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EDUCATION

- Ph.D. Geography, San Diego State University/University of California at Santa Barbara, USA, 2001
- M.S. GIS and Remote Sensing Application, Institute of Remote Sensing Application, Chinese Academy of Sciences, Beijing, P.R. China, 1994
- B.S. Economic Geography, Peking University, Beijing, P.R.China, 1991

EMPLOYMENT HISTORY

- 2015- Full professor, Department of Geography and Planning, Queen's University
- 2015- Cross-appointed professor, School of Environment Studies, Queen's University
- 2019-2021 Associate Head of Geography Graduate Program, Dept. of Geography and Planning
- 2015-2018 Visiting professor, College of Geography and Remote Sensing, Nanjing University of Information Science & Technology
- 2011-2015 Cross-appointed associate professor, School of Environment Studies, Queen's University
- 2008-2015 Tenured associate professor, Department of Geography, Queen's University
- 2009 (Mar.-July) Visiting professor, Institute of Remote Sensing Application/Centre for Earth Observation & Digital Earth, Chinese Academy of Sciences (CAS)
- 2002- 2008 Tenure-track assistant professor, Department of Geography, Queen's University
- 2001-2002 GIS Product Specialist, Environmental System Research Institute, Inc. Redlands, CA
- 1994-2000 Graduate Assistant, Department of Geography, San Diego State University
- 1999, 2000 GIS Assistant, California Institute of Transportation Safety, San Diego State University
- 1992-1994 Assistant Researcher, Institute of Remote Sensing Application, CAS

HONOURS-RESEARCH

- 2014 Shangdong Soft Science Excellence Award (3rd category)
- 2009 Canadian Foundation of Innovation Leaders Opportunity Fund Award
- 2009 Wan Kuancheng research award, Chinese Academy of Science
- 2004 John I. Davidson President's Award, American Society for Photogrammetry and Remote Sensing
- 2002 Finalist in the J. Warren Nystrom Dissertation Award Competition, AAG
- 2001 Best Student Paper Award, International Geographical Information Foundation Award, Worldwide Competition
- 1999 William & Vivian Finch Award for Remote Sensing, San Diego State University
- 1997 Outstanding Research in Human Geography Award, San Diego State University
- 1997 Travel award of UCGIS Summer Assembly, Maine, May 1997
- 1995-1998 Stephen and Mary Birch graduate fellowship

EXTERNAL RESEARCH FUNDING AND PROJECTS

1. 2021-2024 **NSERC network** grant. "Emerging Infectious Disease Modeling (EIDM) network". (Co-PI, PI: V.L. Murty at UT and J. Wu at York Univ.) (CAN\$3,000,000)
2. 2020-2022 **NSERC New Frontier** in Research Fund. "Developing new, real-time, community-based environmental DNA protocols for assessing freshwater ecosystem health". (Collaborator, PI: S. Lougheed at Biology) (CAN\$199,491)

3. 2020-2022 **CIHR Operating Grant** Canadian 2019 Novel Coronavirus (COVID-19) Rapid Research Funding. “Spatial and social patterning of COVID-19 prevention and transmission in Canada: Investigating the impacts of risk perception and preventive behaviour on individual activity space”. (PI, NPI: L. Wang at Ryerson Univ.) (CAN\$189,050)
4. 2020-2023 **Natural Resources Canada Research Affiliate Program (RAP)**. “Towards accurate monitoring of habitat disturbances in Canada: Implementing an AI approach to continuously monitoring caribou habitat changes.” (Supervisor) (CAN\$63,000)
5. 2019-2024 **NSERC Discovery** Grant. “Target based multiple-scale change detection from time series remotely sensed environmental data.” (PI) (CAN\$215,000)
6. 2019-2025 **NSERC CREATE** program. “LEaders in wAtER anD wAtERshed Sustainability (The LEADERS Project)”. (CAN\$1,650,000) (Co-PI, PI: B. R. Stephen at Chemistry)
7. 2019-2023 **CIHR Team** Grant. “A National Research Network on Lyme Disease”. (Collaborator, PI: K. Moore) (CAN\$4,300,000).
8. 2017-2018 Northwest Territories Cumulative Impact Monitoring program (CIMP187). “Vegetation productivity and phenology across the Bathurst caribou range”. (CAN\$37,000) (Co-Investigator, PI: Ryan Danby)
9. 2015-2016 **Ontario Centre of Excellence** VIP II grant. “Semi-automated tools for outlining forest resources and biomass from high resolution digital images.” (CAN\$133,000 + \$64,000 in-kind from industry) (PI)
10. 2015-2018 **China National Science Foundation** grant. “Effects of nitrogen deposition on CH₄ emissions from paddy fields in the south area of China based on remote sensing techniques.” (Co-Investigator with Prof. X. Zhang at Nanjing Univ.) (RMB \$840,000)
11. 2013-2019 **NSERC Discovery** Grant. “Methods and uncertainty modeling for land cover change detection from multi-resolution remotely sensed data.” (PI) (CAN\$155,000)
12. 2014-2016 collaborative research projects, Southern Ontario Smart Computing Innovation Platform (**SOSCIP**) Consortium. “Cloud enabled object-based feature extraction tools for high resolution remotely sensed images.” (PI) (CAN\$15000, plus cloud computing resource support).
13. 2013 **NSERC Interaction** Grant. “Object-based change detection for forest resources from high resolution digital images.” (PI) (CAN\$3,708)
14. 2013-2015 **MITACS** Elevated PDF funding. “Image-objects Manipulation Engine (IoME): semi-automated feature extraction from Very High Resolution (VHR) remotely sensed imagery.” (PI) (CAN\$114,000)
15. 2013-2016 **Canada Foundation for Innovation**, Infrastructure Operating Fund (PI) (CAN\$30,265)
16. 2012-2013 Open Research Fund of Key Laboratory of Digital Earth, Center for Earth Observation and Digital Earth, Chinese Academy of Sciences. “Fuzzy-set-based uncertainty analysis and modeling of multi-resolution image classification.” (PI) (RMB \$50,000)
17. 2011-2013 **PSI Health Research** Grant. “Rural well water contamination and human health: An investigation in Eastern Ontario.” (Co-Investigator with G. Evans and others at Queen’s) (CAN\$170,000 with my portion \$28,000)
18. 2010-2011 **NSERC Engage** Grant. “Developing feature extraction tools for time series of remotely sensed data.” (PI) (CAN\$25,000)
19. 2010 Geomatics for Informed Decision (**GEOIDE**), National Centre of Excellence. “Workshop on spatial and temporal dynamics of infectious diseases.” (CAN\$2,000) (workshop fund)
20. 2010 Public Health Agency of Canada (**PHAC**). “Workshop on spatial and temporal dynamics of infectious diseases.” (CAN\$9,000) (workshop fund)
21. 2010-2012 The **Cancer Research Society**. “Measuring traffic exposure and assessing environmental equity.” (Co-PI with K.J. Aronson at Queen’s) (CAN\$119,740)

22. 2010-2013 **Canada Foundation for Innovation** Leaders Opportunity Fund. “Establishing a Queen's Geocomputation and Analysis Laboratory for Public Health and Disease Modeling.” (PI) (CAN\$100,883).
23. 2010-2013 **Ontario Ministry of Research** and Innovation. “Establishing a Queen's Geocomputation and Analysis Laboratory for Public Health and Disease Modeling.” (PI) (CAN\$100,883).
24. 2010-2011 Southeastern Ontario Academic Medical Association, **AHSC AFP innovation** grant. “Access to primary care services after hours and during regular office hours and utilization of external health care resources.” (Co-PI with M. Green and others at Queen’s Univ.) (CAN\$97,000)
25. 2008-2013 Geomatics for Informed Decision (**GEOIDE**), National Centre of Excellence. “CODIGEOSIM project: Geosimulation tools for simulating spatial-temporal spread patterns and evaluating health outcomes of communicable diseases.” (Co-PI with Profs. J. Wu at York Univ. and M. Bernard at Lavel Univ.) (CAN\$860,000 with my portion \$205,000)
26. 2009-2012 Public Health Agency of Canada (**PHAC**) “Spatial and Environmental Analysis of West Nile Virus in Ontario.” (PI) (CAN\$20,000)
27. 2008-2013 **NSERC Discovery** Grant. “Muti-scale classification error and uncertainty modeling on categorical maps from remote sensing.” (PI) (CAN\$75,000)
28. 2008-2009 **Ontario Centre of Excellence**. “Geosimulation tools for simulating spatial-temporal spread patterns of infectious diseases.” (PI) (CAN\$50,000)
29. 2009-2010 Public Health Agency of Canada (**PHAC**) disease surveillance grant, “Development of a spatial framework to enhance chronic disease surveillance.” (PI with C. Arden at York) (CAN\$109,000 with my portion \$57,000)
30. 2005-2006 Ontario Ministry of Environment (**OME**) **Best in Science** Program. “Improving the mapping of pollutant concentration across Ontario by combing satellite-based and ground-based measurements.” (PI) (CAN\$12,500)
31. 2003-2008 **NSERC Discovery** grant. “Development and evaluation of multi-resolution classification framework and error models for land cover mapping.” (PI) (CAN\$74,500)
32. 2003-2005 Kingston Economic Development Corporation. “Geospatial/statistical analysis of Kingston social and economic data.” (PI) (CAN\$12,300)

INTERNAL RESEARCH FUNDING:

1. 2002, Queen’s University, Research Initiation Grant. (CAN\$80,000)
2. 2002, Queen’s Travel Award, (CAN\$750)
3. 2002-03, Queen’s Academic Research Council, “An integrated remote sensing and GIS method for measuring, analyzing, and modeling urban structure changes in the Greater Toronto Area.” (CAN\$8,000), Research
4. 2003-04, Queen’s Academic Research Council, “Development and evaluation of multi-scale analysis methods for earth observation data.” (CAN\$10,000), Research
5. 2003, Queen’s Chancellor Richardson Memorial Fund, (CAN\$5,000), Teaching (Co-PI with Paul Treitz)
6. 2006-07, Queen’s ARC, (CAN\$9,000), Research (Co-PI with Neal Scott)
7. 2009. Queen’s Faculty of Arts and Science. Matching fund for CFI award. (CAN\$17,600). Research
8. 2020. Queen’s Wicked Idea Competition. “Big data exposed: What smartphone metadata reveals about users”. (CAN\$75,000) (Collaborator, PI: David Lyon, T. Cooke, D. Cohen, S. Dahan)

COURSES TAUGHT:

GPHY 849*: Seminar in Geographic Information Science
 GPHY 855*: Spatial Analysis

GPHY 249*/GPHY344*: Cartography and thematic mapping
 GPHY 349*: Geographic Information System
 GPHY346*/GIS 302*: Environmental Modeling
 GPHY345*: Spatial Analysis
 GPHY348*/GIS 303*: Application design and customization in GIS

PUBLICATIONS: *Peer-reviewed journal papers: 92; Edited books: 3; Book Chapters: 21; Full paper in Conference Proceedings: 25; Technical reports: 8; Conference Presentations/posters:>90*

REFEREED JOURNAL ARTICLES (Names highlighted are my HQPs and myself, Names in *Italic* are visiting researchers/collaborators in my lab)

1. **S. E. Jozdani, D. Chen**, W. Chen, S. G. Leblanc, J. Lovitt, L. He, R. H. Fraser, B. A. Johnson. 2021. Evaluating Image Normalization via GANs for Environmental Mapping: A Case Study of Lichen Mapping Using High-Resolution Satellite Imagery. *Remote Sensing*. 13(24), 5035. <https://doi.org/10.3390/rs13245035>
2. X. *Ouyang*, **D. Chen**, S. Zhou, R. Zhang, J. Yang, G. Hu, Y. Dou and Q. Guo. 2021. A slightly temperature warming trend occurred over Lake Ontario from 2001 to 2018. *Land*, 10, 1315. <https://doi.org/10.3390/land10121315>.
3. **S. Hutasavi, D. Chen**. 2021. Estimating District-level Electricity Consumption Using Remotely Sensed Data in Eastern Economic Corridor, Thailand. *Remote Sensing*. 13(22), 4654. [10.3390/rs13224654](https://doi.org/10.3390/rs13224654)
4. *L. Wang, J. Yu, D. Chen, L. Yang*. 2021. Relationships among COVID-19 prevention practices, risk perception and individual characteristics: A temporal analysis. *International Journal of Environmental Research and Public Health*. 18, 10901. DOI: 10.3390/ijerph182010901.
5. **S. E. Jozdani, D. Chen**, W. Chen, S. G. Leblanc, C. Prévost, J. Lovitt, L. He; B. A. Johnson. 2021. Leveraging Deep Neural Networks to Map Caribou Lichen in High-Resolution Satellite Images based on a Small-Scale, Noisy UAV-Derived Map. *Remote Sensing*, 13, 2658. Doi: 10.3390/rs13142658
6. **M. Burnett** and **D. Chen**. 2021. The Impact of Seasonality and Land Cover Distribution on the Consistency of relationship between Air Temperature and Land Surface Temperature Derived from Landsat 7 and MODIS at a Local Scale: A Case Study in Southern Ontario. *Land*, 10, 672. DOI:10.3390/land10070672. (**Editor's choice paper**)
7. **H. Yao** and **D. Chen**. 2021. Comparison of Apportionment Methods for Assigning Trip Data to Rezoned Traffic Analysis Zones: A Case Study of Toronto, Canada. *The Canadian Geographer*. 65(3):321-332. DOI: 10.1111/cag.12675.
8. **X. Wang**, P. Du, **D. Chen**, S. Liu, E. Li, W. Zheng. 2020. Change detection based on low-level to high-level features Integration with limited labeled samples. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*. 13:6260-6276. Doi:10.1109/JSTARS.2020.3029460
9. **X. Wang**, P. Du, **D. Chen**, C. Lin, H. Zheng, S. Guo. 2020. Characterizing urbanization-induced land surface phenology change from time-series remotely sensed images at fine spatio-temporal scale: A case study in Nanjing, China (2001-2018). *Journal of Cleaner Production*. 274:122487. Doi: [/10.1016/j.jclepro.2020.122487](https://doi.org/10.1016/j.jclepro.2020.122487)
10. XY. Zhang, L. Zhao, J. Xu, **D. Chen**, X. Wu, M. Cheng. 2020. Declining precipitation acidity from H2SO4 and HNO3 across China inferred by OMI products. *Atmospheric Environment*. 224:117359. Doi: [10.1016/j.atmosenv.2020.117359](https://doi.org/10.1016/j.atmosenv.2020.117359).
11. XY. Zhang, M. Cheng, L. Zhao, **D. Chen**. 2020. Estimating ground-level ozone concentrations in eastern China using satellite-based precursors. *IEEE Transactions on Geoscience and Remote Sensing*. 58(7):4754-4763. Doi: 10.1109/TGRS.2020.2966780.

12. P. Du, X. Wang, D. Chen, S. Liu, C. Lin, Y. Meng. 2020. Change Detection Approach Using Tri-temporal Logic-verified Change Vector Analysis. *ISPRS Journal of Photogrammetry and Remote Sensing*, 161:278-293.
13. S.E. Jozdani, D. Chen. 2020. On the versatility of popular and recently proposed supervised evaluation metrics for segmentation quality of remotely sensed images: An experimental case study of building extraction. *ISPRS Journal of Photogrammetry and Remote Sensing*. 160:275-290.
14. XY. Zhang, L. Zhao; M. Cheng; X. Wu; D. Chen. 2020. Urban ozone sink inferred from surface measurements in China. *Journal of Cleaner Production*. 253:119881. doi: [10.1016/j.jclepro.2019.119881](https://doi.org/10.1016/j.jclepro.2019.119881)
15. Y. Feng; D. Chen; X. Zhao. (2019). Impact of Aerosols on Terrestrial Gross Primary Productivity in North China using an Improved Boreal Ecosystem Productivity Simulator with Satellite-based Aerosol Optical Depth. *GIScience and Remote Sensing*. 57(2):258-270. doi: 10.1080/15481603.2019.1682237.
16. X.H. Zhang, Fan Xu, Yang He, X. Li, D. Chen, G. Wang, I. Shi. 2019. Estimation of Corn Chlorophyll Content Using Derivative Spectra in the O2–A Absorption Band. *Frontiers in Plant Science*, section Technical Advances in Plant Science. 10:1047. doi: 10.3389/fpls.2019.01047.
17. S.E. Jozdani, B.A. Johnson, and D. Chen. 2019. Comparing deep neural networks, ensemble classifiers and support vector machine algorithms for object-based urban land use/cover classification. *Remote Sensing*. 11, 1713; doi:10.3390/rs11141714.
18. Song, M., Chen, D., Woodstock, K., Z. Zhang, Y. Wu (2019). A RP-MCE-SOP Framework to China’s County Level “Three-space” and “Three-line” planning – An integration of rational planning, multi-criterial evaluation, and spatial optimization.” *Sustainability*, 11, 2997; doi:10.3390/su11112997.
19. M. D. Hussain and D. Chen. 2019. Segmentation for Object-based Image Analysis (OBIA): A review of algorithms and challenges from remote sensing Perspective. *ISPRS Journal of Photogrammetry and Remote Sensing*. 150:115-134. **(The chief-editor-recommended paper)**
20. Y. Feng; D. Chen; Xinyi Zhao. (2019). Empirical Models to Estimate Daily and Monthly Direct and Diffuse Radiation in North China during 2000-2016. *Progress in Physical Geography: Earth and Environment*, 43(1):80-94.
21. X. Ouyang, D. Chen, Y. Feng and Y. Lei. 2019. Comparison of seasonal land surface temperature trend, spatial variability and its elevation dependency from satellite-based products and numerical simulated outputs over Tibetan Plateau from 2003-2011. *International Journal of Remote Sensing*. 40(5-6): 1844-1857. DOI: 10.1080/01431161.2018.1482024
22. Y. Feng, D. Chen, X. Zhao, 2019. Estimated Long-term Variability of Direct and Diffuse Radiation in North China during 1959-2016. *Theoretical and Applied Climatology*. 137:153-163. DOI: [10.1007/s00704-018-2579-1](https://doi.org/10.1007/s00704-018-2579-1).
23. Y. Feng, D. Chen and Xuehong Zhang 2019. Atmospheric aerosol pollution across China: a spatio-temporal analysis of satellite-based aerosol optical depth during 2001-2016. *International Journal of Digital Earth*. 12(7): 843-857. DOI:10.1080/17538947.2018.1486892.
24. X. Zhang, X. Chuai, L. Liu, W. Zhang, X. Lu, L. Zhao and D. Chen, 2018. Decadal trends in wet sulfur deposition in China estimated from OMI SO2 columns. *Journal of Geophysical Research: Atmospheres*. 123 (18):10796-10811. DOI:10.1029/2018JD028770.
25. Y. Feng, D. Chen, X. Ouyang, X. Zhang 2018. Variability of Satellite-based Total Aerosol Concentration and its Relationship with Meteorology, Emission and Landscape in North China during 2000-2016. *Environmental Earth Sciences*. 77(13):499. DOI: [10.1007/s12665-018-7685-y](https://doi.org/10.1007/s12665-018-7685-y).
26. M. Song and D. Chen. 2018. An improved knowledge-informed NSGA-II for multi-objective land allocation (MOLA). *Geo-spatial Information Science*. 21(4): 273-287.
27. XY. Zhang, W. Zhang, X. Lu, X. Liu, D. Chen, L. Liu and X. Huang. 2018. Long-term trends in NO2 columns related to economic developments and air quality policies from 1997 to 2016 in China. *Science of The Total Environment*, 639 (15):146–155.

28. X. Ouyang, **D. Chen**, Yonghui Lei. 2018. A generalized evaluation scheme for comparing temperature products from satellite observations, numerical weather model, and ground measurements over the Tibetan Plateau. *IEEE Transaction in Geoscience and Remote Sensing*. 56(7): 3876-3894.
29. **M. Song** and **D. Chen**. 2018. A comparison of three heuristic optimization algorithms for solving the multi-objective land allocation (MOLA) problem. *Annals of GIS*.
<https://doi.org/10.1080/19475683.2018.1424736>.
30. XY. Zhang, **D. Chen**, L. Liu, L. Zhao and W. Zhang 2017. Effect assessment of NO_x and SO₂ control policies on acid components in precipitation from 2005 to 2016 in China based on satellite monitoring. *Atmospheric Chemistry and Physics. Discuss.*, <https://doi.org/10.5194/acp-2017-770>.
31. XY Zhang; X. Lu, L. Liu; **D. Chen**; X. Zhang; X. Liu; Y. Zhang. 2017. Dry deposition of NO₂ over China inferred from OMI columns and atmospheric chemistry transport model over China. *Atmospheric Environment*. 169:238-249.
32. L. Liu, XY. Zhang, W. Xu, X. Liu, X. Lu, **D. Chen**, X. Zhang, S. Wang, W. Zhang. 2017. Estimation of monthly bulk nitrate deposition in China-based satellite NO₂ measurement by the Ozone Monitoring Instrument. *Remote Sensing of Environment*. 199(15):93-106.
33. XH. Zhang, P.M. Treitz, **D. Chen**, C. Quan, L. Shi, X. Li. 2017. Mapping mangrove forests using multi-tidal remotely sensed data and a decision tree-based procedure. *International Journal of Applied Earth Observation and Geoinformation*. 62:201-214.
34. **A. Cheng**, **D. Chen**, K. Woodstock, N.H. Ogden, X. Wu, J. Wu. 2017. Analyzing the potential risk of climate change on lyme disease in Eastern Ontario, Canada using time series remotely sensed temperature data and tick population modeling. *Remote Sensing*, 9(6), 609; doi:10.3390/rs9060609.
35. X. Ouyang, **D. Chen**, S-B Duan, Y. Lei, Y. Dou, G. Hu. 2017. Validation and analysis of long-term AATSR land surface temperature product in the Heihe River Basin, China. *Remote Sensing*. 9, 152. d:10.3390/rs9020152.
36. **J. Yu**, **D. Chen**, Y. Lin, and **S. Ye**. 2017. Comparison of linear and nonlinear spectral unmixing approaches: a case study with multispectral TM imagery. *International Journal of Remote Sensing*. 38(3):773-795. Doi:10.1080/01431161.2016.1271475.
37. T. Zhong, **D. Chen**, X. Zhang. 2016. Identification of potential sources of Mercury (Hg) accumulations in farmland soil using a decision tree method in China. *International Journal of Environmental Research and Public Health*, 13(11), 1111; doi:10.3390/ijerph13111111.
38. **D. Chen**, Y. Feng, X. Zhang. 2016. Comparison of Variability and Changing Rate in Tropospheric NO₂ Column Obtained from Satellite Products across China during 1997-2015. *International Journal of Digital Earth*. Doi:10.1080/17538947.2016.1252435.
39. S. Wang, T. Zhong, **D. Chen** and X. Zhang. 2016. Spatial Distribution of Mercury (Hg) Concentration in Agricultural Soil and Its Risk Assessment on Food Safety in China. *Sustainability*, 8, 795; doi: 10.3390/su8080795
40. **Y. Su**, **D. Chen** and **J. Yu**. 2016. A targeted change-detection procedure by combing change vector analysis and post-classification approach. *ISPRS Journal of Photogrammetry and Remote Sensing*, 114:115-124
41. **A. Rosu** and **D. Chen**. 2016. An improved approach for geocoding Canadian postal code-based data in health related studies. *The Canadian Geographer*, 60(2):270-281. DOI: 10.1111/cag.12262
42. **E. Yoo**, **D. Chen**, C. Diao and C. Russell. 2016. The effects of weather and environmental factors on West Nile virus mosquito abundance in Greater Toronto Area. *Earth Interactions*. 20(3): 1-22
43. XY. 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.
44. **Su, Ye, D. Chen**. 2015. An Unsupervised Change Detection Procedure for Multispectral Remotely Sensed Images. *Photogrammetric Engineering and Remote Sensing*. 81(8):13-22

45. 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/clen.201400569.
46. 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.
47. **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*, 60(2):386-401. doi: 10.1002/lno.10036.
48. **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.
49. **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.
50. 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.
51. **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.
52. **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.
53. **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).
54. **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
55. **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
56. **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.
57. **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. **(one of the most cited papers in the journal)**
58. 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.
59. **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.
60. **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
61. 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*. May 2013:929-941. doi: 10.1175/JTECH-D-12-00104.1.

62. **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.
63. *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)
64. *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.
65. **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.
66. **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.
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2. **Gu, F., Liu, W.,** and **D. Chen** (2013). *Research on Dynamics of Urban Land Use Change Patterns*. Xian JiaoTong Univ. Press. (In Chinese), 167p.
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2. Hussain, M., and D. Chen. 2018. Building-Level Change Detection from Large-Scale Historical Vector Data by Using Direct and a Three- Tier Post-classification Comparison. in O. Gervasi et al. (Eds.): *Computational Science and Its Applications – ICCSA 2018, LNCS 10962* proceedings. pp. 1-17. https://doi.org/10.1007/978-3-319-95168-3_20.
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22. **Chen, D.**, A Multi-resolution analysis and classification framework for improving land use/cover mapping from earth observation data. *Proceeding of International Society of Photogrammetry and Remote Sensing Congress*, Istanbul. July 2004
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3. **L. Wang,** , S. Stalker, C.I. Ardern, S. Hoetmer, W. Kou, P. Simmons, S. Cholewa, and **D. Chen.** 2012. *Development of a Spatial Framework to Enhance Cardiovascular Disease Surveillance*. A final report submitted to Public Health Agency of Canada [Project 6271-15-2008/3970757]. 49p.
4. **Tian, J., D. Chen** and D. McGuinness. 2006. *Spatial-temporal cluster detection approaches in the syndromic surveillance system*. Reported to Queen's University Emergency Syndromic Surveillance Team, KFL&A Public Health Unit.
5. **Hartrick, T.E.** and **D. Chen.** 2005. *A comparison of the quality of life indicators derived from 1991, 1996, and 2001 Statistical Canada Census data for census tracts in the Kingston CMA*.
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8. **Chen, D.**, and A. Getis. 1998. "Point Pattern Analysis." a package for spatial point pattern analysis, Department of Geography, SDSU.

INVITED COLLOQUIA AND SYMPOSIA

- 2019. Statistic Canada
- 2018. Nanjing University of Information Technology and Engineering
- 2018 Peking University
- 2017. Department of Land Surveying and Geo-Information, the Hong Kong Polytechnic University
- 2017. School of Public Health, Shandong University
- 2016. China Eastern Normal University &CPGIS
- 2016. Chinese Agriculture Bureau, Foreign affairs
- 2015. Nanjing University
- 2013. Henan University of Science and Technology
- 2011. Institute of Space and Earth Information Science, Chinese Hong Kong University
- 2010. Nanjing Normal University
- 2010. Niagara College
- 2010. Department of Geography, University of Western Ontario
- 2009. Graduate school of Chinese Academy of Science
- 2009. Institute of Remote Sensing Application, Chinese Academy of Science.
- 2009. Institute of Geography and Nature Resource, Chinese Academy of Science
- 2009. School of Medicine, Fudan University

- 2009. School of Geography & Earth Science, McMaster University
- 2008. Queen's Computer Science and Engineering Colloquium
- 2008. Graduate school of Chinese Academy of Science
- 2007. Disease Centre, York University
- 2007. Department of Community Health and Epidemiology, Queen's University
- 2006. GIS day, Department of Geography, Queen's University
- 2006. Institute of Remote Sensing Application, Chinese Academy of China.
- 2006. Ontario Police College
- 2002. Department Seminar. Department of Geography, Queen's University.
- 2002. Advanced Image classification. Graduate school of Chinese Academy of Science.
- 2001. Supercomputing Center, University of California at San Diego.
- 2001. Department of Geography, University of Texas at Austin.
- 2001. Department of Geography, San Diego State University.

GRADUATE AND OTHER SUPERVISIONS

HQP Supervisions

Completed: 7 Ph.Ds, 20 MSc, 4 PDFs, 1 Technician, 26 undergraduates

In Progress: 4 Ph.Ds, 2 MSc., 2 undergraduate

Other Supervision and examining committee member: 28 Ph.Ds, 15 Masters

Masters

- Hui Wei (M.S. completed in 2007, hired by ESRI as a GIS specialist)
- Jamie FitzGibbon (M.S. completed in 2006, Hired by the Optech Company)
- Jianhui Chen (M.S. co-supervised, completed in 2008, Hired by Ontario Hydro as a database analyst)
- Frank Wen (M.S. completed in 2012. Hired by Engineering Seismology Group, Kingston as a product engineer)
- Jessica Stortz (co-supervised M.Sc., completed in 2012, Community Health and Epidemiology) (currently a researcher coordinator at UBC)
- Angela, Cheng (M.Sc., 2011-2015) (Geospatial and remote sensing analyst, Environment Canada, Ottawa, Ontario)
- Harkiran Kaur (M.Sc. in Environmental Studies, co-supervised with G. Whitelaw, 2011.9-2015.1)
- Andrei Rosua (M.Sc. completed in 2014.12) (GIS technician at Natural Resource Canada)
- Nicki Kwon (co-supervised M.Sc. 2013-2015.2)
- Su Ye (M.Sc completed in 2015.6. Environmental Studies)
- Andy Chen (M.Sc, 2014, withdraw)
- Jie Yu (co-supervised visiting Ph.D. from Tongji Univ. China, 2014-2015)
- Jingyi Liu (Co-supervised M.Sc, 2015.9-2018.1, Data analysis at GE Electric Ltd.)
- Alex Boone (M.Sc. in progress, 2015.9-) (GIS analyst at GHD Inc, in Mississauga)
- Katherine Woodstock (M.Sc, 2016.9-2019.4. Data analyst, Yukon Government)
- Caua Guilherme Miranda (Visiting M.Sc. from Univ. of Campinas, 2017.1-2017.7)
- Christopher Radford (M.Sc, completed in 2020.6)
- Matthew Senyshen (M.Sc., completed in 2020.12)
- Michael Burnett (M.Sc. completed in 2021.4)
- Kirsten Noltie (M.Sc., 2018.9-)
- Jiahang Yin (M.Sc, 2021.9-)

PH.D

- Jie Tian (Ph.D. completed in 2009). Hired by University of Illinois at Urbana-Champaign as a visiting assistant professor, now tenure-tracked at Clark University)
- Wenbao Liu (Ph.D., completed in 2012) (Faculty member at Shandong Technology University)
- Grace Miao (Ph.D. completed in 2013, co-supervised with K.J. Aronson. Hired by Queen's Hospital as a researcher)
- Peter Luciani (Ph.D. in progress, 2006-) (GIS specialist at City of Mississauga)
- Mingjie Song (Ph.D., 2013.9-2018.3) (faculty member at Huazhong Normal University)
- Hong Yao (Ph.D. in progress, 2012-)
- Feng Yao (Ph.D., 2015.9-2019.5) (Postdoc at The institute of Geography and Natural Resource, CAS)
- Mohammad Hossain (Ph.D., in progress, 2017.1-)
- Sirikul Hutasavi (Ph.D., in progress, 2017.1-)
- Shahab E. Jozdani (Ph.D, 2019.1-)
- Bruna Cristina Gallo (Visiting Ph.D. from Univ. of Campinas. 2019.1 -2019.7)
- Xin Wang (Visiting Ph.D. student from Nanjing Univ, 2019.9-2020.9)
- Kirsten Noltie (Ph.D., 2020.9-)

Serving in graduate examining committee:

- | | |
|--|-------------------|
| • Nawei Chen (Ph.D.) Computer Science, Queen's, 2005) | External examiner |
| • Laura Chasmer (Ph.D.) Geography, Queen's, 2006-2008) | Internal examiner |
| • Jack Cockburn (Ph.D.) Geography, Queen's, 2005-2007) | Internal examiner |
| • Jessica Tomkins (Ph.D.) (Geography, Queen's, 200) | Head's delegate |
| • Margot Hessing-Lewis (M.S.) Geography, Queen's) | Head's delegate |
| • Sharon Lithwick (M.A.) (SURP, Queen's) | External examiner |
| • Baining Liu (M.S.) (Computing, Queen's, 2008) | Internal/External |
| • Jeff Row (Ph.D.) (Biology, Queen's; 2008-2009) | Internal/external |
| • Karin Van Ewijk (Ph.D.) (Geography, Queen's, 2007-2008) | Internal |
| • Cheng Yang (Ph.D.) (Geography, Queen's, 2008-2010) | Head's delegate |
| • Jasmine Chu (MPhil) (Geography, The Univ. of Queensland, 2010) | External assessor |
| • Barbara Carra (Ph.D.) (Geog&Envir. Studies, Wilfred Laurier Univ., 2012) | External Examiner |
| • Kirby Calvert (Ph.D.) (Geography, Queen's, 2011-2013) | Head's delegate |
| • Jie Yu (M.A.) (Geography, Queen's, 2012-2015) | Internal examiner |
| • Daniel Lamhonwah (Ph.D.) (Geography, Queen's, 2012-2014) | Head's delegate |
| • Katherine Dearborn (Ph.D.) (geography, Queen's, 2014-2015) | Internal examiner |
| • Mingzhi Qu (Ph.D.) (Biology, Queen's, 2014-2017) | Internal/external |
| • Vivian Wasiuta (Ph.D.) (Geography, Queen's, 2014) | Head's delegate |
| • Mustafiz Rahman (Ph.D.)(Geography, Univ. of Calgary, 2014) | External examiner |
| • Xiao Xu (Ph.D.) (Geography, Univ. of Waterloo, 2015) | External examiner |
| • Chen Shang (Ph.D.) (Geography, Queen's, 2015-2018) | Internal examiner |
| • Mengqi Yang (Ph.D.) (Geography, Queen's, 2015-2017) | Head's delegate |
| • Juanxia He (Ph.D.) (Geography, Univ. of Ottawa, 2015) | External examiner |
| • Yifei(Effie) Chen (M.S) (Geography, Univ. of Waterloo, 2016) | External examiner |
| • Nash Amoh (M.S.) (Mining, Queen's, 2016) | External examiner |
| • Ashton Taylor (M.S.)(Geography, Queen's, 2016) | Head's delegate |
| • Nanfeng Liu (Ph.D.) (Geography, Queen's, 2013-2017) | Internal examiner |

- Steve Anderson (M.S.)(Biology, Queen's, 2017-2018) External examiner
- Nathan Manion (Ph.D) (Geography, Queen's, 2017) head's delegate
- Mitchell Bonney (M.S.) (geogrpahy, Queen's, 2017) head's delegate
- Jian Yang (Ph.D) (Geography, Univ. of Toronto, 2017) External Appraiser
- Emma Webb(M.S.)(geography, Queen's, 2017) Head's delegate/chair
- Michael Pope (M.S.)(geography, Queen's, 2017) Head's delegate/chair
- Nanor Momejian (Ph.D)(geography, Queen's, 2018) Chair
- Jessica Rich(Ph.D) (Education, Queen's, 2018) Chair
- Allen Tian (MSc.) (Biology, Queen's, 2019) Internal/external
- Valerie Freemantle (MSc) (Geography, Queen's, 2019) Head's delegate/chair
- Mike Dungey (MSc.) (Biology, Queen's, 2019) Internal/external
- Li Yuan (Ph.D) (Geography, Queen's, 2019-) Internal
- Ioannis Farmakis (Ph.D)(Geology, Queen's, 2019-) Internal/external
- Mark Ouseley (Ph.D) (Geography, Queen's, 2019-) Head's delegate
- Emily Su (MSc.) (Geography, Queen's, 2020-) Internal
- Ming Liu (Ph.D)(Geography, Univ. of Waterloo, 2020) External examiner
- Charlene Monaco (Geography, Queen's, 2021-) Internal examiner
- Evan Koncewicz (Geography, Queen's, 2021) Head's delegate/chair
- Szaroz Daniel (Ph.D)(School of Public Health, Univ. of Montreal, 2021) External examiner

INTERNAL SERVICE

- Associate Head (2019-2021)
- Graduate Committee (2004-2005, 2009-2013, 2014-2021)
- Undergraduate Committee (2006-2007, 2013-2014)
- Renewal, Tenure and Promotion Committee (2011-2012, 2013-2014)
- Library Committee (2011-2012)
- Computing Committee (2002-2005, 2007-2008)
- Hiring committee (2009-2010)
- Session hiring committee (2004-2005, 2014-2016)
- Nominating committee (2012-2013, 2015-2016)
- Visiting speakers committee (2007-2008, 2018-2019, 2021-2022)
- GIS committee (2006-2007)
- GIS career talks and event for GIS DAY (2013, 2014, 2016, 2017, 2019)

IN-CAMPUS Service

- Graduate Council (2018-2019, 2019-2020)
- Graduate School Scholarship committee (2016-2017)
- Arts and Science Curriculum review committee (2014-2015)
- Arts and Science Board of Studies (2019-2022)
- Senate (2005-2008)
- Academic research committee of Water Research Center (2005-present)
- An administrative team member for Computational Science and Engineering specialization (2004-2010)
- Major entering Award review (2009, 2011, 2013, 2017)
- Joint-degree program plan between Queen's Environmental Studies and Tongji University, China (2013 to present)

- Chair more than 20 thesis and qualifying exams in Geog. Computer science, Business school, Biology, SURP, etc.

EXTERNAL SERVICE

Reviewer of Grant Proposals for

- CIHR operating grants
- NSERC Discovery, strategic and I2I grants,
- Georgia Science Foundation,
- US National Science Foundation grant,
- MITACS accelerate PDF and GlobalLink grants,

Reviewer of Journal Articles

Remote Sensing of Environment, International Journal of Remote Sensing, The international Journal of Plant Sciences, Photogrammetric Engineering and Remote Sensing, The Annals of the Association of American Geographers, Geomatica, The Canadian Geographer, Journal of Landscape and Urban Planning, , the ISPRS Journal of Photogrammetry and Engineering, Professional Geographer, , Geographical Analysis, IEEE Transactions on Geoscience and Remote Sensing, GeoJournal, Journal of Environmental Management, Journal of Environmental Informatics, Environmental modeling and assessment,, The open Journal of geography, Geographical Analysis, International Journal of Geographical Information Science, The Open Remote Sensing Journal, Atmospheric Research, IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing. The Canadian Remote Sensing Journal, BMC Public Health, the Canadian Geographer.

Book Review:

- Spatial Database Management by A.K.W. Yeung and G.B. Hall. 2007. Springer. 553p.
- The SAGE Handbook of Spatial Analysis by A. Stewart and Peter A. Rogerson. 2009. SAGE Pub. 511p.
- Remote Sensing of Land Use and Land Cover: Principles and Applications, by Chandra P. Giri (ed.), 2012, CRC Press. 477p.

Editorial Board Member

- *Canadian Geographer* (2019- present)
- Guest editor in Special issue for *International Journal of Applied Earth Observation and GeoInformation* (2018, 2021).
- *The Open Geography Journal* (2008-2015),
- *Geoinformatics & Geostatistics: An Overview* (2009-present)
- *the International Journal of Geoscience* (2011)

The Ontario Graduate Scholarship (OGS) panel chair (2005, 2006, 2007, 2011)

Members of organizing and program committee of conferences

- International Conference on Environmental Informatics, 2005
- International conference on GeoInformatics 2005
- Canada Spatial Knowledge and Information 2014, 2015, 2017
- EORSA 2018
- IGRASS 2018
- IGRASS 2016

Organizer and chair of research network and workshops:

- One of the key organizers of the researcher network of spatial-temporal disease analysis and modeling in Canada during 2007-2013.
- Co-chair of the workshop on spatial-temporal modeling of infectious disease, Sept. 11-12, 2008. Toronto

- One of three organizers of the PHAC/GEOIDE/MITACS joined workshop on mathematical modeling and geosimulation for disease spread, Feb. 17-18, 2009. Ottawa.
- Organizer and chair of the PHAC/GEOIDE/MITACS workshop on spatial and temporal dynamics of zoonotic diseases in Aug. 2010, Toronto.
- One of four organizers of the workshop on *statistical methods for geographic and spatial data in the management of natural resources* for the National Institute on Complex Data Structures in March 2010, Montreal.

Tenure and renewal reviewer

- University of Toronto, Toronto, Canada
- Ohio State University, US
- Peking University, China
- Clark University, US
- University of Massachusetts, US
- University of Toronto, Mississauga, Canada

Consulting

- Academic reviewer, BA/BS in Geography program at Algoma University. March 2016.
- The international expert team member and researcher for the Centre for Earth Observation & Digital Earth, Chinese Academy of Sciences. 2009-2010.
- Kingston Economic Development Corporation. “*Geospatial/statistical analysis of Kingston social and economic data.*” 2004-2005.
- City of Oakville. Review on UFORE project. 2007.
- K&LFC Public Health. “*The impact of privacy on disease outbreak detection from syndromic surveillance.*” 2007. 2008, 2009
- K&LFC Public Health. “*Aberration detection for disease outbreak from syndromic surveillance.*” 2008-2009.
- Public Health Agency of Canada. “*WNV Mosquito surveillance data analysis in Ontario*” 2009.
- 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.*” with Novus Environmental Ltd. 2011.
- International researcher for the research project “*Water quality monitoring from multi-satellite observation in the coastal region of Hong Kong and the Pearl River estuary*” supported by Hong Kong Research Grants Council. 2010-2012
- K&LFC Public Health. “*Spatial and temporal analysis of Lyme tick submissions.*” 2012.
- Eastern Ontario Public Health. GIS setting up and needs at EOPH. 2013.
- Ontario Ministry of Health and Long-Term Care. “*Evaluating primary health care services for Ontario women by LHIN.*” 2006
- Ontario Ministry of Health and Long-Term Care. “*Lyme risk analysis in Eastern Ontario.*” 2013.
- Public Health. “*Remote sensing of ground heat.*” 2014.
- Statistics Canada. “*Object-based buildings extraction and detection from multispectral remotely sensed images.*” 2018/05-2019/01.