

CURRICULUM VITAE

George Christakos, Ph.D, Sc.D., PE

Department of Geography
San Diego State University
Storm Hall 307C
5500 Campanile Drive
San Diego, CA 92182-4493
U.S.A.

Tel.: +619-621-4830 and 619-594-8285

Emails: GChrista@sdsu.edu

EDUCATION

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

ACADEMIC APPOINTMENTS

2006-Present: *Distinguished Professor, Steven and Mary Birch Endowed Chair*
Department of Geography, San Diego State University, San Diego, CA, U.S.A.

2011-Present: *Adjunct Scholar*

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

1990-2005:

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

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

2001-2005: *Adjunct Professor*

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

OTHER APPOINTMENTS

Honorary Professorships:

- *National Chair Professor*, Chinese Ministry of Education, Beijing, China (2014).

- *Yongqian Chair Professor*, College of Environmental Sciences and Natural Resources, Zhejiang University, Hangzhou, China (2011).

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 and 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*

2017-Present: Editorial Board, *Environmental Systems Research*

2014-Present: Review Editorial Board, *Frontiers in Interdisciplinary Climate Studies*

2014-Present: Editorial Board Member, *Journal of Social Sciences*

2011-Present: Associate Editor, *Journal of Environmental Informatics*

2009-Present: Advisory Editor, *Chilean Journal of Statistics (ChJS)*

2008-Present: Associate Editor, *Water Quality, Exposure and Health*

1992-Present: Editorial Board, *Journal of Environmental & Ecological Statistics*

1997-2007: Editorial Board, *Advances in Water Resources*

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).
- STARBME (Space-time Analytics & Rendering Bayesian Maximum Entropy software toolbox).

SCIENTIFIC PUBLICATIONS

I. Books:

Wu J., He J. and Christakos, 2018. *Quantitative Analysis and Modeling of Earth and Environmental Data*. Elsevier, Amsterdam, the Netherlands. Under contract.

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 Hristopoulos 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).

II. Book Chapters:

Christakos G., 2013. "Stochastic Modelling in Human Exposure," in *Encyclopedia of Environmetrics*, A.-H. El-Shaarawi and W. Piegorisch (eds), J. Wiley & Sons Ltd, Chichester, UK.

Yu H-L, Wang C-H, Christakos G., Wu Y-Z, 2011. "Spatiotemporal Analysis of PM2.5 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., 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., 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., 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. Glossary and Multilingual Dictionary:

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

IV. Entries in Encyclopedias:

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

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.

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.

V. Papers in Refereed Scientific Journals:

Environmental Science & Technology (IF=6.65):

Fei X., Christakos G., Xiao R., Ren Z., Xiaonan Lv X., 2018. "Improved prediction of heavy metals in Shanghai City soils using auxiliary data". Under review.

Yang Y., Christakos G., 2015. "Spatiotemporal Characterization of Ambient PM2.5 Concentrations in Shandong Province (China)." **49**(22): 13431-8.

Kolovos A., Skupin A., Jerrett M., Christakos G., 2010. "Multi-perspective analysis and

spatiotemporal mapping of air pollution monitoring data.” **44**(17): 6738-6744.

Christakos G., 2003. “Critical conceptualism in environmental modeling and prediction.” **37**: 4685-4693.

Environmental Health Perspectives (IF=9.78):

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.

Reviews of Geophysics (IF=12.34):

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

PLoS-Neglected Tropical Diseases (IF=4.45):

He J., Christakos G., Wu J., Jankowski P., Langousis A., Wang Y., Yin W., Zhang W., 2018. “Probabilistic logic analysis of the highly heterogeneous HFRS incidence distribution in Heilongjiang province (China) during 2005-2013”. Under review.

He J., 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.

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.

Institute of Electrical & Electronic Engineers (IEEE) Transactions-Journal of Selected Topics in Applied Earth Observations and Remote Sensing (IF=2.78):

He J., Christakos G., Jankowski P., 2017. “Comparative performance of the LUR, ANN and BME techniques in the multi-scale spatiotemporal mapping of PM_{2.5} concentrations in North China”. Accepted, in Press.

Institute of Electrical & Electronic Engineers (IEEE) Transactions-Systems, Man, & Cybernetics (IF=5.13):

Christakos G., 1991. “On certain classes of spatiotemporal random fields with application to space-time data processing”. **21**(4): 861-875.

Institute of Electrical & Electronic Engineers (IEEE) Transactions-Geosciences & Remote Sensing (IF=4.66):

Yu H-L, Christakos G., 2010. “Modeling and estimation of heterogeneous spatiotemporal attributes under conditions of uncertainty” **49**(1): 366-376.

Wang J-F, Christakos G., Hu M-G, 2009. “Modelling spatial means of surfaces with stratified non-homogeneity”. **47**(12): 4167-4174.

Christakos G., Kolovos A., Serre M.L., Vukovich F., 2004. “Total ozone mapping by integrating data bases from remote sensing instruments and empirical models.” **42**(5): 991-1008.

Christakos G., Bogaert P., 1996. “Spatiotemporal analysis of springwater ion processes derived from measurements at the Dyle Basin in Belgium”. **34**(3): 626-642.

Christakos G., Panagopoulos C., 1992. “Space transformation methods in the representation of geophysical random fields.” **30**(1): 55-70.

Journal of Environmental Informatics (IF=5.56):

- Christakos G., Yang Y., Huang W., Lin C., Zhang C., Mei Y., Liao X., Liu Y., 2018. "BME prediction of soil heavy metal by assimilating ICP and X-RAY data." Accepted-In press.
- Liu X., Wang J-F, Christakos G., 2018. "China population distributions at multiple geographical scales and their correlates". Accepted-In press.
- Christakos G., Angulo J.M., Yu H-L, Wu J., 2017. "Space-time metric determination in environmental modeling." **30**(1): 29-40.
- Xiao L., Christakos G., He J., Lang Y., 2017. "Space-time ground-level PM_{2.5} distribution at the Yangtze river delta: A comparison of Kriging, LUR, and combined BME-LUR techniques". Accepted subject to revisions.
- Wu W., Norvell W.A., Christakos G., Wu J., 2017. "Mapping zinc deficiency risk of crops on soils of northern North Dakota, USA." Accepted subject to revisions.
- Yang Y., Zhang CT, Zhang R., Christakos G., 2015. "Improving BME Prediction of continuous attributes by assimilating auxiliary variables". **26**(2): 91-105.

Water Research (IF=6.94):

- Xiao X., He J., Huang H., Miller T.R., Christakos G., Reichwaldt E.S., Ghadouani A., Lin S., Xu X., and Shi J., 2017. "A novel single-parameter approach for forecasting algal blooms." **108C**: 222-231.

Hazardous Material (IF=6.43):

- Yang Y., Yang X., He M., Christakos G., 2018. "Identification of land covers emitting soil heavy metals by combining PCA/APCS, GeoDetector and GIS analysis". Under review.

Environmental Pollution (IF=5.1):

- He J., Christakos G., 2018. "A synthetic approach of space-time PM_{2.5} distribution assessment and mapping of the Jing-Jin-Ji region (China)." **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.
- 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.

PLoS-One (IF=2.77):

- 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.

Epidemiology (IF=4.99):

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.

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.

J. Public Health (IF=2.3):

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

Christakos G., Olea R.A., 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., 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=3.4):

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.

J. of Exposure Analysis & Environmental Epidemiology (IF=3.08):

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.

Limnology and Oceanography (IF=3.60):

Jiang Q., He J., Wu J., Hu X., Ye G., Christakos G., 2018. "Assessing the severe eutrophication status and trend in the coastal waters of Zhejiang province (China)". Doi: 10.1002/lno.11013 .

Ecological Indicators (IF=3.98):

Yang Y., Wu J., Christakos G., 2015. "Prediction of soil heavy metal distribution using spatiotemporal Kriging with trend model." **56**: 125-133.

Christakos G., Yang Y., Wu J., Zhang C., Mei Y., He J., 2018. "Improved space-time mapping of PM2.5 Distribution using a domain transformation method." **85**: 1273-1279.

Social Science & Medicine D: Medical Geography (IF=3.01):

- 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.

Environmental Monitoring & Assessment (IF=1.80):

- 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. DOI 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." DOI: 10.1007/s10661-012-2593-1.

Air Quality, Atmosphere & Health (IF=3.18):

- 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.

Estuarine, Coastal and Shelf Science (IF=2.41):

- Wang L., Christakos G., Wu C., Wu J., 2018. "Assessment on spatial variability of La and Nd concentrations in the coastal sediments after land reclamation." Under review.
- Gu J., Luo M., Zhang X., Christakos G., Agusti S., Duarte C.M., Wu J., 2018. "Losses of salt marsh in China: trends, threats and management". Accepted, in Press.

Acta Oceanologica Sinica (IF=0.78):

- Zheng Y., Jin R., Zhang X., Christakos G., Duarte M.C., Wu J., 2018. "The considerable environmental benefits of seaweed aquaculture in China." Under review.

Biometrical Journal (IF=1.11):

- 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.

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.

Environmental Geochemistry and Health (IF=2.62):

- 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". Doi: 10.1007/s10653-018-0113-0

International J. of Health Geographics (IF=2.50):

- 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) [Online: <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). [On-line: <http://www.ij-healthgeographics.com/>].
Top 5 Most-Accessed Papers, 2006.

Ecotoxicology and Environmental Safety (IF=3.97):

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.

Frontiers-Applied Mathematics and Statistics (New journal, no IF):

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.

Sensors (IF=2.68):

Wang J-F, Li L-F, Christakos G., 2009. "Sampling and Kriging spatial means: Efficiency and Conditions". **9**: 5224-5240. DOI:10.3390/s90705224.

International Journal of Geographical Information Science (IF=2.50):

Angulo J.M., Yu H-L, Langousis A., Madrid D., Christakos G., 2012. "Modeling of space-time infectious disease spread under conditions of uncertainty". **26**(10): 1751-1772 [DOI:10.1080/13658816.2011.648642].

Wang J-F, Li X-H, Christakos G., Liao Y-L, Zhang T., Gu X., Zheng X-Y, 2010. "Geographical detectors-based health risk assessment and its application in the Neural Tube Defects study of the Heshun Region, China". **24**(1): 107-127. DOI: 10.1080/13658810802443457.

Water Resources Research (IF=4.40):

Kolovos A., Christakos G., Serre M.L., Miller C.T., 2002. "Computational BME solution of a stochastic advection-reaction equation in the light of site-specific information." **38**(12): 1318-1334.

Christakos G., Hristopulos D.T., Li X., 1998. "Multiphase flow in heterogeneous porous media: A stochastic differential geometry viewpoint." **34**(1): 93-102.

Christakos G., Hristopulos D.T., 1996. "Stochastic indicators for waste site characterization." **32**(8): 2563-2578.

Christakos G., Hristopulos D.T., Miller C.T., 1995. "Stochastic diagrammatic analysis of groundwater flow in heterogeneous soils". **31**(7): 1687-1703.

Christakos G., Killam B.R., 1993. "Sampling design for classifying contaminant level using annealing search algorithms". **29**(12): 4063-4076.

Christakos G., 1984. "On the problem of permissible covariance and variogram models". **20**(2): 251-265.

Geoderma (IF=3.74):

He J., Yang Y., Christakos G., Liu Y., Yang X., 2018. "Assessment of soil heavy metal pollution using stochastic site indicators". Under review.

Savelieva E, Demyanov V., Kanevski M., Serre M.L., Christakos G., 2005. "BME-based uncertainty assessment of the Chernobyl fallout". **128**: 312-324.
Best Paper in Pedometrics Award, 2005 [<http://www.pedometrics.org/>].

Christakos G., 1998. "Spatiotemporal information systems in soil and environmental sciences". **85**(2-3): 141-179.

Science of the Total Environment-STOTEN (IF=4.90):

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.

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.

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.

Atmospheric Environment (IF=3.71):

Xiao L., Lang Y., Christakos G., 2018. "High spatial and temporal resolution estimation of PM2.5 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., Hristopoulos 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.

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.

Atmospheric Pollution Research (IF=1.64):

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>.

Physical Review E (IF=2.28):

Hristopoulos D.T., Christakos G., 1997. "A variational calculation of the effective fluid permeability of heterogeneous media". **55**(6): 7288-7298.

Environmetrics (IF=1.32):

Lang Y., Christakos G., 2018. "Ocean pollution assessment by integrating physical law and site-specific data". Submitted.

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". Submitted.

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

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

J. of Geophysical Research-Solid Earth (IF=3.35):

Yu H-L, Christakos G., Modis K., 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=3.45):

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

J. of Geophysical Research-Oceans (IF=2.93):

He M., He J., Christakos G., 2018. "Space-time mapping of sea surface salinity in western Pacific Ocean using contourgram modeling." Submitted.

Bulletin of American Physical Society:

Hristopulos D.T., Christakos G., 1999. "Monte Carlo calculations of single-phase effective permeability in 2-D anisotropic porous media." **44**(6): 23.

Nonlinear Analysis (IF=1.29):

Hristopulos D.T., Christakos G., 1997. "An analysis of hydraulic conductivity upscaling." **30**(8): 4979-4984.

Engineering Geology (IF=3.10):

Christakos G., 1985. "Modern statistical analysis and optimal estimation of geotechnical data". **22**(2): 175-200.

Agronomy Journal (IF=1.61):

Wu, W., Norwell WA, Christakos G., Hopkins DG, Bohn MP, Wu J., 2018. "Spatial distribution of cadmium, zinc in agricultural soils of northern North Dakota". Accepted-In press.

Human Biology (IF=0.6):

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

Journal of Hydrology (IF=3.73):

Li D., Christakos G., Ding X., Wu J., 2018. "Adequacy of TRMM satellite rainfall data in driving the SWAT modelling of Tiaoxi catchment (Taihu lake basin, China)." **556**: 1139-1152.

Stochastic Hydrology & Hydraulics (IF=1.04):

Bogaert P., Christakos G., 1997. "Stochastic analysis of spatiotemporal solute content measurements using a regressive model". **11**(4): 267-295.

Hristopulos D.T., Christakos G., 1997. "Diagrammatic theory of nonlocal effective hydraulic conductivity". **11**(5): 369-395.

- Oliver L.D., Christakos G., 1995. "Diagrammatic solutions for hydraulic head moments in 1-D and 2-D bounded domains". **9**: 269-296.
- Christakos G., Hristopulos D.T., 1994. "Stochastic space transformation techniques in subsurface hydrology-Part 2: Generalized spectral decompositions and Plancherel representations". **8**(2): 117-155.
- Christakos G., Miller C.T., Oliver D., 1993. "The development of stochastic space transformation and diagrammatic perturbation techniques in subsurface hydrology". **7**(1): 14-32.
- Christakos G., Miller C.T., Oliver L.D., 1993. "Stochastic perturbation analysis of ground water flow. Spatially variable soils, semi-infinite domains and large fluctuations". **7**(3): 213-239.

Advances in Water Resources (IF=3.51):

- Kolovos A., Christakos G., Hristopulos D.T., Serre M.L., 2004. "Methods for generating non-separable spatiotemporal covariance models with potential environmental applications". **27**: 815-830.
- Christakos G., 2002. "On the assimilation of uncertain physical knowledge bases: Bayesian and non-Bayesian techniques". **25**(8-12): 1257-1274.
- Christakos G., Hristopulos D.T., Bogaert P., 2000. "On the physical geometry hypotheses at the basis of spatiotemporal analysis of hydrologic geostatistics." **23**: 799-810. *Top 10 of Year's Most Requested Pdf* (Oct 1999-Sept 2000).
- Miller C.T., Christakos G., Imhoff P.T., McBride J.F., Pedit J.A., Trangenstein J.A., 1998. "Multiphase flow and transport modelling in heterogeneous porous media: Challenges and approaches". **21**(2): 77-120. *Top 10 of Most Cited Papers, last 10 years*.
- Oliver L.D., Christakos G., 1996. "Boundary condition sensitivity analysis of the stochastic flow equation". **19**(2): 109-120.
- Christakos G., Olea R.A., 1992. "Sampling design for spatially distributed hydrogeologic and environmental processes". **15**(4): 219-237.
- Christakos G., 1986. "Space transformations in the study of multidimensional functions in the hydrologic sciences". **9**(1): 42-48.

Boletín Geológico y Minero de España (BGME):

- Christakos G, Angulo J.M., Yu H-L, 2011. "Constructing space-time pdf distributions in geosciences." **122**(4): 531-542.

Science China:

- Wang J-F, Li L-F, Christakos G., 2009. "Estimating spatial attribute means in a GIS environment." **53**(2): 181-188. Doi:10.1007/s11430-009-0193-x.

Quarterly of Applied Mathematics (IF=0.88):

- Christakos G., Hristopulos D.T., 1997. "Stochastic Radon operators in porous media hydrodynamics". **LV**(1): 89-112.

J. of Optimization Theory & Applications (IF=1.23):

- Christakos G., Paraskevopoulos P.N., 1987. "On the functional optimization of a certain class of nonstationary spatial functions". **52**(2): 191-208.
- Christakos G., 1989. "Optimal estimation of nonlinear state-nonlinear observation systems". **62**(1): 29-48.

Mathematics & Computers in Simulation (IF=1.48):

Christakos G., 1987. "The space transformations in the simulation of multidimensional random fields". **29**: 313-319.

Mathematical & Computer Modelling (IF=2.15):

Christakos G., 1988. "A simple approach to nonlinear estimation of physical systems". **11**: 583-588.

Christakos G., Olea R.A., 1988. "A multiple-objective optimal exploration strategy". **11**: 413-418.

Soc. of Industrial & Applied Mathematics (SIAM) Jour. on Applied Mathematics (IF=1.93):

Yu H-L, Christakos G., 2005. "Porous media upscaling in terms of mathematical epistemic cognition". **66**(2): 433-446.

Christakos G., Hristopulos D.T., Kolovos A., 2000. "Stochastic flowpath analysis of multiphase flow in random porous media". **60**(5): 1520-1542.

Soc. of Industrial & Applied Mathematics (SIAM) Jour. on Scientific Computing (IF=2.96):

Hristopulos D.T., Christakos G., Serre M.L., 1999. "Implementation of a space transformation approach for solving the three-dimensional flow equation". **20**(2): 619-647.

Theory of Probability & Mathematical Statistics-Teoriya Imovirnostey ta Matematychna Statystyka (IF=0.70):

Christakos G., 2002. "On a deductive logic-based spatiotemporal random field theory". **66**: 54-65.

Jour. of Applied Probability (IF=0.83):

Christakos G., Hristopulos D.T., 1997. "Stochastic indicator analysis of contaminated sites." **34**(4): 988-1008.

J. of Multivariate Analysis (IF=1.01):

Porcu E., Mateu J., Christakos G., 2009. "Quasi-arithmetic means of covariance functions with potential applications to space-time data". **100**: 1830-1844

J. Statistical Methods & Applications (IF=0.93):

Ruiz-Medina M.D., Angulo J.M., Christakos G., Fernández-Pascual R., 2015. "New compactly supported spatiotemporal covariance functions from SPDEs". DOI: 10.1007/s10260-015-0333-8.

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.

Stochastic Environmental Research & Risk Assessment (IF=2.67):

Christakos G., Zhang C., He J., 2017. "Modeling and prediction of space-time disease spread: The traveling epidemic." **31**(2): 305-314.

Yu H-L, Yang S-J, Yen H-J, Christakos G., 2011. "Spatiotemporal analysis of climate impact on dengue fever risk in Southern Taiwan." **25**(4): 485-494.

- Vilca F., Sanhueza A., Christakos G., 2009. "An extended Birnbaum–Saunders model and its application in the study of environmental quality in Santiago, Chile". **23**(3): 299-307. DOI 10.1007/s00477-009-0363-6.
- Yu H-L, Kolovos A., Christakos G., Chen J-C, Warmerdam S., Dev B., 2007. "Interactive spatiotemporal modelling of health systems: The SEKS-GUI framework." **21**(5): 555-572.
- Baker R., Christakos G., 2007. "Revisiting prior distributions, Part I: Priors based on a physical invariance principle". **21**(4): 427-434.
- Baker R., Christakos G., 2007. "Revisiting prior distributions, Part II: Implications of the physical prior in maximum entropy analysis". **21**(4): 435-446.
- Christakos G., Olea R.A., 2005. "New space-time perspectives on the propagation characteristics of the Black Death epidemic and its relation to bubonic plague". **19**(5): 307-314.
- Kovitz J., Christakos G., 2004. "Assimilation of fuzzy data by the BME method". **18**(2): 79-90.
- Kovitz J., Christakos G., 2004. "Spatial statistics of clustered data". **18**(3): 147-166.
- Christakos G., 2003. "Soil behaviour under dynamic loading conditions: Experimental procedures and statistical trends". **17**(3): 175-190.
- Serre M.L., Christakos G., Li H., Miller C.T., 2003. "A BME solution of the inverse problem". **17**(5-6): 354-369.
- Christakos G., 2003. "Another look at the conceptual fundamentals of porous media upscaling". **17**(5-6): 276-290.
- D'Or D., Bogaert P., Christakos G., 2001. "Applications of BME to soil texture mapping". **15**(1): 87-100.
- Christakos G., Papanicolaou V., 2000. "Norm-dependent covariance permissibility of weakly homogeneous spatial random fields." **14**(6): 1-8.
- Serre M.L., Christakos G., 1999. "Modern Geostatistics: Computational BME in the light of uncertain physical knowledge -The Equus Beds study". **13**(1): 1-26.
- Hristopulos D.T., Christakos G., 1999. "Renormalization group analysis of permeability upscaling". **13**(2): 131-160.
- Mathematical Geology* –now *Mathematical Geosciences* (IF=1.57):
- Hristopulos D.T., Christakos G., 2001. "Practical calculation of non-Gaussian multivariate moments in BME analysis". **33**(5): 543-568.
- Christakos G., Li X., 1998. "Bayesian maximum entropy analysis and mapping: A farewell to kriging estimators?" **30**(4): 435-462.
- Cassiani G., Christakos G., 1998. "Analysis and estimation of spatial non-homogeneous natural processes using secondary information." **30**(1): 57-76.
- Christakos G., Raghu V.R., 1996. "Dynamic stochastic estimation of physical variables". **28**(3): 341-365.
- Christakos G., 1990. "A Bayesian/maximum-entropy view to the spatial estimation problem". **22**(7): 763-776.
- Christakos G., 1988. "On-line estimation of nonlinear physical systems". **20**(2): 111-133.
- Christakos G., 1987. "Stochastic simulation of spatially correlated geoprocesses". **19**(8): 803-827.
- Christakos G., 1985. "Recursive parameter estimation with applications in earth sciences". **17**(5): 489-515.

International Journal of Numerical & Analytical Methods in Geomechanics (IF=2.41):

Christakos G, 1987. "A stochastic approach in modelling and estimating geotechnical data". **11**(1): 79-102.

Environmental Science - 环境科学

肖璐,郎艺超,夏浪,楼昭涵,孙楠,黄李童, George Christakos, 2017. 基于多源数据的 PM_{2.5} 浓度时空分布预测与制图.环境科学.接收, 小修. Xiao L., Lang Y., Xia L., Lou Z., Sun N., Huang L. and Christakos G. 2017. "Space-time estimations and mapping of PM_{2.5} fine particulates based on multi-source data." **38**(12): 4913-4923.

Acta Scientiae Circumstantiae - 环境科学学报

郎艺超, 肖璐, Christakos G, 2018. "基于 SARIMA 模型和普通 Kriging 法对杭州市主城区 PM_{2.5} 短期预测和制图." 第38卷第1期. 2018年1月 Lang Y, Xiao L, Christakos G, 2018. "Forecasting concentrations of PM_{2.5} in main urban area of Hangzhou and mapping using SARIMA model and ordinary Kriging method." **38**(1): 1-9.

VI. Papers in Refereed Volumes:

Spatiotemporal Modelling of Environmental Processes:

Christakos G., 2005. "Integrated modelling in space-time environments: Toward a synthetic theory of human exposure". Invited paper, *Modelización Espacio-Temporal de Procesos Medio-Ambientales (METMA'04)*, Granada, Spain.

Advances in Mineral Resources Management & Environmental Geotechnology:

Kolovos A., Christakos G., Hristopulos T., Serre M.L., 2004. "Spatiotemporal covariance functions from physical models." In Proc. *1st Intern Conf*: 157-162, Agioutantis Z. and Komnitsas K. (eds). Publisher: Heliotopos Conferences, Chania, Greece.

Calibration & Reliability in Groundwater Modelling:

Christakos G., 2003. "The role of conceptual frameworks in hydrologic research and development." *IAHS Publ.* **277**: 277-285. Kovar K. and Hrkal Z. (eds), Oxfordshire, UK.

Serre M.L., Christakos G., 2003. "Efficient BME estimation of subsurface hydraulic properties using measurements of water table elevation in unidirectional flow." *IAHS Publ.* **277**: 321-327. Kovar K. and Hrkal Z. (eds), Oxfordshire, UK.

ModelCARE2002:

Serre M.L., Christakos G., 2002. "BME-based hydrogeologic parameter estimation in groundwater flow modelling". *IAHS Proc*: 566-570, June 17-20, 2002, Prague, Czech Rep.

Christakos G., 2002. "Conceptual framework of physical knowledge synthesis in uncertain environments". *Keynote Talk, IAHS Proc*: 535-539, June 17-20, 2002, Prague, Czech Rep.

Geostatistics for Environmental Applications:

Serre M., Christakos G., Howes J., Abdel-Rehiem A.G., 2001. "Powering an Egyptian air quality information system with the BME space/time analysis toolbox: Results from the Cairo baseline year study". 91-100, Monestiez P., Allard D. and Froidevaux R. (eds.), Kluwer Acad. Publ., Dordrecht, the Netherlands.

Christakos G., Serre M.L., Demyanov V., Kanevski M., Savelieva E., Chernov S., Timonin V., 2001. "BME analysis of Neural network residual data from the Chernobyl fallout: Bayesian and Non-Bayesian approaches". 509-510, Monestiez P., Allard D. and Froidevaux R. (eds.), Kluwer Acad. Publ., Dordrecht, Netherlands.

Christakos G., 2004. "Global BME mapping of ozone distribution by assimilating soft information and data from TOMS and SBUV instruments on the Nimbus 7 satellite". In *geoENV IV*, Sanchez-Vila X. and Carrera J. (eds), Kluwer Acad. Publ., Dordrecht, The Netherlands.

Serre M.L., Christakos G., Lee S-J, 2004. "Soft data space/time mapping of coarse particulate matter annual arithmetic average over the US". In *geoENV IV*, Sanchez-Vila X. and Carrera J. (eds.), Kluwer Acad. Publ., Dordrecht, Netherlands.

Computational Methods in Surface & Groundwater Transport:

Christakos G., 1998. "Multi-point BME space/time mapping of environmental variables". **2**: 289-296. Burganos V.N., Karatzas G.P., Payatakes A.C., Gray W.G. and Pinder G.F. (eds.), Computational Mechanics Publ, Southampton, UK.

Geostatistics for the Next Century:

Christakos G., Miller C.T., Oliver D.L., 1993. "Cleopatra's nose and the diagrammatic approach to flow modelling in random porous media". 341-358. Kluwer Acad. Publ., Amsterdam, Netherlands.

NATO Advanced Study Institute Book Series:

Christakos G., 1991. "Certain results on spatiotemporal random fields and their applications in environmental research". *Probabilistic & Stochastic Methods in Analysis with Applications* **372**: 287-322. Byrnes J.S., Byrnes J.L., Hargreaves K.A. and Berry K. (eds.), Kluwer Acad. Publ., Dordrecht, the Netherlands.

Civil Engineering & Computers:

Christakos G., Dimitrakopoulos R., 1991. "Developing intelligent computer models in the stochastic analysis of environmental systems". 213-218, Oxford, UK.

Fundamental Theories of Physics:

Christakos, G., 1990. "Some applications of the Bayesian maximum entropy concept in geostatistics". *Proceed. of 10th Intern. Confer on Maximum Entropy & Bayesian Methods*. July 30-Aug 3, Laramie, Wyoming. Also, published in a 1991 volume titled "Fundamental Theories of Physics" **43**: 215-229. Grandy Jr W.T. and Schick L.H. (eds), Kluwer Academic Publ., Norwell, MA.

Modelling & Simulation of Systems:

Christakos G., 1989. "Modelling and estimation of nonlinear systems". *IMAC*: 221-223. Baltzer AG Sci. Publ., Red Bank, NJ.

VII. Papers in Conference and Symposia Proceedings

Joint METMA'07-GRASPA'14:

Ruiz-Medina M.D., Angulo J.M., Christakos G., Fernández-Pascual R., 2014. "Fractional pseudodifferential modeling through spatiotemporal duality applied to geosciences". *Joint METMA'07-GRASPA'14*. September 10-12, 2014, Torino, Italy.

Spatial Thinking & GIS:

Wang J.F., Christakos G., Guo Y.S., Yang W.Z., Liao Y.L., Wang X.Z., 2011. "Spatiotemporal Types of HFMD and Climate." *Procedia Social and Behavioral Sciences* **21**: 314–316 [STGIS2011, Tokyo, Japan.]

International Society of Exposure Analysis-International Society for Environmental Epidemiology (ISEE-ISEA):

Yu H-L, Wang C-S, Chen J-C, Christakos G., 2008. "Accuracy assessment of long-term exposure estimation using modern geostatistics." In *Proc. Joint ISEE-ISEA Conf*, Oct 12-16, 2008, Pasadena, CA.

Chen J.C., Cooper G.S., Yu H-L, Christakos G., 2008. "Ambient air pollution and increased mortality in Lupus." In *Proc. Joint ISEE-ISEA Conf*, Oct 12-16, 2008, Pasadena, CA.

International Conference on Urban Drainage-IICUD-2008:

Rieckermann J., Christakos G., 2008. "Monitoring and modeling the occurrence of illicit drugs in wastewater systems", In *Proceed 11 ICUD-Edinburgh Intern Confer Centre*, Aug 31-Sept 5, 2008, Edinburgh, Scotland.

European Geophysical Union-EGU2008:

Christakos, G., Choi K-M, H-L Yu, 2008. "Climate Issues of Influenza Mortality Risks)", *EGU General Assembly*, April 13-18, 2008, Vienna, Austria.

Congreso Nacional de Física 2007:

Castro J.J., Christakos G., Carsteanu A.A., and Rios R., 2007. "No-estacionariedad de los Coeficientes de Descomposicion de la Contaminacion Atmosferica", *WTC y Galeria Plaza*, Oct. 29-Nov. 2, 2007, Boca del Rio, Veracruz, Mexico.

EcoMod2007:

Kolovos A., Christakos G., 2007. "Statistical tools in renewable energy modelling: physical based, non-separable spatiotemporal covariance models", *EcoMod Conf. on Energy & Environmental Modeling*, Sept. 13-14, 2007, Moscow, Russia.

Geostatistics for Environmental Applications-GeoEnv:

Kolovos A., Skupin A., Pang W., Christakos G., Jerrett M., 2010. "Spatiotemporal geostatistics in cross-methodological monitoring of air pollution". *8th European Confer on GeoEnv*, Sept. 13-15, 2010, Ghent, Belgium.

Demyanov V., Serre M.L., Christakos G., Timonin, V., Kanevski M., Savelieva E., Chernov S., 2000. "Neural network residual BME analysis of Chernobyl fallout-Part II". *3d European Confer on GeoEnv*, 1: 99-110, Nov. 22-24, 2000, Avignon, France.

European Geophysical Union-EGU2007:

Yu H-L and Christakos G., Tartakovsky D., Modis K., Papantonopoulos G., 2007. "Composite stochastic solution of a 3-D geothermal model in Nea Kessani (Greece)". *EGU General Assembly*, April 16-20, Vienna, Austria.

METMA'04:

Christakos G., 2004. "Integrated modelling in space-time environments: Toward a synthetic theory of human exposure". *2nd Spanish Workshop on Spatio-Temporal Modelling of Environmental Processes (METMA'04)*, June 1-4, Granada, Spain.

International Statistical Institute:

Choi K-M, Serre M.L., Christakos G., 2001. "Space/time BME analysis and mapping of mortality in California". 53rd Session, 22-29 August, Seoul, S. Korea.

Joint Intern. Symposium on Geospatial Theory, Processing & Applications:

Choi K-M, Christakos G., Wilson M.L., 2002. "A new multi-scale modelling approach for space/time random field estimation." Ottawa, Canada, July 9-12.

Air Pollution 2002:

Christakos G., Kolovos A. and Serre M.L., Abhichek C., Vukovich F., 2002. "Towards global mapping of ozone distribution using soft information and data from TOMS and SBUV instruments on the Nimbus-7 satellite." Segovia, Spain, July 1-3.

Serre M.L. and Christakos G., 2002. "Efficient exposure mapping across space-time of particulate matter in the US", Segovia, Spain, July 1-3.

Pedometrics 2003:

Savelieva E., Demyanov V., Kanevski M., Serre M.L., Christakos G., 2003. "BME application for uncertainty assessment of the Chernobyl fallout." In Proceed. *5th Conference of Pedometrics-International Union of Soil Sciences*, September 2003, Reading, UK.

IEEE Symposia:

Christakos G., Miller C.T., Oliver D.L., 1993. "Stochastic flow modelling in terms of interactive perturbation, Feynman diagrams and graph theory". In Proc. of *Southeastcon-93*: 77-84. April 4-7.

Christakos G., Kolovos A., Serre M.L., 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., 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., 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., 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., 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., 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., 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.

VIII. Presentations-Abstracts-Posters in National & International Conferences¹:

American Association of Geographers:

Yu H-L, 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.

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., 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.

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.

Computational Methods in Water Resources:

Lee S.J., Serre M.L., 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., 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., 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.

American Physical Society Meeting:

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

Rieckermann J., 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.

¹ Partial List

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.

Society of Industrial & Applied Mathematics (SIAM):

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

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

Iliev P., 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., Oliver D.L., 1993. "Analysis of Methods for Closure of the Stochastic Groundwater Flow Equation". 171, San Francisco, CA.

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

Vyas V.M., Christakos G., 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., Miller C.T., 1993. "New results on the diagrammatic approach to stochastic steady-state saturated flow modeling." 157, Baltimore, MD.
- Thesing G., Christakos G., Miller C.T., 1993. "Analysis and local estimation of spatial data under the intrinsic hypothesis of random fields." Baltimore, MD.
- Killam B., Christakos G., Miller C.T., 1993. "Spatial sampling design for contaminant hydrologic level using classification criteria and stochastic annealing". 157, Baltimore, MD.
- Raghu V., Christakos G., 1994. "Space-time analysis of water quality data using random fields". 271, San Francisco, CA.
- Oliver L.D., Christakos G., 1994. "A comparison of analytic stochastic flow results with two-dimensional numerical results." 255, San Francisco, CA.
- Christakos, G., Raghu V.R., Bogaert P., 1995. "Stochastic analysis of spatiotemporal water quality data". San Francisco, CA.
- Christakos G., Hristopulos D.T., 1995. "Stochastic Characterization of Contaminated Sites". Baltimore, MD.
- Hristopulos D.T., Christakos G., 1995. "Modeling of Nonlocality and Nonhomogeneity in the Hydraulic Conductivity". Baltimore, MD.
- Raghu V., Christakos G., 1995. "Spatiotemporal analysis of sulfate deposition data over the conterminous United States". Baltimore, MD.
- Christakos G., Hristopulos D.T., Li X., 1996. "Stochastic path analysis of multiphase flow systems: A differential geometry approach." San Francisco, CA.
- Hristopulos D.T., Christakos G., 1996. "Nonlocal kernels and upscaling of effective parameters". San Francisco, CA.
- Hristopulos D.T., 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., 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., Christakos G., 1997. "Estimation and health impact assessment of tropospheric ozone concentrations over the Eastern US". San Francisco, CA.
- Kolovos A., Christakos G., 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., 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., 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.

American Institute of Hydrology:

Serre M.L., 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., Leone P.A., 2000. "Deriving a surface of Chlamydial infection rates using geostatistics." Proceedings, Dec. 4-7, Milwaukee, Wisconsin.

Stanford Center for Reservoir Forecasting:

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

IX. Institutional Publications²:*Superfund Basic Research Program News:*

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

Center for Multiphase Research News:

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

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

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

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

Hristopulos D.T., 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., 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.

National Technical University of Athens Research Reports:

Christakos G., Tsakmakidis Ch., Tsekouras D., 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., 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., 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., 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., 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 Perturbationn Analysis of Groundwater Flow". Research Notes No. **SM/3.92**: 63p.

Christakos G., Oliver D.L., 1992. "Space Transformations: New Results". Research Notes No. **SM/8.92**: 13p.

Oliver D.L., 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., 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.

X. Book Reviews:

Christakos G., 2005. "Analysis and Modeling of Spatial Environmental Data" by Kanevski M. and Maignan M.: *J. of Computers & Geosciences* **31**(10): 1302-1304.

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., 1988. "Geostatistical Case Studies", by G. Matheron and M. Armstrong (eds.): *Jour. of American Statistical Association* **83**(401): 279-280.

XI. 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).
- "Quantitative Health Geography" (GEOG 596).
- "Advanced Quantitative Methods in Geography" (GEOG 685).
- "Probabilistic Reasoning in Geographical Science" (GEOG 750).
- "Issues of Spatiotemporal Modelling and Mapping" (GEOG 780).

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

"Spatial Data Analysis."

Ocean College, Zhejiang University, Hangzhou, Zhejiang, China.
June 15-July 15, 2015-18.

"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 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 (ICSDM 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,

³ Partial List

- 2010.
- “Stochastic reasoning: Thinking under uncertainty”. Keynote Speaker, *International Workshop 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, Varese, 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 (April).
- EGU'2012 Session Organizer (Climate, Water & Health), Vienna, Austria (April).
- EGU'2013-2018 Session Co-Convener (Climate, Water & Health), Vienna, Austria (April).

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 Peer 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 (2007-2015)
 Jour. Environmental Science & Technology: Peer Reviewer (1992-1994; 2010-2015)
 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 (2000-2010)
 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 (2008-2016)
 International Jour. of Environmental Research & Public Health: Peer Reviewer (2011)
 Environmental Modelling & Software: Peer Reviewer (2011-2015)
 Journal of Geographical Systems: Peer Reviewer (2011)
 PLoS ONE: Peer Reviewer (2011-2016)
 Environmental Pollution (2016-2018)

HONORS AND AWARDS

1000-Elite Award (2014)
 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.

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.

Education Award (1978):

Ministry of Education, Athens, Greece.