

Appointment Status

Professor

Geography and Planning, Arts and Sciences, Queen's University at Kingston
Full-time, Professor
Tenure Status: Tenured

Academic Background

- 2001/6 Doctorate, Geography, San Diego State University/University of California at Santa Barbara, USA, 2001. Supervisors: Doug Stow, 1994/4 – 2001/6;
- 1994/6 Master of Science, GIS and remote sensing application, Institute of Remote Sensing Application, Chinese Academy of Sciences, Beijing, P.R. China, 1994
Supervisors: Zhengyi Cheng, 1991/9 - 1994/5
- 1991/6 Bachelor's, Economic geography, Beijing University, P.R. China (1987/9-1991/06)

Work Experience

- 2015-Present Professor, Geography and Planning, Arts and Science, Queen's University at Kingston
- 2015-Present Cross-appointed Professor, Environmental Studies, Arts and Sciences, Queen's University at Kingston
- 2008-2015 Associate Professor, Geography, Arts and Sciences, Queen's University at Kingston
- 2011-2015 Cross-appointed Associate Professor, Environmental Studies, Arts and Sciences, Queen's University at Kingston
- 2002-2008 Tenure-track Assistant Professor, Geography, Arts and Sciences, Queen's University at Kingston
- 2009 Visiting professor, Institute of Remote Sensing Application/Centre for Earth Observation & Digital Earth, Chinese Academy of Sciences
- 2000-2002 GIS Product Specialist, Environmental System Research Institute, Inc. Redlands, California, USA

Distinctions, Awards and Credentials

- 2009 Canadian Foundation of Innovation Leaders Opportunity Fund Award
- 2009 Wan Kuancheng research award, Chinese Academy of Science

Professional Memberships

- American Association of Geographer [from 1999]
- Canadian Association of Geographer [from 2002]

Undergraduate Teaching and Course Development

- 2002 - present Instructor and Course Designer, Queen's University at Kingston
Course Title: GPHY 346*/GISC 302* Environmental Modeling
GPHY 249*/GPHY344*: Cartography and thematic mapping
GPHY 349*: Geographic Information System
GPHY345*: Spatial Analysis

GPHY348*/GISC 303*: Application design and customization in GIS

Course Level: Undergraduate

Undergraduate Supervisory Experience

- 2009/9-2010/5 Tyler Nightingale, Bachelor's (completed), Queen's University
Thesis/Project Title: Summer RA: Climate and environmental impacts on
WNV spread in Ontario
- 2011/1-2012/8 Alexander Boone, Bachelor's (completed), summer RA,
Project title: The impact of bird migration on global H5N1 outbreaks
- 2011/5-2012/8 Rebecca Clark, Bachelor's (completed),
project title: Collecting Ontario GIS database
- 2011/5-2012/8 Suzanne Li, Bachelor's (completed), summer RA,
Project title: Statistical analysis of MODIS surface temperature data
- 2010/5-2010/8 Jessica Matthews (completed), Bachelor's (completed), summer RA,
Project title: spatial analysis of water quality data in Eastern Ontario
- 2011/5-2012/5 Haidy Wang (completed), Bachelor's (completed), summer RA, (NSERC
USRA), Project title: Lyme disease risk analysis in Eastern Ontario.
- 2012/5-2012/8 Heather Richardson (completed), Bachelor's (completed), summer RA,
Project title: network analysis of global H5N1
- 2013/9-2014/5 Jason Lao (completed), Bachelor's (completed), summer RA,
Project title: air pollution modeling with RS and GIS
- 2013/9-2014/5 Brad Holmes (completed), Bachelor's (completed), summer RA,
Project title GIS-based side walkability assessment in Kingston City

Graduate Teaching and Course Development

- 2003/1 - present Instructor and Course Designer, Queen's University
Course Title: GPHY855: Spatial Analysis
Course Title: GPHY849: Seminar in Geographic Information Science
Course Level: Graduate

Graduate and Postdoctoral Supervision

- 2006/9-2008/6 Principal Supervisor Jamie FitzGibbon, M.Sc. (completed), Queen's University,
Thesis Title: Sensitivity analysis of multi-temporal remote sensing change
detection from multiple sensors
Present Position: the Optech Company
- 2006/9-2008/8 Co-supervisor Jianhui Chen, M.Sc. (completed), Queen's University,
Thesis Title: Wavelet-based approach in the classification of remotely sensed
images: a comparison of different feature sets in an urban environment
Present Position : Ontario Hydro as a database analyst
- 2004/9-2009/12 Principal Supervisor Jie Tian, Ph.D. (completed), Queen's University,
Thesis Title: Integration of satellite remote sensing and ground-based
measurements for modeling the spatial-temporal distribution of fine particular
matter at a regional scale
Present Position : Assistant Professor at Clark University

- 2005/9-2012/12
Principal Supervisor
Wenbao Liu, Ph.D. (completed), Queen's University,
Thesis Title: Spatio-temporal modeling of the impacts of forest harvesting, climate change and topography on stream nitrates in a forested watershed
Present Position : Professor at Shandong Technology University, China
- 2008/9-2013/12
Co-supervisor
Grace Miao, Ph.D. (completed), Queen's University,
Thesis Title: Air pollution and health: distribution and determinants of exposure in Montreal, Quebec with a focus on PAH assessment
Present Position: Researcher at Queen's University
- 2009/9-2012/12
Principal Supervisor
Frank Wen, M.Sc. (completed), Queen's University,
Thesis Title: A spatial statistical analysis to estimate the spatial dynamics of the 2009 H1N1 Pandemic in GTA
Present Position: Product engineer and manager at Engineering Seismology Group, Kingston.
- 2010/9-2012/08
Co-supervisor
Jessica Stortz (M.Sc) (completed), Queen's University,
Thesis Title: Spatial analysis of pregnancy complications associated with maternal cardiovascular disease risk in Ontario
Present Position : Research coordinator at UBC
- 2011/9-2014/09
Principal supervisor
Andrei Rosua (M.Sc) (completed), Queen's University
Thesis Title: A new approach for geocoding postal code-based data in health related studies
Present Position : GIS analysts at Alberta Ministry of Health
- 2011/9-2014/12
Co-supervisor
Harkiran Kaur, MES (completed), Queen's University,
Thesis Title: land use change and surface water quality in the Cataraqui region
Present Position : Research assistant at LaGISA
- 2013/9-2015/01
Co-supervisor
Nicki Kwon, Master, (completed), Queen's University,
Thesis Title: Mapping the risk of breast cancer to exposure from traffic-related air pollution using land-use regression in Vancouver, B.C.
Present Position : Data analyst at Ontario Ministry of Health and Long-term Care
- 2006/9-2013/4
Principal supervisor
Peter Luciani, Ph.D (Unfinished), Queen's University,
Thesis Title: Multi-scale analysis of the spatial and temporal dynamics of effective impervious surfaces and non-point source runoff of zinc in an urbanizing watershed
Present Position : GIS specialist at City of Mississauga
- 2012/9-
Principal supervisor
Hong Yao, Ph.D (In progress), Queen's University,
Thesis Title: Analyzing and modeling regional travel-related energy consumptions using system dynamics approach
Present Position : Ph.D student at Queen's
- 2013/9-
Principal supervisor
Mingjie Song, Ph.D (In progress), Queen's University,
Thesis Title: Spatial optimization modeling for China's county-level land use planning
Present Position : Ph.D student at Queen's

2013/9-2015/6 Principal supervisor	Su Ye, MES (completed), Queen's University, Thesis Title: target-based change detection from multiple time series RS images Present Position: Ph.D at Clark Univ.
2012/9-2015/10 Principal supervisor	Angela, Cheng (M.Sc) (Completed), Queen's University, Thesis Title: Spatial-temporal analysis of Lyme disease due to climate change in Eastern Ontario from 2000 to 2013 Present Position : Geospatial and remote sensing analyst at Environment Canada
2013/9- Principal supervisor	Rezvan Taki, (M.Sc) (In progress), Queen's University, Thesis Title: Integrating remote sensing and genetic algorithm to estimate spatial variation of temperature Present Position : On leave
2015/9- Principal supervisor	Feng Yao, Ph.D (In progress), Queen's University, Thesis Title: TBD Present Position : graduate student at Queen's
2015/9- Principal supervisor	Jinyi Liu, MES(In progress), Queen's University, Thesis Title: TBD Present Position : graduate student at Queen's
2015/9- Principal supervisor	Alex Boone, MSc(In progress), Queen's University, Thesis Title: TBD Present Position : graduate student at Queen's
2014/9-2015/9 Principal supervisor	Jie Yu, Ph.D (Completed), Tongji University, Thesis Title: Water pollution detection methods based on multi-feature identification from RS Present Position : Visiting student
2010/1-2012/2 Principal supervisor	Lei Wang, PDF (completed), Queen's University Project title: Development of a spatial framework to enhance cardiovascular disease surveillance Present Position: Associate Professor at Institute of Remote Sensing Application, Chinese Academy of Science
2009/9-2011/4 Principal supervisor	Zhijie Zhang, PDF (completed), Queen's University Project title: Analyzing and modeling the global spread of H5N1 bird flu Present Position: Associate Professor at Fudan University, China
2011/4-2015/6 Principal supervisor	Masroor Hussain, PDF(completed) Queen's University Project title: object-based segmentation Present Position: Senior scientist at PCI

Membership on Graduate Examining, Supervisory & Advisory Committees

<u>Name of Student</u>	<u>Department</u>	<u>University</u>	<u>Your Role</u>	<u>Years</u>
Karin Van Ewijk	Geography	Queen's	Internal examiner	(2007-2008)
<u>Baining Liu</u>				

<u>Jessica Tomkins</u>	Computing	Queen's	Internal/external	2008
<u>Jeff Row</u>	Geography	Queen's	Head's delegate	2008
<u>Cheng Yang</u>	Geography	Queen's	Internal/external	2008-2009
<u>Jasmine Chu</u>	Geography	Queen's	Head's delegate	2008-2010
	Geography	Univ. of	External Assessor	2010
<u>Barbara Carra</u>		Queensland		
<u>Meg Southee</u>	Geography	Wilfred Laurier	External Examiner	2010
<u>Kirby Calvert</u>	Geography	Queen's	Head's delegate	2010
<u>Daniel</u>	Geography	Queen's	Head's delegate	2011-2013
<u>Lamhonwah</u>	Geography	Queen's	Head's delegate	2012-2014
<u>Jie Yu</u>				
<u>Nanfeng Liu</u>	Geography	Queen's	Internal examiner	2012-2015
<u>Cheng Shan</u>	Geography	Queen's	Internal examiner	2013-2015
<u>Katherine</u>	Geography	Queen's	Internal examiner	2014-2015
<u>Dearborn</u>	Geography	Queen's	Internal examiner	2014-2015
<u>Mingzhi Qu</u>				
<u>Vivan Wasiuta</u>	Biology	Queen's	Internal/external	2014
<u>Mustafiz</u>	Geography	Queen's	Head's delegate	2014
<u>Rahman</u>	Geography	Univ. of	External examiner	2014
		Calgary		
<u>Xiao Xu</u>	Geography	Univ. of	External examiner	2014
		Waterloo		
<u>Mengqi Yang</u>	Geography	Queen's	Head's delegate	2015

Selected Publications

1. **Su, Ye, D. Chen.** An Unsupervised Change Detection Procedure for Multispectral Remotely Sensed Images. *Photogrammetric Engineering and Remote Sensing*. 81(8):13-22.
2. **X. Zhang, T. Zhong, D. Chen, M. Cheng, L. Liu, X. Zhang, and X. Li.** 2015. Assessment of arsenic (As) occurrence in arable soil and its related health risk in China. *Environmental Geochemistry and Health*, 9751, DOI:10.1007/s10653-015-9751-7
3. **D. Chen.** 2015. Methods for detecting spatial and temporal aberration of disease outbreak in syndromic surveillance. In Y. Shi, F. Wang (ed). *Applications of GIS and Spatial Analysis in Public Health (地理空间分析在健康领域的应用)*. Beijing: High Education Press (In Chinese).
4. **X. Zhang, D. Chen, T. Zhong, X. Zhang, M. Cheng, X. Li.** 2015. Evaluation on Lead (Pb) occurrence in arable soil in China, *CLEAN-Soil, Air, and Water*. DOI: 10.1002/clean.201400569.
5. **Sun, X., L. Li, B. Zhang, D. Chen, L. Gao.** 2015. Soft urban water cover extraction using mixed training samples and support vector machines. *International Journal of Remote Sensing*. 36(13):3331-3344.
6. **Razavi, N.R, M. Qu, D. Chen, Y. Zhong, W. Ren, Y. Wang, L.M. Campbell.** 2015. Effect of eutrophication on mercury (Hg) dynamics in subtropical reservoirs from a high Hg deposition ecoregion, *Limnology and Oceanography*. doi: 10.1002/lno.10036.

7. **D. Chen, H. Wong, P. Belanger, K. Moore, M. Peterson, J. Cunningham.** 2015. Analyzing the correlation between deer habitat and the component of the risk for Lyme disease in Eastern Ontario, Canada: A GIS-based approach. *ISPRS International Journal of Geo-Information*, 4:105-123.
8. **Q. Miao, M Bouchard, D. Chen, M. Rosenberg, K. J. Aronson.** 2015. Commuting behaviours and exposure to air pollution in Montreal, Canada. *Science of the Total Environment*, 508: 193-198.
9. **Chen, D. B. Moulin, and J. Wu.** (eds). 2014. *Analyzing and Modeling Spatial and Temporal Dynamics of Infectious Diseases*. Jones Wiley. 496p. ISBN:978-1-118-62993-2.
10. **X. Zhang, D. Chen, T. Zhong, X. Zhang, M. Cheng, X. Li.** 2014. Assessment of Cadmium (Cd) Concentration in arable soil in China. *Environmental Science and Pollution Research* . DOI 10.1007/s11356-014-3892-6.
11. **Zhang Z, Chen D, Chen Y, Wang B, Hu Y, Gao J, Sun L, Li R, Xiong C.** 2014. Evaluating the impact of environmental temperature on global highly pathogenic avian influenza (HPAI) H5N1 outbreaks in domestic poultry. *International Journal of Environment Research and Public Health* , Jun;11(6):6388-99.
12. **J. Li, Q. Shen, B. Zhang, D. Chen.** 2014. Retrieving total suspended matter in Lake Taihu from HJ-CCD near-infrared band data. *Aquatic Ecosystem Health & Management*. 17(3):280-289.
13. **Q. Miao, D. Chen, M. Buzzelli, K. J. Aronson.** 2014. Environmental Equity Research: Review with Focus on Outdoor Air Pollution Research Methods and Analytic Tools. *Archives of Environmental and Occupational Health*, 69(4).
14. **Wu, Y., H. Zheng, B. Zhang, D. Chen, L. Lei.** 2014. Long-term changes of lake level and water budget in the Nam Co Lake basin, Central Tibetan Plateau. *Journal of Hydrometeorology*, 15:1312-1322. DOI: 10.1175/JHM-D-13-093.1
15. **Miao, Q.; M. Bouchard; D. Chen; I. Burstyn; J. J Spinelli, K. Aronson** 2013. Assessing Traffic and Polycyclic Aromatic Hydrocarbon Exposure in Montreal, Canada. *Science of the Total Environment* 470-471:945-953
16. **Gu, F., Liu, W., and D. Chen** (2013). *Research on Dynamics of Urban Land Use Change Patterns*. Xian JiaoTong Univ. Press. (In Chinese), 167p.
17. **Zhang, Z., R. Bergquist, D. Chen, B. Yao, Z. Wang, J. Gao, Q. Wu.** 2013. Identification of Parasite-host habitats of Anxiang County, Hunan Province, China based on multi-temporal China-Brazil Earth Resources Satellite (CBERS) images. *Plus One* 8(7): e69447. doi:10.1371/journal.pone.0069447.
18. **M. Hussain, D. Chen, A. Cheng, H. Wei, D. Stanley.** 2013. Change detection from digital images: from pixel-based to object-oriented approaches. *ISPRS Journal of Photogrammetry and Remote Sensing*, 80:91-106.
19. **Zhang, B., Y. Wu, L. Lei, J. Li, L. Liu, D. Chen, J. Wang.** 2013. Monitoring changes of snow cover, lake and vegetation phenology in Nam Co lake basin (Tibetan Plateau) using remote sensing (2000-2009). *Journal of Great Lakes Research*. 39(2): 224-233.
20. **F. Xie, D. Chen, J. Meligrana, Y. Lin, W. Ren.** (2013). Selecting key features for remote sensing classification by using decision-theoretic rough set model. *Photogrammetric Engineering & Remote Sensing*. 79(9): 787-797.
21. **Jie, T., W. Tu, S. Tedders, D. Chen.** 2013. A spatial-temporal analysis of low birth weight prevalence in Georgia, USA. *GeoJournal, January*. DOI:10.1007/s10708-013-9472-3
22. **Zhang, H., B. Zhang, D. Chen, J. Li, G. Zhao.** 2013. Influence of filter band function on retrieval of aerosol optical depth (AOD) from sun photometer data. *Journal of Atmospheric and Ocean Technology*. doi: 10.1175/JTECH-D-12-00104.1.
23. **Z. Zhang, D. Chen, M. P. Ward and Q. Jiang.** 2012. Transmissibility of the highly pathogenic avian influenza virus, subtype H5N1 in domestic poultry: a spatio-temporal estimation at the global scale. *Geospatial Health* 7(1):135-143.

24. B. Zhang, W. Yang, L. Gao and **D. Chen**, 2012. Real-time target detection in hyperspectral images based on spatial-spectral information extraction. *EURASIP Journal on Advances in Signal Processing* 2012:142 (13 July 2012)
25. Peng, D., B. Zhang, L. Liu, D. H. Fang, **D. Chen**, Y. Hu, and L. Liu. 2012. Characteristics and drives of global NDVI-based FPAR from 1982 to 2006. *Global Biogeochemical Cycles*. 26. GB3015, doi:10.1029/2011GB004060.
26. **Zhang, Z.**, R. Zhu, N.R. Bergquist, **D. Chen**, Y. Chen, L. Zhang, J. Guo, F. Zhao, Q. Jiang. (2012) Spatial comparison of areas at risk for schistosomiasis in the hilly and mountainous regions in the People's Republic of China: evaluation of the long-term effect of the 10-year World Bank Loan Project. *Geospatial Health*, 6(2): 205-214.
27. **Zhang Z., Chen D**, Chen Y, Davies TM, Vaillancourt JP, Liu WB. 2012. Risk signals of an influenza pandemic caused by highly pathogenic avian influenza subtype H5N1: Spatio-temporal perspectives. *The Veterinary Journal*. 192(3): 417-421.
28. **Chen, D.** (eds). 2011. *Advances in Data, Methods, Models and their Applications in Geoscience*. InTech Press. 336p. ISBN 978-953-307-737-6.
29. **Chen, D. J. Cunningham, K. Moore, J. Tian**. 2011. Spatial and temporal aberration detection for disease outbreak in syndromic surveillance. *Annals of Geographic Information System*. 17(4):211-220. <http://dx.doi.org/10.1080/19475683.2011.625979>.
30. Zhang, B. **Wu Y.**, Zhu L., Wang J., Li J., **Chen D.** (2011). Estimation and trend detection of water storage at Nam Co Lake, central Tibetan Plateau. *Journal of Hydrology*. 405(1-2):161-170. Doi:10.1016/j.jhydrol.2011.05.018.
31. **S. Li, B. Zhang, D. Chen**, L. Gao, M. Peng. (2011). Adaptive support vector machine and Markov Random Field model for classifying hyperspectral imagery. *Journal of Applied Remote Sensing*. 5, 053538; doi:10.1117/1.3609847
32. **Peng, D.**, B. Zhang, L. Liu, **D. Chen**, H. Fang, and Y. Hu. 2011. Seasonal dynamic pattern analysis on global FPAR derived from AVHRR GIMMS NDVI. *International Journal of Digital Earth*. DOI: 10.1080/17538947.2011.596579.
33. **Zhang Z., Chen D., Liu WB**, Racine JS, Ong SH, Chen Y., G. Zhao, Q. Jiang. 2011. Nonparametric evaluation of dynamic disease risk: a spatio-temporal kernel approach. *PLoS ONE*, 6(3): e17381. doi:10.1371/journal.pone.0017381.
34. **P. Luciani and D. Chen**. 2011. The impact of image and class structure upon sub-pixel mapping accuracy using the pixel-swapping algorithm, *Annual of Geographical Information System*, 17 (1): 31-42. <http://dx.doi.org/10.1080/19475683.2011.558022>.
35. **Chen, D.** and **J. Tian**. 2010. Monitoring spatial and temporal variability of air quality using satellite observation data: a case study of MODIS-observed aerosols in Southern Ontario, Canada, in *Air Quality*, Sciyo Press. 2010. Pp. 65-80
36. **Chen, D., W. Liu, J. Tian**, and **P. Luciani**. 2010. Evaluating ecological and environmental impact of urbanization in the Greater Toronto Area through multi-temporal remotely sensed data and landscape ecological measures. In *Geospatial Analysis and Modeling of Urban Environment*, edited by B. Jiang and X. Yao. Springer. pp. 251-264
37. **Zhang Z, Chen D., Chen Y, Liu WB**, Wang L, Zhao F, Yao BD (2010). Spatio-temporal data comparisons for global highly pathogenic avian influenza (HPAI) H5N1 outbreaks. *PLoS ONE* 5(12):e15314. doi:10.1371/journal.pone.0015314.
38. **J. Tian**, and **D. Chen** . Spectral, spatial and temporal sensitivity of correlating MODIS aerosol optical depth with ground-based PM2.5 across southern Ontario. *Canadian Journal of Remote Sensing* 36(2): 119-128. 2010.
39. **Tian, J.**, and **D. Chen**. A semi-empirical model for predicting ground-level fine particle matter (PM2.5) concentration in Ontario from satellite remote sensing and ground-based meteorological measurements. *Remote Sensing of Environment*, 114(2):221-229. 2010.
40. Liu, X., Gao, L., Zhang, B., and **Chen, D.** A maximum noise fraction transform with improved noise estimation for hyperspectral images. *Science in China Series F: Information Sciences*. 52(9): 1578-1587. 2009

41. **Liu, W.** and **D. Chen.** Spatial impact of organic matters from point sources on stream water quality. *Mining Science and Technology*, 19(2):256-261. 2009.
42. **Chen, D.** and **H. Wei.** The effect of spatial autocorrelation and class proportion on the accuracy measures from different sampling designs". *ISPRS Journal of Photogrammetry and Remote Sensing* 64(2):140-150. 2009.
43. **Zhang, B., J. Li, Q. Shen,** and **D. Chen.** A bio-optical model based method of estimating total suspended matter of Lake Taihu from near-infrared remote sensing reflectance. *Environmental Monitoring Assessment* 145:339-347. 2008
44. **D. Chen.** A standardized probability comparison approach for evaluating and combining pixel-based classification procedures. *Photogrammetric Engineering & Remote Sensing*. 74(5): 601-610. 2008
45. **J. Chen, D. Chen,** and **D. Blostein,** Wavelet-based classification of remotely sensed images: a comparative study of different feature sets in an urban environment. *Journal of Environmental Informatics*. 10(1): 2-9, 2007.
46. **D. Chen** and **A. Farrar,** Evaluation of NEXRAD precipitation data for rainfall monitoring in Eastern Ontario, Canada. In *Geomatics Solutions for Disaster Management*. Edited by J. Li, S. Zlatanova, and A.G. Fabbri, a Springer book, within its Lecture Notes on Geoinformatics and Cartography. 2007. pp 103-116
47. **Tian, J.** and **Chen, D.,** Optimization in multi-scale segmentation of high resolution satellite images for artificial feature recognition. *International Journal of Remote Sensing*. 28(20): 4625-4644. 2007
48. **Tian, J** and **Chen, D.,** Evaluating satellite-based measurements for mapping air quality in Ontario, Canada. *Journal of Environmental Informatics*. 10(1):30-36, 2007

Presentations

1. **M. Hussain, D. Chen.** 2014. Creating a three-tier buildings classification by using large scale topographic and address-based data. In *ISPRS Annals: ISPRS Technical Commission II Symposium (Volume II-2)*, 6–8 October 2014, Toronto, Canada. , 67-73
2. **Ye, S.,** and **D. Chen** (2014). Comparison of automatic threshold selection methods for change detection from remotely sensed images. Paper presented at CAG annual meeting, Brock University, St. Catharines, Ontario. May 26-28, 2014.
3. **D. Chen.** (2014). The impact of deer habitat on spatial and temporal dynamics of lyme risk in Eastern Ontario, Canada. Paper presented at AAG Annual Meeting, Tampa, Florida, April 8-12, 2014.
4. **D. Chen. S. Li, Q. Jian and B. Zhang** (2013). Change detection after earthquake from multi-resolution remotely sensed images with a multi-temporal geostatistical measure. Paper presented at the 9th International Conference on Geoinformation for Disaster Management (Gi4DM). Dec.9-11, 2013. Hanoi, Vietnam.
5. **D. Chen** and **H. Wong** (2013). Spatial and temporal analysis of Lyme disease risk in Eastern Ontario, Canada. Paper presented at 2nd Symposium on Advances in Geospatial Technologies for Health, Arlington, August 25-29, 2013.
6. **D. Chen, R. Taki** (2013). A tool for optimizing parameters of inverse distance weight function with genetic algorithms. Paper presented at 2013 ESRI International User Conference, July 8-12, 2013, San Diego, US.
7. **M. Hussain** and **D. Chen** (2013). Object-based land-cover classification with SPOT imagery and aerial photos – a case study for large area mapping. Poster at 2013 International Conference on Earth Observation for Global Changes (EOGC'2013) and 2013 Canadian Institute of Geomatics Annual Conference, Toronto, June 5-7, 2013.
8. **D. Chen.** (2013). Detecting oil-spills and other seawater contamination with SAR data in the Northern South China Sea. Presented at SOAR mini-workshop at Queen's Univ, April 25, 2013.
9. **D. Chen** (2013). Spati-temporal data mining framework for analyzing vector-borne disease risk: a case study of WNV in Ontario. Paper presented at 2013 AAG annual conference, Los Angeles,

- April 12-16, 2013.
10. **J. Stortz**, D. Hunter, G. Smith, **D. Chen** (2012). Spatial analysis of pregnancy complications associated with cardiovascular disease risk in ON. Poster at the Eastern Canadian Perinatal Investigators Meeting in November, 2012 Toronto.
 11. **Miao Q, Chen D**, Bouchard M, Spinelli JJ, Burstyn I, Aronson KJ. Assessing Traffic Exposure and PAHs in Urine in Montreal, Quebec (poster). Queen's Cancer Research Institute 2012 Retreat, Kingston, January 20 2012.
 12. **A. Rosu** and **D. Chen** (2012) Comparing different approaches for representing populations in postal code geocoding for health applications. Poster at 2012 CAG Annual Meeting, May 28-June 2, Waterloo.
 13. **A. Cheng** and **D. Chen** (2012). Accuracy assessment in change detection: a study with simulated images. Presentation at 2012 CAG Annual Meeting, May 28-June 2, Waterloo.
 14. **W. Fan, D. Chen**, and *A. Majury* (2012). A statistical network model to estimate early spatial and temporal dynamics of 2009 H1N1 outbreaks in Greater Toronto Area (GTA). Presentation at 2012 CAG Annual Meeting, May 28-June 2, Waterloo.
 15. **J. Stortz, D. Chen**, G. Smith and D. Hunter. (2012) Spatial analysis of pregnancy complications associated with cardiovascular disease risk in ON. Poster at 2012 CAG Annual Meeting, May 28-June 2, Waterloo.
 16. **D. Chen** and **M. Hussain** (2012). A spatio-temporal data mining framework for analyzing the infectious disease risk: a case study of WNV in Ontario. Presentation at Global Geospatial Conference, Quebec City, May 13-17. 2012.
 17. **W. Fan, D. Chen**, and *A. Majury* (2012). A statistical model to estimate early spatial and temporal dynamics of 2009 H1N1 outbreaks in Greater Toronto Area (GTA). Presentation and Poster Global Geospatial Conference, Quebec City, May 13-17. 2012. (GEOIDE Student Poster Award).
 18. **G. Miao; D. Chen**; M. Bouchard; J. J. Spinelli; I. Burstyn; *K. J. Aronson*, (2012). Assessing Traffic Exposure and PAHs in Urine in Montreal, Quebec. Poster at Queen's Cancer Research Institute 2012 Retreat. Jan. 20th 2012, Kingston, ON.
 19. **D. Chen** and **M. Hussain**. (2011). An object-based data mining framework for change detection in urban areas from very high resolution images. Poster at *International Symposium on Remote Sensing and GIS method for Change Detection and Spatio-temporal Modeling*, Hongkong, Dec. 14-17, 2011.
 20. **L. Wang, S. Stalker, C.I. Ardern, S. Hoetmer, W. Kou, P. Simmons, S. Cholewa, D. Chen**. (2011). Development of a spatial analytic framework for cardiovascular disease surveillance. Poster at 7th World Alliance for Risk Factor Surveillance (WARFS) Global Conference, Toronto, Oct.
 21. *Green ME.*, Birtwhistle R, Phillips S, MacDonald S, Hall-Barber K, and **Chen DM**. 2011. Access to primary care services after hours and during regular office hours and utilization of external health care resources. Paper submitted to the 39th NaPCRG Annual Meeting, Banff, Alberta. Nov. 12-16, 2011.
 22. **Zhang, L., R. Deardon, D. Chen**, 2011. Modeling 2009 H1N1 data from Southern Ontario over time and space. Poster at the 39th Annual Meeting of the Statistical Society of Canada, June 12-15, Acadia University, Wolfville, NS. Canada.
 23. **Luciani, P.** and **D. Chen**. 2011. Accuracy of context-based impervious surface extraction incorporating regression tree methods and textural transformations. Presentation at the 32nd Canadian Symposium on Remote Sensing, Sherbrooke, Qubec, Canada on June 13-16 2011.
 24. **Z. Zhang, DM. Chen**, Chen Y, Davies TM, *Vaillancourt JP*, **Liu WB**. 2011. Risk of influenza pandemic from highly pathogenic avian influenza (HPAI) subtype H5N1: signals from the spatio-temporal perspective. Poster at the GEOIDE Annual Scientific Conference 2011, Toronto, May 14-15, 2011.

25. **W. Fan** and **D. Chen**. 2011. A network-based model for 2009 H1N1 outbreaks in the Greater Toronto Area. Poster at the GEOIDE Annual Scientific Conference 2011, Toronto, May 14-15, 2011.
26. **L. Zhang**, *R. Deardon*, and **D. Chen**. 2011. Modeling spatio-temporal spread of H1N1 in Toronto Metropolitan Area. Poster at to the GEOIDE Annual Scientific Conference 2011, Toronto, May 14-15, 2011.
27. **Chen, D.** and **Z. Zhang**. 2011. Spatio-temporal data comparisons of global HPAI H5N1 databases. Paper presented at 2011 AAG annual conference, Seattle, April 12-16, 2011.
28. **Chen, D.** 2010. Climate Impact on global HPAI H5N1 outbreaks. Presented at the Canada-China International Conference on Dynamics of Infectious Diseases. Nanjing, China. Dec. 2010.
29. **Chen, D.** and **Z. Zhang**. 2010. Spatial and temporal analysis of global bird-flu outbreaks. Presented at GEOIDE-MITACS-PHAC Workshop on Spatial and Temporal Dynamics of Infectious Diseases. Fields Institute, Toronto. Aug. 2010.
30. **Wen, F.**, **Chen, D.** 2010. Network-based approach for simulating spatial and temporal spreads of communicable diseases at multiple scales (poster). 2010 Annual GEOIDE Scientific Conference, Calgary, June 2010.
31. **Zhang, Z.**, **L. Wang**, *D. Chen*, *j-P. Vaillancourt*, *J. Wu*. 2010. Impacts of temperature on spatial and temporal distribution of global HPAI H5N1 outbreaks (poster). 2010 Annual GEOIDE Scientific Conference, Calgary, June 2010.
32. **Tian, J.** and **D. Chen** (2010), Mapping the spatiotemporal distribution of PM2.5 concentration using a Bayesian Maximum Entropy (BME) approach, The AAG 2010 Annual Meeting, Washington D.C., USA, April 14-18.
33. **Zhang, Z.** and **D. Chen**. 2010. Spatio-temporal kernel density estimation for evaluating disease risk. NCDIS Workshop on Statistical Methods for Geographic and Spatial Data. March 2010. Montreal.
34. **Miao Q**, **Chen D**, *Aronson KJ*. Traffic Exposure: A Comparison of Survey, Biomarker, and Geographic Information System Methods (poster). Canadian Society for Epidemiology and Biostatistics Student Conference, University of Ottawa, May 23-24, 2009.
35. **Miao Q**, **Chen D**, *Aronson KJ*. Traffic Exposure: A Comparison of Survey, Biomarker, and Geographic Information System Methods (poster). Health Sciences Trainees Research Day, Kingston, June 2, 2009.
36. **Chen, D.** 2009. Geographical analysis and modeling of bird-flu. Workshop on mathematical modeling and geosimulation of zoonotic diseases. Aug. 19-21, 2009 York University.
37. **Chen, D.** 2009. Simulating spatial-temporal spread patterns of communicable diseases. CPGIS summer research summit. June 18, 2009.
38. **Chen, D.** and **J. Tian**. 2009. A semi-empirical model for predicting ground-level fine particle matter (PM2.5) concentration from satellite remote sensing and ground-based meteorological measurements. 2009 Workshop on Earth Observation and Global Change, Chengdu, China. May 24-29, 2009.
39. **Chen, D.** 2008. Spatial disease spread modeling and environmental simulation in GIS. CODIGEOSIM workshop, Sept. 3-4, York University.
40. **Chen, D.** 2008. Geosimulation tools for simulating spatial-temporal spread patterns and evaluating health outcomes of communicable diseases. The 10th GEOIDE Annual Scientific conference, Niagrall Fall, Canada. May 28-30, 2008
41. **Tian, J.** and **D. Chen** (2008), Spatial and temporal issues in correlating MODIS aerosol optical depth data with ground-based PM2.5 observations across southern Ontario, The AAG 2008 Annual Meeting, Boston, Massachusetts, USA, April 15-19.
42. **Chen, D.** and **J. FitzGibbon**. 2008. Comparison of seasonal change detection from multi-temporal MODIS and TM images in Southern Ontario. 2008 International workshop on Earth Observation and Remote Sensing Applications, Beijing, China. July.
43. **Liu, W.** and **D. Chen**. 2008. The effect of grid size on topographic parameterization of small watershed. Paper presented at 2008 AAG annual meeting, Boston, USA. April. **Tian and D.**

Chen. 2008. Satellite remote sensing of fine particle matter and air quality assessment at a regional scale in southern Ontario. Paper presented at 2008 AAG annual meeting, Boston, USA. April.

44. **Chen, D.** 2007. Mapping and modelling the distribution and spread of West Nile Virus in GIS. the MITACS/PHAC Mini-Symposium on West Nile Virus, York University, Dec. 6, 2007.

Consulting Activities

- K&LFC Public Health. “*The impact of privacy on disease outbreak detection from syndromic surveillance*”. 2007. [2007/4-2008/9]**Error! Bookmark not defined.**
- Public Health Agency of Canada. “*WNV Mosquito surveillance data analysis in Ontario*” [2009/4-2010/3]
- Alberta Ministry of Environment. “*Potential impact of climate change on water availability and land use/land cover in SSRP area of Southern Alberta: Scoping study and recommendation for integrated model development*” [2011/1-2011/5]
- K&LFC Public Health. “*Spatial and temporal analysis of Lyme tick submissions*” [2012/03-2013/04]
- Public Health. “*Remote sensing of ground heat*” [2014/03-2014/10]

Main Research Funds – External

Period of Funding	Role	Principal Applicant	Funding Organization	Type	Amount (CAN\$)
2013/4 - 2018/3	PI		NSERC	Discovery grant	155,000
2015-2016	PI		OCE	VIP II research grant	70,000
2015/01-2013/4-2015/4	PI		MITACS	PDF award	114,000
2013/4-2016/3	PI		CFI	Lab operating fund	30,265
2011/3-2013/4	Co-investigator PI	G. Evans	PSI Health research NSERC	Research grant Engage grant	170,000 25,000
2010/4-2012/3	Co-investigator	K.J. Aronson	Cancer Research society	Research grant	119,740
2010/9-2013/3	PI		CFI & OMRI	Infrastructure fund	201,866
2010/4-2011/5	Co-Investigator	M. Green	SOAMA	Research grant	97,000
2008/4-2013/3	Co-PI	J. Wu	GEOIDE	Research grant	860,000

2008/4- 2013/3	PI		NSERC	Research grant	75,000
2009/4- 2010/3	Co-PI	C. Ardern	PHAC	Research grant	109,000

Service and Administration – External/Internal

(2009/7-2013/6, 2014/7-2015/6)	Committee Member, Graduate committee, Department of Geography, Queen's University				
(2013/7-2014/6)	Committee Member, Undergraduate Committee, Department of Geography, Queen's University				
(2011/7-2012/6, 2013/7- 2014/6)	Committee Member, Renewal, tenure and promotion committee, Department of Geography, Queen's University				
2007/7-2008/6	Committee Member, Computing Committee, Department of Geography, Queen's University				
2009/7-2008/6	Committee Member, hiring committee, Department of Geography, Queen's University				
2015/7-2015/6	Committee Member, session hiring committee, Department of Geography, Queen's University				
2012/7-2013/6	Committee Member, Nominating committee, Department of Geography, Queen's University				
2014/9-2015/6	Committee Member, Arts and Science Curriculum review committee, Queen's University				
2007-present	Academic research committee of Water Research Center, Queen's University				
2009, 2011, 2013	Reviewer for major entering awards, Queen's University				
2009-present 2007	Editorial board members for <i>Geoinformatics & Geostatistics: An Overview</i> Chair, the Onatrio Graduate Scholarship panel				
2014, 2015	Program committee member for <i>Canada Spatial Knowledge and Information</i>				
2008	Co-chair of the workshop on spatial-temporal modeling of infectious disease, Sept. 11-12, 2008. Toronto				
2009	Co-chair of the PHAC/GEOIDE/MITACS joined workshop on mathematical modeling and geosimulation for disease spread, Feb. 17-18, 2009. Ottawa				
2010	Organizer and chair of the PHAC/GEOIDE/MITACS workshop on spatial and temporal dynamics of zoonotic diseases in Aug. 2010, Toronto				
2010	Co-organizer of the workshop on <i>statistical methods for geographic and spatial data in the management of natural resources</i> for the National Institute on Complex Data Structures in March 2010, Montreal				

Other Professional Work

2014	Tenure and renewal reviewer for Clark University, US				
2012	Tenure and renewal reviewer for University of Massachusetts, US				
2007-present	Regular reviewer for more than 20 journals.				
2007-present	Regular grant reviewer for NSERC, Georgia Science Foundation, US NSF, MITACS accelerate PDF and GlobalLink grants				