterior-Preposterior Terminal Analysis": **ES 201**: 7p., Cambridge, MA.

Christakos G., 1989. "On the Choice of an Utility Function": *Environmental Systems Program*, 9p, Cambridge, MA.

Dept. of Environmental Sciences & Engineering, UNC-Chapel Hill:

Iliev P. and Christakos G., 1992. "Water quality modelling and management of the Danube river: An integrated approach". Research Notes No. **SM/2.93**: 26 p.

Christakos G., 1992. "Dynamic stochastic estimation of soil profiles using Kalman techniques". Research Notes No. **SM/2.92**: 41p.

Oliver D.L. and Christakos G., 1992. "Certain equivalence between the single and the double diagram flow representations". Research Notes No. **SM/9.92**: 21p.

Christakos G., 1992. "A Treatise on the Stochastic Interactive Perturbation Analysis of Groundwater Flow". Research Notes No. **SM/3.92**: 63p.

- Christakos G. and Oliver D.L., 1992. "Space Transformations: New Results". Research Notes No. **SM/8.92**: 13p.
- Oliver D.L. and Christakos G., 1992. "The fast Fourier option added to the turning bands simulation program". Research Notes No. **SM/10.92**: 20p.
- Christakos G., 1990. "Spatiotemporal random field models for climate and global change analysis". Research Notes No. **SM/9.90**: 36p.
- Christakos G., 1990. "On a frequency domain approach to spatiotemporal stochastic hydrodynamics." Research Notes No. **SM/10.90**: 41p.

Environmental Science & Engineering Notes:

- Lee S.J., Serre M.L. and Christakos G., 2004. "Bayesian Maximum Entropy Mapping of Arsenic using pH-Arsenic empirical laws". Department of Environmental Sciences and Engineering, University of North Carolina, Chapel Hill.

Dept. of Applied Sciences, Harvard University, Cambridge, MA:

- Rogers P., Quinn J.T. and Christakos G., 1989. "Notes on Time Series and Kriging of Rainfall Records in the Ganges-Brahmaputra Basin". February.

IX. Book Reviews:

- Christakos G., 1988. "Geostatistical Case Studies", by G. Matheron and M. Armstrong (eds.): *Jour. of American Statistical Association* **83**(401): 279-280.
- Christakos G., 1999. "GeoEnvi-Geostatistics for Environmental Applications", by A. Soares A., Gomez-Hernandez J. and Froidevaux R. (eds.): *J. of Environmental Geosciences* **6**(1): 1-4.
- Christakos G., 2005. "Analysis and Modeling of Spatial Environmental Data" by Kanevski M. and Maignan M.: *J. of Computers & Geosciences* **31**(10): 1302-1304.

X. Forum-Debates:

Debate on Plagues of the Future:

- Christakos G., 2004. "The influence of Philistinism upon public health". *Spiked-Risk Debates on Risk and Biomedicine*: CA83F.
[<http://www.spiked-online.com/sections/risk/debates/futureplagues/responses.htm>.]

Forum on the State of Stochastic Hydrology:

- Christakos G., 2004. "A sociological approach to the state of stochastic hydrogeology": *Stochastic Envir. Research & Risk Assess.* **18**(4): 274-277.

UNIVERSITY TEACHING EXPERIENCE

2006-Present:

Department of Geography, San Diego State University, San Diego, California, U.S.A:

- "Spatiotemporal Data Analysis" (GEOG 385).
- "Applied Geostatistics" (GEOG 596).
- "Quantitative Methods in Geographical Research" (GEOG 585).
- "Advanced Quantitative Methods in Geography" (GEOG 685).
- Graduate Seminar on "Health Geography" (GEOG 740).
- "Probabilistic Reasoning in Geographical Science" (GEOG 750).
- "Issues of Spatiotemporal Modelling and Mapping" (GEOG 780).

2015:

Ocean College, Zhejiang University, Hangzhou, Zhejiang, China:

- "Spatial Data Analysis" (Summer Course).

1990-1993 and 1994-2005:

Department of Environmental Science & Engineering, School of Public Health
University of North Carolina, Chapel Hill, NC, U.S.A.

- "Advanced Geostatistics of spatiotemporal environmental phenomena" (ENVR 161).
- "Random field modelling of physical processes" (ENVR 162).
- "Advanced functions of Temporal GIS" (ENVR 167).
- "Model-based exposure mapping and risk assessment" (ENVR 275).
- "Stochastic environmental health modelling" (ENVR 277).
- "Knowledge processing in uncertain environments with applications in physical and biological sciences" (ENVR 278).
- "Stochastic hydrology" (ENVR 279).

1993-1994:

Department of Geological & Environmental Sciences, Stanford University, Stanford, CA,
U.S.A.

- "Stochastic analysis of earth science processes" (GES 243).

1993-1994:

Petroleum Engineering Department, Stanford University, Stanford, CA, U.S.A.

- "Geostatistics for spatial phenomena" (PE 240).

1988-1990:

Division of Applied Sciences, Harvard University, Cambridge, MA, USA.

- "Decision theory" (ES 201).
- "Introduction to Decision and Control" (ES 102).

INTERNATIONAL SHORT-COURSES

- "Decision-making and risk assessment in ecological studies."
 School of the Environment & Natural Resources, Zhejiang University, Hangzhou, China.
 November 4-11, 2012.
- "Progress in Spatiotemporal Statistics."
 Departamento de Matematica y Estadistica, Universidad de La Frontera, Temuco, Chile.
 October 9-16, 2009.
- "Towards a Theory of Evolutionary Statistics."
 Department of Mathematics, Universitat Jaume I, Castellon, Spain.
 November 13-18, 2007.
- "BME methods in Interdisciplinary SpatioTemporal Modelling and Prediction."
 StatGIS Summer School 2006.
 Sponsored by the University of Klagenfurt, Austria.
 September 11-15, 2006.
- "Efficient Risk Assessment of Environmental Systems."
 UNIL Institute of Geomatics & Risk Analysis
 Sponsored by the University of Lausanne, Switzerland.
 October 10-14, 2005.
- "The Implementation of Data Assimilation Techniques in Temporal GIS."
 Sponsored by the Facultad de Ciencias, Universidad de Granada, Granada, Spain.
 April 11-22, 2002.
- "Physical Model-Based Statistics".
 Department of Statistics, Universidad de Granada, Granada, Spain.
 November 10-19, 2001.
- "Advanced Methods of Knowledge Synthesis with Applications in Human Exposure."
 Department of Engineering & Applied Mathematics,
 Universidad Politecnica de Catalunya, Barcelona, Spain.
 November 20, 2001-January 6, 2002.
- "Modern Geostatistics and its Applications in Earth Sciences."
 Sponsored by the National Research Council (CNR) of Italy, Naples, Italy.
 October 3-4, 1998
- "Stochastic Space-Time analysis in Environmental Health Science"
 Sponsored by Universitat Politecnica de Catalunya, Barcelona, Spain.
 September 20-24, 1997

INVITED SEMINARS, KEYNOTE SPEAKER³

"Modeling Pandora's Box: Nothing is Quite What it Seems" *Nanshan Distinguished*

³ Partial List

- Lecture on Environment*, Southern University of Science and Technology (SUSTech), Shenzhen, June 5, 2018.
- “Space-Time Projection (STP) Technique of Geographical Mapping” Chinese Academy of Science, Beijing, China, May 19, 2017.
- “Theoretical investigation of projected random fields in near-shore environments.” *Invited Seminar*, Forum of “Marine Cooperation between China & South Europe Countries.” Xiamen, China, Nov 6-9, 2015.
- “Introduction to Basic BME.” *Invited Seminar*, Chinese Academy of Science, Beijing, China, Oct 22, 2015.
- “Uncertainty: Never express yourself more clearly than you think.” *Keynote Speech*, 1st Intern. Confer. on “Quantification of Uncertainty in Engineering, Science & Technology (QUEST-2015)”. Beihuan University, Beijing, China, Oct 19-21, 2015.
- “A Stochastic Approach to Geosynthesis.” *Keynote Speech*, 3rd Annual Intern. Confer. on Geo-Informatics in Resource Management & Sustainable Ecosystem (GRMSE-2015). Wuhan University, Wuhan, Hubei, China, Oct 16-18, 2015.
- “Disease Spread in the Light of Integrative Stochastic Logic.” *Invited Seminar*, *Intern. Confer on Past Plague Pandemics in Light of Modern Molecular Life Science Insights*, Norwegian Academy of Science & Letters, Oslo, Norway, Nov 20, 2014.
- “Health Statistics: Developments and Challenges.” *Invited Seminar*, Dept of Preventive Medicine, *Univ. of Southern California Keck School of Medicine*, Mar 7, 2014.
- “On the Methodological Challenges for Physically-Inspired Information and Data Uncertainty in Modern Spatiotemporal Analysis.” *Annual Joint Statistical Meetings (JSM)*, Montreal, Canada, Aug 3-8, 2013.
- “The Value of Oinoposia in Modern Space-Time Statistics.” *Invited Seminar*, Dept of Statistics & Operations Research, *Univ. of Granada*, Spain, Feb 14, 2013.
- “Developments in Spatiotemporal Statistics.” *Invited Seminar*, Dept of Statistics and Operations Research, *Univ. of Granada*, Spain, Sept 7, 2012.
- “Spatiotemporal Reasoning in environmental exposure and health studies.” *Invited Speech*, *Chinese Academy of Sciences*, Beijing, China, July 5, 2011.
- “Spatiotemporal Knowledge Synthesis.” *Keynote Speech*, *1st IEEE International Conference on Spatial Data Mining & Geographical Knowledge Services (ICS DM 2011)* in conjunction with the *8th Beijing International Workshop on Geographical Information Systems (BJ-IWGIS 2011)*, Fuzhou city, China, June 29-July 1, 2011.
- “Space-Time Geostatistics: Crossing Parmenides’ ‘Gates’ and Morrison’s ‘Doors’ ”. *Invited Keynote Speech*, *Geostatistics for Environmental Applications (GeoENV)*, Gent, Belgium, Sept 13-15, 2010.
- “Large Scope Integrative Problem-Solving.” *Keynote Speaker*, *International Conference on Ecological Informatics (ISEIS 2010)*, Beijing Normal Univ, Beijing, China, Aug. 26-29, 2010.
- “Stochastic reasoning: Thinking under uncertainty”. *Keynote Speaker*, *International Workskop on Applied Probability (IWAP 2010)*, Univ. Carlos III, Madrid, Spain, July 5-8, 2010.

- “Interdisciplinary Health Problem-Solving”. Invited Seminar, *National Health Research Institute*, Taiwan, Dec 1, 2009.
- “Advances in Human Exposure Assessment and Epidemic Mapping”. Invited seminar, *Institute of Occupational Medicine and Industrial Hygiene, National Taiwan University*, Taipei, Taiwan, Nov 30, 2009.
- “Modern Spatiotemporal Statistics in Environmental Modelling”. Invited seminar, *Dept of Bioenvironmental Systems Engineering, National Taiwan University*, Taipei, Taiwan, Nov 11, 2009.
- “The Evolution of Modern Spatiotemporal Statistics”. Invited Keynote talk, Annual National Statistics Meeting, Temuco, Chile, Oct 5-8, 2009.
- “Spatiotemporal Conditional Probabilities: A Neuropsychological Perspective”. Invited Seminar, Dept of Statistics and Operations Research, Univ. of Granada, Spain, May 6-14, 2009.
- “Interdisciplinary SpatioTemporal modelling: It’s not where you take things from, it’s where you take them to”. Keynote Address, Workshop on *Spatial-Temporal Modeling, Harvard Center for Geographic Analysis, Harvard University*, Cambridge, MA, April 10, 2009.
- "Spatiotemporal Statistics in real world problem-solving: should we migrate to Mongolia to raise chickens?" Invited Seminar, International Workshop on *Spatio-Temporal Modelling (METMA4)*, Alghero, Sardinia, Italy, Sept 24-26, 2008.
- "An integrative framework of geographical problem-solving: The Journey to Ithaca". Invited Seminar, Dept. of Geography, *Univ of California-Santa Barbara*, Santa Barbara, USA, Nov 29, 2007.
- “Physical problem solving on the Road to Damascus”. Invited Seminar, *Departamento de Matematicas, Centro de Investigacion y de Estudios Avanzados del I.P.N.*, Mexico City, Mexico, Nov 1, 2007.
- “Revisiting the fundamentals of environmental problem solving: Concepts and applications”. Invited Seminar, Dept. of Environmental Sciences and Management, *Tsinghua University*, Beijing, China, June 23, 2007.
- “Spatiotemporal reasoning in environmental health sciences”. Invited Seminar, *Chinese Academy of Sciences*, Beijing, China, June 23, 2007.
- “Evolutionary perspectives concerning the action-based mathematical study of natural systems”. Invited Seminar, College of Life Sciences, *Zhongshan University*, Gongzhou, China, June 20, 2007.
- “Epistematics: Theory and Practice”. Invited Seminar, College of Environmental Sciences & Natural Resources, *Zhejiang University*, Hangzhou, China, June 13, 2007.
- “The composite method for solving physical models under conditions of uncertainty and space-time heterogeneity”. Invited Seminar, Dept. of Geosciences, *Florida State University*, Tallahassee, Florida, April 27, 2007.
- “Dealing with spatiotemporal heterogeneity: The GBME model”. Invited Talk, *European Geophysical Union, Nonlinear Processes in Geosciences (NP3.05)*, Vienna, Austria, April 16, 2007.
- “Epistematics and its applications in physical modelling and predictive mapping under conditions of uncertainty”. Keynote Speaker, *European Geophysical Union*,

Stochastic-dynamic modelling of precipitation (HS.39), Vienna, Austria, April 20, 2007.

- “Spatiotemporal Comparative Analysis of Plague - An Interdisciplinary perspective”. Invited Commentary, Workshop on “The Identity of Plague”. The Wellcome Trust Centre for the History of Medicine at *UCL (Univ. College London)*, London, UK, April 5, 2006.
- “Developments on Interdisciplinary Spatiotemporal Modelling”. Invited Seminar, Dept. of Geosciences, Workshop on “Data Analysis and Modelling in Environmental Sciences: Toward Risk Assessment and Impact on Society”. *University of Lausanne*, Switzerland, October 10-13, 2005.
- “An Interdisciplinary Perspective of Temporal GIS: Spatiotemporal mapping as a knowledge synthesis process”. Invited Talk, dept. of Geography, *San Diego State University*, San Diego, CA, March 18, 2005.
- “The cognitive basis of physical modelling”. Invited Speaker, 2004 *Intern Confer on Computational Methods in Water Resources (CMWR04)*, Chapel Hill, NC, USA, June 13-17, 2004.
- “Integrated physical and life sciences modelling and space-time prediction”. Keynote speaker, 2nd *Spanish Workshop on Spatio-Temporal Modelling of Environmental Processes (METMA'04)*, Granada, Spain, June 1-3, 2004.
- “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.
- “Killing time: Adventures in a spatiotemporal parallel world”. Invited seminar, *National Center for Atmospheric Research (NCAR)*, Boulder, Colorado, USA, June 5, 2003.
- “Spatiotemporal mapping for multi-disciplinary knowledge synthesis”. Invited seminar, *Lamont-Doherty Earth Observatory, Columbia University*, Palisades, N.Y., USA, October 18, 2002.
- “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.
- “Conceptual frameworks of physical knowledge synthesis in uncertain environments”. Keynote speaker, *ModelCARE'2002*, Prague, Czech Republic, June 17-20, 2002.
- “Representation and prediction in terrestrial sciences”, Invited Seminar, *Topographic Engineering Center, Army Corps of Engineers*, Washington DC, USA, May 6, 2002.
- “Assimilation modelling in the light of physical knowledge synthesis”, Invited Seminar, Dept. of Civil & Environmental Engineering, *Duke Univ.*, USA, April 29, 2002.
- “Bayesian and Non-Bayesian conditionalization in assimilation modelling”. Invited lecture, Department of Statistics, *University of Granada*, Spain, April 18, 2002.
- “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.

- "Towards an information-theoretic approach to environmental risk assessment". Invited lecture, *Russian Academy of Sciences*, Nuclear Safety Institute, Moscow, Russia, September 11, 2001.
- "The role of uncertainty in developing a realistic environmental modelling approach". Invited lecture, *National Technical University of Athens*, Athens, Greece, August 27, 2001.
- "Physical knowledge synthesis in environmental engineering". Invited lecture, Department of Environmental Engineering, *Yale University*, New Haven, CT, USA, December 13, 2000.
- "Aristotle, his wives' teeth and the fate of stochastic modelling". Invited speaker, Department of Mathematics, *Duke University*, NC, USA, March 8, 2000.
- "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.
- "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.
- "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.
- "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.
- "The holistochastic character of environmental health statistics". Invited speaker, 1999 Lukacs Symposium, *Bowling Green State Univ.*, OH, USA, April 25, 1999.
- "The future of environmental health engineering - Opportunities and challenges". Invited lecture, School of Engineering, *Vanderbilt University*, Nashville, Tennessee, USA, May 4, 1999.
- "Spatiotemporal ozone variation and its impact on human populations." Invited speaker, *XXIV European Geophysical Soc*, General Assembly, The Hague, Netherlands, April 19, 1999.
- "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.
- "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.
- "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.

- "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.
- "Bayesian prediction and the incorporation of entropic measures." *American Statistical Association* □ Joint Statistical Meeting, Anaheim, CA, USA, August 1997.
- "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.
- "Multiphase flow in heterogeneous porous media: A stochastic differential geometry approach". Invited speaker, *Army Research Office Workshop*, Panama City, FL, USA, January 1997.
- "Stochastic analysis of spatiotemporal natural processes." Invited speaker, *American Society of Agronomy/Crop Science Soc of America/Soil Science Soc of America Confer*, Indianapolis, IN, USA, 1996.
- "Space-time characterization and risk analysis of hazardous waste sites using indicator parameters." Invited lecture, The University of South Carolina, SC, USA, November 1996.
- "Multiphase flow and contaminant transport modelling in heterogeneous porous formations." Invited, seminar, Dept. of Civil & Environmental Engineering, Duke University, Durham, NC, USA, May 1996.
- "The role of stochastic indicators in site characterization, risk assessment, and remediation analysis." Invited speaker, *Society of Risk Analysis*, Raleigh, NC, August 1996
- "The atmospheric data assimilation cycle: New tools of objective analysis." Invited seminar, Topographic Engineering Center, *Department of Defense*, Alexandria, VA, USA, 1995.
- "Diagrammatic perturbation analysis of stochastic groundwater flow." Invited speaker, *SIAM Confer on Applied Mathematics*, San Antonio, Texas, USA, Feb. 8-10, 1995.
- "Ab initio analysis of scale dependence in porous formations." Invited seminar, *American Geophysical Union Confer*, San Francisco, USA, 1994.
- "New directions in subsurface pollution modelling and prediction." Invited seminar, *Lawrence Berkeley Laboratory*, Berkeley, CA, USA, 1994.
- "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.
- "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.
- "Global warming-related uncertainties: the new challenge for stochastic analysis experts." Invited seminar, *Southern Regional Council*, Flatroch, NC, USA, June 13-17, 1992.

- "Certain emerging environmental exposure problems: To be or not to be stochastic?"
Invited speaker, *European Economic Community (EEC) Joint Research Center Ispra*,
Vareze, Italy, 1991.
- "Stochastic solutions to environmental problems." Invited seminar, Dept. of Civil,
Mechanical and Environmental Engineering, *George Washington University*,
Washington DC, USA, 1991.
- "Certain results on spatiotemporal random fields, and their applications in environmental
health research". Invited seminar, *NATO Advanced Studies Institute*, Castelvecchio
Pascoli (Lucca), Italy, 1991.
- "Site exploration: The synthesis of random field representations and multi-objective
optimization." Invited seminar, Dept. of Statistics, *Univ. of North Carolina*, Chapel
Hill, NC, USA, 1991.
- "Some applications of the Bayesian maximum-entropy concept in Geostatistics." Invited
lecture, Dept. of Physics & Astronomy, *Univ. of Wyoming-Laramie*, WYO, USA,
1990.
- "Recent results on random fields and certain engineering applications." Invited seminar,
Dept. of Mathematics & Computer Sciences, *University of Kansas*, Kansas, USA,
1987.
- "Random field simulation using the Radon transform." Invited speaker, Department of
Pure Mathematics & Mathematical Statistics, *University of Cambridge*, UK., Oct.,
1987.
- "Nonlinear estimation of factorable random processes." Invited seminar, Dept. of
Electrical Engineering, *Imperial College of Science & Technology*, London, UK,
Oct., 1987.

PROFESSIONAL SERVICE

I. Honorary Chairs, Symposia, Scientific, Committees, Sessions, Forums.

*First International Conference on Quantification of Uncertainty in Engineering, Sciences
and Technology*, QUEST2015:

Mini-Symposium organizer (Environmental Health and Space-Time Epidemiology),
School of Mathematics and System Sciences, Beihang University, Beijing, China
(Oct 19-21).

International Society for Environmental Information Sciences Conference, ISEIS 2010:
Honorary Co-Chair, Beijing, China (Aug 2010).

International Association for Mathematical Geology (IAMG) Annual Conference:

- IAMG'1998, Program Committee, Ischia Island, Naples, Italy (Sept 1998).
- IAMG'1999, Session Chairman, Trondheim, Norway (Aug 1999).
- IAMG'2013, Scientific Committee, Madrid, Spain (Sept 2013).

Annual Joint Statistical Meetings (JSM 2013):

Session Discussant: “Methodological Challenges for Physically-Inspired Information and Data Uncertainty in Modern Spatiotemporal Analysis.” Montreal, Canada (Aug 2013).

European Geophysical Union (EGU) Meeting:

- EGU’2008, Session Organizer (Climate, Water & Health), Vienna, Austria (Apr 2008).
- EGU’2012, Session Organizer (Climate, Water & Health), Vienna, Austria (Apr 2012).
- EGU’2013, Session Co-Convener (Climate, Water & Health), Vienna, Austria (Apr 2013).
- EGU’2014, Session Co-Convener (Climate, Water & Health), Vienna, Austria (Apr 2014).
- EGU’2015, Session Co-Convener (Climate, Water & Health), Vienna, Austria (Apr 2015).
- EGU’2016, Session Co-Convener (Climate, Water & Health), Vienna, Austria (Apr 2016).
- EGU’2017, Session Co-Convener (Climate, Water & Health), Vienna, Austria (Apr 2017).
- EGU’2018, Session Co-Convener (Climate, Water & Health), Vienna, Austria (Apr 2018).

Spatial Statistics 2011 Conference: Scientific Advisory Board, University of Twente, the Netherlands (Mar 2011).

Joint Doctoral Program in Global Health Concentration: Scientific Committee, SDSU, San Diego, CA, USA (2007-Present).

StatGIS09 Meeting: Scientific Committee, GeoInformatics for Environmental Surveillance, Milos, Greece (June 2009).

15th European Colloquium on Theoretical & Quantitative Geography, ecTQG’07: Scientific Committee, Montreaux, Switzerland (Sept 2007).

European Conference on Geostatistics for Environmental Applications (GeoEnv):

- GeoEnv2002, Scientific Committee, Technical University of Catalonia, Barcelona, Spain (Nov 2002).
- GeoEnv2004, Scientific Committee, University of Neuchatel, Switzerland (Oct 2004).

Advances in Mineral Resources Management & Environmental Geotechnology 1st International Conference, AMiRMEG’2004: Scientific Committee, Chania, Greece (June 2004).

Urban, Regional, Environmental Planning & Informatics to Planning in an Era of Transition International Conference, UREPI’1997: Program Committee, Athens, Greece (Sept 1997).

Geostatistics for the Next Century International Forum, GNCIF’1993: Forum Co-Organizer, Montreal, Canada (Aug 1993).

American Geophysical Union Meeting, AGU'1993: Session Chairman, San Francisco, CA, USA (Dec 1993).

II. Expert Consulting & Advising

Professional

Consortium for Risk Evaluation with Stakeholder Participation (CRESP), Piscataway, NJ, USA (2000).

Versar Inc., Assessment of Environmental Indicator Case Studies, Springfield, VA, USA (2009).

S. Florida Water Management District, West Palm Beach, FL, USA (Jun-Sept 2011).

GIE AXA Research Fund, ReInventon, Paris, France (Feb 2011-Present).

SpaceTimeWorks, LLC, Chief Consultant, San Diego, CA, USA (2012-Present).

Academic

University of South Carolina, Department of Geological Sciences, Columbia, SC, USA (Oct 2000).

Spanish Ministry of Education, Advisor to the Inter-University Doctoral Program, "Doctorado en Estadística e Investigación Operativa - Programa de Doctorado Interuniversitario," UGR-USE, Spain (2009-Present).

University of Botswana, Geology Department, Gaborone, Botswana (May-July 2011).

National Health Research Institutes, Institute of Population Health Sciences, Zhunan, Taiwan (Mar-May 2014).

Research

US Environmental Protection Agency (EPA)-Office of Research & Development, Environmental Benefits Mapping & Analysis Program (BenMAP), USA (2004).

US Environmental Protection Agency (EPA), Report on the Environment" (ROE), Office of Research & Development, USA (2009).

US Environmental Protection Agency (EPA), Research Proposal Review, Washington DC, USA (1997-1999).

Science Foundation of Ireland (SFI)-Research Frontiers Programme, Dublin, Ireland (2006).

Swiss National Science Foundation-Environmental Health Program, Berne, Switzerland (2004-2006).

US Department of Energy (DOE)-Research & Development (R&D), Washington DC, USA (2006).

US National Science Foundation (NSF), Washington DC, USA (1990-1992 & 1995).

US Department of Defense (DOD)-Army Research Office (ARO), Adelphi, MD (1992-2000).

US National Aeronautics and Space Administration (NASA), Langley Research Center, Hampton, VA, USA (1990-2003).

Research Triangle Institute (RTI)-National Institute of Environmental Health Sciences (NIEHS), P30 Research Center Review, USA (2005).

National Institute of Environmental Health Sciences (NIEHS), Experts Panel on Health Effects Mapping, Carry, NC, USA (2000-2004).

Delft Cluster & the NWO-Council for Earth & Life Sciences, The Hague, The Netherlands (Aug-Oct 2000).

III. Scientific Paper Reviewer

Environmental Health Perspectives
Peer Reviewer (2012-)

Remote Sensing of Environment
Peer Reviewer (2012-)

Journal of Climate
Peer Reviewer (2012-)

International Journal of Applied Earth Observation & Geoinformation
Peer Reviewer (2012-)

International Journal of Environmental Research & Public Health
Peer Reviewer (2012-)

Advances in Sociology
Peer Reviewer (2014-)

Estuarine, Coastal & Shelf Science
Peer Reviewer (2012-)

Jour. Advances in Water Resources
Peer Reviewer (1991-2006)

Jour. Social and Scientific Medicine
Peer Reviewer (1996-2000)

Water Resources Research
Peer Reviewer (1989-)

Mathematical Geology
Peer Reviewer (1989-2003)

Jour. Atmospheric Environment.
Peer Reviewer (1995-2004)

Jour. Water, Air and Soil Pollution
Peer Reviewer (1990)

Jour. Computers & Geosciences
Peer Reviewer (2005)

Institute of Electrical & Electronic Engineers
Trans. on Systems, Man & Cybernetics

Peer Reviewer (1992-1996)
 Institute of Electrical & Electronic Engineers
 Trans. on Information Theory
 Peer Reviewer (2007-)

Jour. Environmental Science & Technology
 Peer Reviewer (1992-1994; 2010-)

Jour. Environmental Quality
 Peer Reviewer (2005)

Jour. Stochastic Processes & Their Applications
 Peer Reviewer (1995)

Jour. Methodology & Computing in Applied Probability
 Peer Reviewer (2005)

Jour. Environmental & Ecological Statistics
 Peer Reviewer (1995-)

Jour. Hydrologic Engineering
 Peer Reviewer (1995-1997)

SIAM on Scientific Computing
 Peer Reviewer (1995-2005)

Jour. Exposure Analysis & Environmental Epidemiology
 Peer Reviewer (1997-2004)

Jour. American Statistical Association
 Peer Reviewer (1987-1988)

Jour. Environmental Geosciences
 Peer Reviewer (1998)

Jour. of Risk Analysis.
 Peer Reviewer (2001-2005)

The Annals of Occupational Hygiene
 Peer Reviewer (1999-2001)

Jour. Multivariate Analysis
 Peer Reviewer (2000-Present)

Scandinavian Journal of Statistics
 Peer Reviewer (2005-)

Annals of the Institute of Statistical Mathematics of Japan.
 Peer Reviewer (2003-)

Jour. Professional Geographer.
 Peer Reviewer (2006-)

International Journal of Health Geographics.
 Peer Reviewer (2006-2011)

Jour. Royal Statistical Society-UK.
 Peer Reviewer (2009-)

Jour. Biometrics.

Peer Reviewer (2006-)
 Annals of Geography.
 Peer Reviewer (2006-)
 Jour. Geographical Analysis.
 Peer Reviewer (2007-)
 Jour. of Computational Physics.
 Peer Reviewer (2008-)
 Jour. Naturwissenschaften.
 Peer Reviewer (2008-)
 International Jour. of Geographical Information Science.
 Peer Reviewer (2008-)
 Jour. Environmental Science & Technology.
 Peer Reviewer (2006-)
 Jour. of Geographical Information Science
 Peer Reviewer (2008-)
 International Jour. of Environmental Research & Public Health.
 Peer Reviewer (2011)
 Environmental Modelling & Software
 Peer Reviewer (2011-)
 Journal of Geographical Systems
 Peer Reviewer (2011-)
 PLoS ONE
 Peer Reviewer (2011-)
 Environmental Pollution
 Peer Reviewer (2016-)

HONORS AND AWARDS

1000-Elite Award (2014-2017)

Ministry of Education
 Beijing, China.

Visiting International Scholar Award (2007, 2011-2014).

Zhejiang University
 Hangzhou, China.

Award of the Taiwanese National Science Council (2009)

Division of “Visiting Distinguished Researchers”
 Taipei, Taiwan.

Award of the Chinese Ministry of Education (2007)

Program of “Internationally Renowned Scholars”
 Beijing, China.

Adjunct Professorship (2001-2005)

Department of Statistics & Operations Research
University of North Carolina
Chapel Hill, N.C., USA.

Kenan Award (2001-2002)
Competitive Academic Leave
University of North Carolina,
Chapel Hill, NC, USA.

Award of the Spanish Ministry of Education (2001)
Ministerion de Education, Cultura Y Deporte
Madrid, Spain.

20th Century E. Lukacs Distinguished Service Award (1999)
For outstanding contribution to the synergistic development of statistics, ecology,
environment, risk assessment and society.
Ninth Lukacs Symposium, Bowling Green, OH, USA.

Visiting Faculty Award (1993-1994).
Department of Petroleum Engineering
Stanford University
Stanford, CA, U.S.A.

President's Prize (1991):
International Association for Mathematical Geology
(now, International Association for Mathematical Geosciences).

Advanced Studies Institute Awards (1984, 1991):
North Atlantic Treaty Organization (NATO)
Brussels, Belgium.

Faculty Award (1990, 1995):
University of North Carolina
Chapel Hill, NC, USA.

Fellowship (1988-1990):
Division of Applied Sciences,
Harvard University
Cambridge, MA, USA.

Award for Distinguished Service (1987):
State of Kansas, USA.

Award (1978):
Ministry of Education
Athens, Greece.