

Nirupama Agrawal

## CURRICULUM VITAE

Nirupama Agrawal  
Associate Professor  
Disaster and Emergency Management  
School of Administrative Studies  
Faculty of Liberal Arts & Professional Studies  
York University

September 2018

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## **EDUCATION**

- DEng, Water Resources Engineering, Kyoto University, Japan, 1996
- Master in Hydrology, Indian Institute of Technology Roorkee, India, 1991
- M.Sc. Statistics, Indian Institute of Technology Kanpur, India, 1981

## **PROFESSIONAL CERTIFICATES**

- Associate Business Continuity Professional, DRI Canada, April 2008.
- Wild Fire Smart, Manitoba Emergency Services, Brandon, October 2003.

## **EMPLOYMENT HISTORY**

- Associate Professor, tenured, School of Administrative Studies, York University, Canada, July 2007 – present.
- Assistant Professor (tenure track), School of Administrative Studies, York University, Canada, July 2005- June 2007.
- Adjunct faculty, Institute of Natural Resources, University of Manitoba, Winnipeg, 2004-2006.
- Assistant Professor (tenure track), Department of Applied Disaster & Emergency Studies, Brandon University, Canada, August 2003 – June 2005.
- Sessional Instructor, Department of Civil Engineering, University of Western Ontario, Canada, September 2002 – December 2002.
- Postdoctoral Fellow, Department of Civil & Environmental Engineering, University of Western Ontario, Canada, October 2000 – August 2002.
- Senior Consultant, Water and Land Management Institute, Lucknow, India, June 1999 – June 2000.
- Scientist, Roorkee University, Council of Scientific and Industrial Research (CSIR), India, December 1996 – May 1999.
- Senior Research Assistant, National Institute of Hydrology, Roorkee, India, May 1983 – September 1992.

## **RESEARCH AREAS**

- Disaster risk management and mitigation
- Natural disasters: physical dynamics and causes
- Geo-Information systems for disaster simulation using Geographic Information System (GIS)
- Engaging public for resilience and capacity building
- Business continuity planning and disaster recovery
- Multi-criteria, multi-objective decision making support systems using GIS, remote sensing techniques, and fuzzy mathematics.

## RESEARCH FUNDING

### External Funding

- 2016-2017 Integrated Approach for Resilience Estimation and Disaster Risk Reduction, *Natural Sciences and Engineering Research Council of Canada (NSERC) - Collaborative Research and Training Experience (CREATE)* - Advanced Disaster, Emergency and Rapid-response Simulation (ADERSIM). (with Slobodan Simonovic, Western University – Principal Investigator), \$32,000.
- 2015 Quantitative Resilience Simulator – ResilSIM, *NSERC CREATE ADERSIM* (with Slobodan Simonovic, Western University – Principal Investigator), \$8,500.
- 2015 Advanced Disaster, Emergency and Rapid-response Simulation (ADERSIM), Canada Foundation for Innovation (CFI) grant (co-applicant with J. Wu as PI), \$1.65 million over 6 years for the development of a disaster simulation facility at York University.
- 2014 *Social Science and Humanities Research Council of Canada (SSHRC)* Partnership Grant, Co-applicant (David Etkin, Principal Investigator), \$25,000.
- 2012 Engaging public for building community resilience, *SSHRC Small Grants*, \$1,500.
- 2012 *Canadian Institute of Health Research (CIHR)*, (Collaborator with Dr. Brian Schwartz as Principal Investigator), Public Health Ontario, \$25,000.
- 2009 Prioritization of disaster risks in a community using GIS techniques: propane explosion case study, *SSHRC Small Grants* (with Costas Armenakis – co PI), \$1,000.
- 2008 Disaster and Emergency Management in Canada: Taking Stock, *SSHRC Research Development Initiative* (with David Etkin as co-PI), \$37,950.
- 2005 The Emergency and Disaster Management Community in Canada: Barriers to Effective Disaster Management, *SSHRC Small Grants* (with David Etkin - co PI), \$3,100.

### Internal Funding

- 2017 Climate change impact on Rideau Canal, *Minor Research Grant*, York University, \$2,245
- 2013 Hazard risk mitigation through community engagement, *Minor Research Grant*, York University, \$4,165
- 2012-2013 Geoinformation-based disaster & emergency management training facility – Prototype set-up, *Academic Innovation Fund*, York University (with Prof. Costas Armenakis), \$26,700
- 2009 Linking the Stats Canada 2006 Census DA profile (attribute) data to DA polygon data (.shp files) for the GTA, *RAY student support*, York University, \$2,040
- 2005 Atkinson Start-up Research Funds, \$50,000

### Conference Travel Funding

- 2005-2017 National and international conference travel grants, \$16,390

## HONOURS/AWARDS

- Awarded 0.5 FCE toward Research Release Program 2017; submitted RRP 2018 for next year.
- Three-time recipient of the Merit Award for excellence in research, 2007; 2009; 2014, \$7,000
- Certificate of Recognition for outstanding contribution to Teaching and Learning & Student Experience, May 2013.
- MOMBUSHO Japanese Government Scholarship: Annual value of ¥2,400,000 (US\$ 21K), 1992-1996, Civil and Water Resources Engineering, Kyoto University, Japan.
- Research Fellowship Annual value £18,000 (US\$ 23K), Oct 1997 – Sep 1998, Department of Civil Engineering, University of Newcastle, UK.

## INTERNATIONAL COLLABORATIONS

1. Academic Network for Disaster Resilience to Optimise (ANDROID) (with Drs. R. Haigh and D. Amaratunga). Centre for Disaster Resilience, School of the Built Environment, The University of Salford, Salford, UK (2013-15). Contributed toward developing methodologies for natural disaster risk reduction and attended Work Package 4 meetings at the Salford conference during September 8-11, 2014, as well as via online.
2. Assessment of Natural Disasters in the Caribbean Region (with Dr. G. Seepersad, Lecturer, Faculty of Science & Agriculture, UWI, Trinidad (2013-14).

## PUBLICATIONS

### Books

1. Nirupama Agrawal (2018) Natural Disasters and Risk Management in Canada – An Introduction, Springer, Dordrecht, 366 pages. <https://www.springer.com/us/book/9789402412819>
2. Atlantic Ocean Tsunami Travel Time Atlas, York University Publication. Nirupama, N., K. Ponnambalam, I. Nistor, and T. Murty, York University, 160 pages, 2007.

### Editorships

1. Guest Editor (with Robin Cox) of Special Issue of *Natural Hazards* on Natural disasters and 150th commemoration of Canada as a country, Springer (In progress).
2. Guest Editor (with Costas Armenakis) (2013). Special Issue on Sociological Aspects of Natural Disasters, *Natural Hazards*, Springer, 66, p140.
3. Indian Ocean Tsunami, Eds: T.S. Murty, U. Aswathanarayana, N. Nirupama, A.A. Balkema Publication, The Netherlands, 398 pages, 2006.
4. Editor (with David Etkin and Tetyana Bogutka). (2006). Proceedings of the Canadian Risk and Hazard Network Symposium, Toronto, Canada, Nov 17-19, 2006.
5. Editor (with R. Khanna), Proceedings of All India Seminar on Environmental & Social Issues in Water Resources Development, Lucknow, India, June 5-6, 2000.

### Book Chapters - Peer Reviewed

1. Subbotina K., Agrawal N. (2017) Natural Disasters and Health Risks of First Responders. In: Masys A., Lin L. (eds.) *Asia-Pacific Security Challenges*. Springer International Publishing. 85-122.
2. Nirupama, N. (2013). Disaster Risk Management, *Invited* contribution in *Encyclopaedia of Natural Hazards*, (Ed.) Peter Bobrowsky, Springer, 164-169, 1133p.
3. Ballisario, L, J. McGee and N. Nirupama (2012). Emergency Management Education in Canada: A View from the Crossroads, *In Disaster Risk and Vulnerability: Mitigation through Mobilizing Communities*. Eds.: C.E. Haque and D. Etkin, McGill-Queen's University Press, Canada.
4. Nirupama, N., T.S. Murty, I. Nistor, and A.D. Rao (2006). A Review of Classical Concepts on Phase and Amplitude Dispersion: Application to Tsunamis. In *Indian Ocean Tsunami*, Eds: Murty, Aswathanarayana, Nirupama, A.A. Balkema Publication, The Netherlands, p63-72.
5. Nirupama, N., T.S. Murty, A.D. Rao and I. Nistor (2006). A Partial Explanation for the Initial Withdrawal of the Ocean during the Tsunami. In *Indian Ocean Tsunami*, Eds: Murty, Aswathanarayana, Nirupama, A.A. Balkema Publication, The Netherlands, p73-80.
6. Nirupama, N., T.S. Murty, I. Nistor, and A.D. Rao (2006). The Energetics of the Tsunami of 26 December 2004 in the Indian Ocean: A Brief Review. In *Indian Ocean Tsunami*, Eds: Murty, Aswathanarayana, Nirupama, A.A. Balkema Publication, The Netherlands, p81-90.
7. Nirupama, N., T.S. Murty, I. Nistor, and A.D. Rao (2006). Possible Amplification of the Tsunami through Coupling with Internal Waves. In *Indian Ocean Tsunami*, Eds: Murty, Aswathanarayana, Nirupama, A.A. Balkema Publication, The Netherlands, p91-96.

8. Nirupama, N., T.S. Murty, A.D. Rao and I. Nistor (2006). Normal Modes and Tsunami Coastal Effects. In Indian Ocean Tsunami, Eds: Murty, Aswathanarayana, Nirupama, A.A. Balkema Publication, The Netherlands, p143-150.
9. Nirupama, N., T.S. Murty, I. Nistor, and A.D. Rao (2006). Helmholtz Mode and K-S-P Waves: Application to Tsunami. In Indian Ocean Tsunami, Eds: Murty, Aswathanarayana, Nirupama, A.A. Balkema Publication, The Netherlands, p151-158.
10. Nirupama, N., T.S. Murty, I. Nistor, and A.D. Rao (2006). The Cauchy-Poisson Problem: Application to Tsunami Generation and Propagation. In Indian Ocean Tsunami, Eds: Murty, Aswathanarayana, Nirupama, A.A. Balkema Publication, The Netherlands, p175-184.
11. Nistor, I., K. Xie, N. Nirupama and T.S. Murty (2006). A Review and Listing of Tsunami Heights and Travel Times for the 26 December 2004 Event. In Indian Ocean Tsunami, Eds: Murty, Aswathanarayana, Nirupama, A.A. Balkema Publication, The Netherlands, p185-208.
12. Murty, T.S., N. Nirupama, A.D. Rao and I. Nistor (2006). Possible Detection in the Ionosphere of the Signals from Earthquakes and Tsunamis. In Indian Ocean Tsunami, Eds: Murty, Aswathanarayana, Nirupama, A.A. Balkema Publication, The Netherlands, p227-234.
13. Murty, T.S., N. Nirupama, A.D. Rao and I. Nistor (2006). Methodologies of Tsunami Detection. In Indian Ocean Tsunami, Eds: Murty, Aswathanarayana, Nirupama, A.A. Balkema Publication, The Netherlands, p259-272.
14. Murty, T.S., A.D. Rao, N. Nirupama, and I. Nistor (2006). An Ideal Conceptual Tsunami Warning System for the Indian Ocean. In Indian Ocean Tsunami, Eds: Murty, Aswathanarayana, Nirupama, A.A. Balkema Publication, The Netherlands, p455-474.
15. Murty, T.S., N. Nirupama, I. Nistor and A.D. Rao (2006). The Role of Oscillations of the First and Second Class in Tsunami around Andaman & Nicobar Islands, In: Geomatics in Tsunami, Eds.: S.M. Ramasamy, C.J. Kumanan, R. Sivakumar and B. Singh, New India Publishing Agency, India, p11-16.
16. Haque, C.E., N. Nirupama, and T.S. Murty (2006). Nature Itself Does Not Cause a Disaster: The Role of Physical and Socioeconomic Variables in the Catastrophic Loss Due to the Indian Ocean Tsunami of 26 December 2004, In Natural Hazards and Disaster Management : Vulnerability and Mitigation, Ed: R.B. Singh, p79-103.
17. Nirupama, N., T.S. Murty, A.D. Rao and I. Nistor (2005). The Role of Gravid and Elastoid Modes in Tsunami around Andaman and Nicobar Islands. In Indian Ocean Tsunami, Ed: V. Sundar, Indian Institute of Technology Madras, India, p41-52.
18. Nirupama, N., T.S. Murty, A.D. Rao and I. Nistor (2005). Tsunami in Andaman and Nicobar Islands: Oscillations of the First and Second Class. In Indian Ocean Tsunami, Ed: V. Sundar, Indian Institute of Technology Madras, India, p22-30.
19. Ponnambalam, K., Nirupama and H. Venema (2001). Wetlands Management using Geographical Information Systems and Multiobjective Decision Support System, Best Modelling Practices for Urban Water Systems Monograph 10, Ed. William James, 215-224.

### Journal Articles - Peer Reviewed

1. Agrawal N, Jahanadish A (2018). Is climate change impacting Rideau Canal Skateway, the world's longest skating rink? Special Issue Natural Disasters and 150th Commemoration of Canada as a Country, Natural Hazards, Springer DOI: 10.1007/s11069-018-3459-9.
2. Jahanadish A, Nirupama N (2017). Quantitative analysis of earthquake fatalities: case of Iran, Natural Hazards, 87: 567-579.
3. Dumbuya B, Nirupama N (2017). Disasters and long term economic sustainability: a perspective on Sierra Leone, Special Issue on Investments in Disaster Resilience, Int. J Disaster Resilience in the Built Environment, 8(1): 58-76.
4. Irwin S, Schardong A, Simonovic SP, Nirupama N (2016). ResilSIM—A Decision Support Tool for Estimating Resilience of Urban Systems. Water 8(9): 377.

5. Nirupama, N. (2015). Understanding risk from floods and landslides in the Himalayan region: a discussion to enhance resilience. *planet@risk*, Global Risk Forum, 3 (2): 231-235.
6. N. Nirupama T. Popper A. Quirke (2015). Role of social resilience in mitigating disasters, *Int. J Disaster Resilience in the Built Environment*, 6(3): 363 – 377.
7. Guindon, S-M, Nirupama, N. (2015). Reducing risk from urban heat island effects in cities, *Natural Hazards*, 77 (2): 823-831.
8. Daddar, S., Nirupama, N. (2015). The potential of recurrent epidemics and pandemics in a highly mobile global society, *Natural Hazards*, 77 (2): 1395-1403.
9. Agada, S., Nirupama, N. (2015). A serious flooding event in Nigeria in 2012 with specific focus on Benue State, *Natural Hazards*, 77 (2): 1405-1414.
10. Nirupama, N., Sharma, R., Verma, K., Panigrahi, S. (2014). A multi-tier hazard-Part I: description of the event, *Natural Hazards*. 76 (1): 259-269.
11. Sharma, R., Verma, K., Panigrahi, S. Nirupama, N. (2014). A multi-tier hazard-Part II: meteorological Analysis, *Natural Hazards* 76 (1): 271-281.
12. Nirupama, N., Adhikari, I., Sheybani, A. (2014). Natural hazards in Ontario Canada – taking stock for mitigating disasters, *Procedia Economics and Finance*, Elsevier, 18: 55-61.
13. Armenakis, C., Nirupama, N. (2014). Flood risk mapping for the city of Toronto, *Procedia Economics and Finance*, Elsevier, 18: 320-326.
14. Armenakis, C., Nirupama, N. (2014). Urban impacts of ice storm – Toronto 2013, *Natural Hazards*, 74(2): 1291-1298.
15. Nirupama, N., Hafezi, H. (2014). A short communication on school bus accidents: A review and analysis, *Natural Hazards*, 7(3): 2305-2310.
16. Nirupama, N., Armenakis, C., Montpetit, M. (2014). Is flooding in Toronto a concern? *Natural Hazards*, 72(2): 1259-1264.
17. Armenakis, C., Nirupama, N., Zalidid, G., Alexandridis, T. (2014). Degradation of Coastal Wetlands using Examples from Greece and Canada: A Review, *International J Ecology and Development*, 29 (3):87-109.
18. Armenakis, C. and Nirupama, N. (2013). Estimating spatial disaster risk in urban environments, *Geomatics, Natural Hazards and Risk*, Taylor & Francis, 4 (4): 289-298.
19. Nirupama, N. (2013). Vertical evacuation during cyclones: suitable for developing countries. *Natural Hazards*. 69:1137-1142.
20. Nirupama, N. (2013). Tsunami versus storm surge: a brief review. *Natural Hazards*. 69:1123-1130.
21. Nirupama, N. (2013). Is it possible to rank hurricanes in a unique manner? *Natural Hazards*. 67: 963-968.
22. Nirupama, N. and Armenakis, C. (2013). Sociological Aspects of Natural Hazards. Editorial, Special Issue, *Natural Hazards*. 66:1-2.
23. Nirupama, N. and Maula, A. (2013). Engaging Public for Building Resilient Communities to Reduce Disaster Impact, Special Issue on Sociological Aspects of Natural Disasters Springer, *Natural Hazards*. 66:51-59.
24. Armenakis, C. and Nirupama, N. (2013). Prioritization of Disaster Risk in a Community using GIS, Special Issue on Sociological Aspects of Natural Disasters Springer, *Natural Hazards*. 66:15-29.
25. Nirupama, N. and Etkin, D. (2012). Institutional Perception and Support in Emergency Management in Ontario, Canada, *Disaster Prevention and Management*, Emerald, 21(5): 599-607.
26. Nirupama, N. (2012). Risk and Vulnerability Assessment – A Comprehensive Approach, *International Journal of Disaster Resilience in the Built Environment*, Emerald, 3:2.
27. Khalafzai, AK and Nirupama, N. (2011). Building Resilient Communities through Empowering Women with Information and Communication Technologies: A Pakistan Case Study, *Sustainability* 3(1): 82-96.
28. Nirupama, N. and D. Etkin (2009). Emergency Managers in Ontario: An Exploratory Study of Their Perspectives, *Journal of Homeland Security and Emergency Management*: 6 (1), Article 38. <http://www.bepress.com/jhsem/vol6/iss1/38>
29. Kurian, N.P., N. Nirupama, M. Baba, and K.V. Thomas (Feb 2009). Coastal Flooding due to Synoptic Scale, Meso-Scale and Remote Forcings, *Natural Hazards*, 48 (2), 259-273.

30. Nirupama, N. (2009). Socio-economic Implications based on Interviews with Fishermen following the Indian Ocean Tsunami, *Natural Hazards*, 48 (1): 1-9.
31. Nirupama, N. (2009). Analysis of the Global Tsunami Data for Vulnerability and Risk Assessment, *Natural Hazards*, 48 (1), 11-16.
32. Tsasis, P. and N. Nirupama (Nov 2008). Vulnerability and Risk Perception in the Management of HIV/AIDS: Public Priorities in a Global Pandemic, *Risk Management and Healthcare Policy*, 1, 7-14.
33. Nirupama, N. and S.P. Simonovic (2007). Increase of Flood Risk due to Urbanisation: A Canadian Example, *Natural Hazards*, Springer, 40, 25-41.
34. Nirupama, N., T.S. Murty, I. Nistor, and A.D. Rao (2006). The Energetics of the Tsunami of 26 December 2004 in the Indian Ocean: A Brief Review, *Marine Geodesy*, 29 (1), 39-48.
35. Nirupama, N., T.S. Murty, I. Nistor, and A.D. Rao (2006). Persistent High Water Levels around Andaman & Nicobar Islands following the 26 December 2004 Tsunami, *Science of Tsunami Hazards*, 24 (3), 183-193.
36. Nirupama, N., I. Nistor, K. Ponnambalam and T.S. Murty (2006). Tsunami Travel Time Atlas for the Atlantic Ocean, *Marine Geodesy*, 29 (3), 179-199.
37. Garnett, R.E., N. Nirupama, T.S. Murty, and C.E. Haque (2006). Correlates of Canadian Prairie Rainfall-Implications for Crop Yield, *Climate Research*, 32, 25-33. Citation 14
38. Kurian, N.P., T.N. Prakash, M. Baba and N. Nirupama (2006). Observations of Tsunami Impact on the Coast of Kerala, India, *Marine Geodesy*, 29 (2), 135-145.
39. Murty, T.S., A.D. Rao, N. Nirupama and I. Nistor (2006). Tsunami warning systems for the hyperbolic (Pacific), parabolic (Atlantic and elliptic (Indian) oceans. *Journal of Indian Geophysical Union*. 10 (2), 69-78.
40. Nirupama, N., T.S. Murty, A.D. Rao and I. Nistor (2006). Numerical Tsunami Models for the Indian Ocean Countries and States, *Indian Ocean Survey*, 2 (1), 1-14.
41. Kurian, N.P., M. Baba, K. Rajith , N. Nirupama and T.S. Murty (2005). Analysis of the Tsunami of 26 December 2004 on the Kerala Coast of India -Part I: Amplitudes, *Marine Geodesy*, 29 (4), 265-270.
42. Baba, M., N.P. Kurian, B.T. M. Krishnan, N. Nirupama and T.S. Murty (2005). Analysis of the Tsunami of 26 December 2004 on the Kerala Coast of India-Part II: Arrival Times, *Marine Geodesy*, 29 (4), 271-276.
43. Kurian, N.P., K. Rajith, B.T. Muralikrishnan, N. Nirupama and T.S. Murty (2005). Analysis of the Tsunami of 26 December 2004 on the Kerala Coast of India-Part III: Inundation and Initial Withdrawal, *Marine Geodesy*, 29 (4), 277-281.
44. Murty, T.S., N. Nirupama, I. Nistor, and A.D. Rao (2005). Leakage of the Indian Ocean Tsunami Energy into the Atlantic and Pacific Ocean, *Recorder of Canadian Society of Exploration Geophysicists*, December, 33-36.
45. Murty T.S., A.D. Rao, N. Nirupama and I. Nistor (2005). Numerical Modelling Concepts for the Tsunami Warning Systems, *Current Science*, 90 (8), 1073-1081.
46. Murty, T.S., A.D. Rao, and N. Nirupama (2005). Inconsistencies in Travel Times and Amplitudes of the 26 December 2004 Tsunami, *J. Marine Medicine*, 7 (1), 4-11.
47. Murty, T.S., N. Nirupama, I. Nistor and A.D. Rao (2005). Conceptual Differences Between the Pacific, Atlantic and Arctic Tsunami Warning Systems for Canada, *Science of Tsunami Hazards*, 23 (3), 39-51.
48. Teller, J.T., T.S. Murty, N. Nirupama, and P. Chittibabu (2005). A Possible Tsunami in the Labrador Sea Related to the Drainage of Glacial Lake Agassiz ~8400 Years B.P., *Science of Tsunami Hazards*, 23 (3), 3-16.
49. Murty, T.S., N. Nirupama, I. Nistor, and S. Hamdi (2005). Far Field Characteristics of the Tsunami of 26 December 2004, *J. Indian Society of Earthquake Technology*, 42 (4), 213-217.
50. Murty T.S., N. Nirupama, I. Nistor and S. Hamdi (2005). Why the Atlantic Generally cannot Generate Trans-Oceanic Tsunamis, *J. Indian Society of Earthquake Technology*, 42 (4), 227-236.
51. Simonovic, S. and Nirupama (2005). A Spatial Multi-Objective Decision Making under Uncertainty for Water Resources Management, *Journal of Hydroinformatics*, 7 (2), 117-133.
52. Nirupama, T. Tachikawa, M. Shiiba, and T. Takasao (1996). A Simple Water Balance Model for a Mesoscale Catchment Considering Areal Tension Water Distribution, *Bulletin of the Disaster Prevention Research Institute*, Japan, 45 B-2.

53. Takasao, T., M. Shiiba, T. Tachikawa, A. Fujita and Nirupama (1995). Analysis of a Time Scale on Runoff Phenomena, *Bulletin of the Disaster Prevention Research Institute*, Japan, **38** B-2.

### Conferences Presentations – Peer Reviewed

1. Agrawal N, Simonovic SP, Elliott M (2017). A Canadian example of integrating qualitative and quantitative approaches, IDRC Sendai 2017, Japan Nov 25-28, 2017.
2. Nirupama N, Simonovic SP, Elliott M (2017). Disaster adaptiveness, resilience, and capacity building by accounting for people's perception: a Canadian case study, 7<sup>th</sup> Int. Conference on Flood Management (ICFM7), 05-07 September 2017, University of Leeds, UK.
3. Subbotina K, Nirupama N (2016). Health risk analysis of internationally deploying first responders following a natural disaster, 6<sup>th</sup> International conference on Building Resilience, University of Auckland, New Zealand, Sep 7-9, 2016.
4. Nirupama N, Jubril J (2016). Social capital and disaster resilience: A Canadian case study, Proceedings of the 6th International Disaster and Risk Conference, IDRC Davos, Switzerland, Aug 28-Sep 01, 2016, p 464-467.
5. Dumbuya B, Nirupama N (2016). Disasters and Long Term Economic Sustainability: A Perspective on Sierra Leone, Proceedings of the 6th International Disaster and Risk Conference, IDRC Davos, Switzerland, Aug 28-Sep 01, 2016, p 191-194.
6. Nirupama, N., Hebert, L., Jubril, J. (2015). Urban heat island effect in metropolitan cities: taking stock, 5<sup>th</sup> Building Resilience Conference, Newcastle, Australia, 15-17 July 2015.
7. Lee, N.M., Ellis, D., Nirupama, N. (2014). North Atlantic Oscillation and the Variability of Atlantic Tropical Cyclones: Implications for Disaster Risk Management, CRHNet Symposium, Oct 22-24, 2014, Toronto.
8. Dumbuya, B., Nirupama, N. (2014). Understanding community resilience using disaster models in post conflict Sierra Leone. CRHNet Symposium, Oct 22-24, 2014, Toronto.
9. Khayeri, M.S., Nirupama, N. (2014). Are women and children more vulnerable to natural disasters – the case of Chicago heat wave of 1995? CRHNet Symposium, Oct 22-24, 2014, Toronto.
10. McNeil, C., Subbotina, K., Nirupama, N. (2014). Pandemics and emergency management perspectives: understanding historical, environmental, and first responder implications. CRHNet Symposium, Oct 22-24, 2014, Toronto.
11. Nirupama, N., Adhikari, I., Sheybani, A. (2014). Natural hazards in Ontario Canada – taking stock for mitigating disasters, 4<sup>th</sup> International Conference on Building Resilience, Salford Quays, UK, September 9-11 2014. **Best paper award.**
12. Armenakis, C., Nirupama, N. (2014). Flood risk mapping for the city of Toronto, 4<sup>th</sup> International Conference on Building Resilience, Salford, UK, Sep 8-11, 2014.
13. Nirupama, N. (2014). Risk from a three tier multi hazard in Uttarakhand region of India, Global Risk Forum, Davos, Switzerland, Aug 24-28, 2014.
14. Thomson, K., Nirupama, N., Popper, T., Pradhan, S., Higuchi, K. (2014). A qualitative study of the experiences of first responders, International Conference on Disaster Mitigation, Preparedness, Response and Sustainable Reconstruction, Centre for Rebuilding Communities after Disasters, Boston, USA, May 8-9, 2014.
15. Nirupama, N. (2013). Role of Social Resilience in Mitigating Seismic Disasters, International Conference of the International Institute for Infrastructure, Renewal and Reconstruction (IIIRR) Brisbane, Australia, July 7-10, 2013.
16. Armenakis, C. and Nirupama, N. (2013). Spatial risk estimation for technological hazards, Int. Conference on Earth Observation for Global Changes and 2013 Annual Conference of The Canadian Institute of Geomatics (CIG), Ryerson University, Toronto, Ontario, Canada, 5-7 June 2013.
17. Nirupama, N (2012). The Triple Disaster of Japan and People's Resilience. CRHNet Annual Symposium, Vancouver, October 24-26, 2012.



18. Nirupama, N. (2012). A Reasonable Success Story of Vertical Evacuation against Tropical Cyclones in India, Global Risk Forum, Davos, Switzerland August 26-Sep 1, 2012.
19. Nirupama, N. and Murty, TS. (2012). Similarities and Differences in Tsunamis and Storm Surge Mitigation, International Conference on Disaster Resilience, Kumamoto, Japan, August 24-26.
20. Nirupama, N., Nistor, I. And Murty, TS. (2011). Probabilistic versus Deterministic Approaches in Early Warning Systems for Natural Hazards: Coastal Inundation from Tsunamis and Storm Surges, Conference on Probabilistic Methodologies in Water and Wastewater Engineering, Toronto, September 23-24, 2011.
21. Nirupama, N. (2011). Risk and Vulnerability Assessment - A Comprehensive Approach, International Conference on Building Resilience, Kandalama, Sri Lanka, July 20-22, 2011. **Best Paper award.**
22. Armenakis, C and N. Nirupama (2009). Vulnerability Assessment using GIS: Toronto Propane Explosion, CRHNet Symposium, Edmonton Nov 23-26, 2009.
23. Nirupama, N and T.S. Murty (2007). Aliasing and Fuzzy Mathematics in Natural Marine Hazard Mitigation. Fourth Indian National Conference on Harbour and Ocean Engineering, NIT, Surthkal, India, Dec 12-14, 2007.
24. Murty, T.S. and N. Nirupama (2006). Tsunamis and storm surges in Indian Ocean, 12th Pacific Congress on Marine Science and Technology (PACON), Myanmar, Thailand, June 11-15, 2006.
25. Nirupama, N and T.S. Murty (2005). Analysis of the Travel Times of the Tsunami of 26 December 2004 in the Indian Ocean, Canadian Coastal Engineering Conference, Halifax, N.S., Nov 7-9, 2005
26. Murty, T.S., I. Nistor, S. Hamdi and N. Nirupama (2005). Numerical Modelling for the Tsunami Warning System for Atlantic Canada, Canadian Coastal Engineering Conference, Halifax, N.S., Nov 7-9, 2005
27. Logan, L., K. Ponnambalam, N. Nirupama, and H. Belore (2003). Evaluating Performance Sensitivity of a Water Balance Model, Proc. Canadian Society for Civil Engineering Conference, Burlington, Ontario, October 22-24, 2003
28. Nirupama, T. Tachikawa, M. Shiiba, and T. Takasao (1995). Comparison of Water Balance Models Taking Account of Water Storage Distribution, Proc. 50th Annual Conference of Japan Society of Civil Engineers, Tokyo, Japan, October 25-27, 1995.
29. Nirupama, Mathur, B.S. and T. Takasao (1993). A Criterion for Application of Kinematic Wave Modelling, 48th Annual Conference of Japan Society of Civil Engineers, 15-18, 1993.

#### **Invited Presentations - Non-Peer Reviewed**

1. Nirupama N (2016). What do you need to know about natural hazards and why? New College Seminar Series, Faculty of Liberal Arts and Professional Studies, York University, March 9, 2016.
2. Session Chair report presentation (2016). Session 16: Awareness and Preparedness in Integrative Risk Management, IDRC Davos, Switzerland, Aug 28-Sep 01, 2016.
3. Irwin S, Simonovic SP, Nirupama N (2016). ResilSIM, CREATE ADERSIM Workshop, May 2016, York University.
4. Nirupama, N. (2015). Community partnership in building resilience for dam related emergencies, Canadian Dam Association Workshop on Emergency Management, Ottawa, Feb 24-25, 2015.
5. Nirupama, N. (2014). Defining risk and its role in disaster management, FIDS Symposium, University of Western Ontario, London, Canada, May 11-12, 2014.
6. Nirupama, N. (2014). Personal statement on science & technology towards the Post 2015 framework for Disaster Risk Reduction. IDRC Davos Switzerland, p177.
7. Nirupama, N. (2014). Red Chair Session statement, IDRC Davos Switzerland. <http://idrc.info/outcomes/red-chair-statements/>
8. Guindon, S. and Nirupama, N. (2013). Natural hazards and economic development and planning in the Caribbean, 8th Caribbean Conference on Comprehensive Disaster Management, Jamaica, December 2-6, 2013.
9. Nirupama, N. (2012). Tsunamis and Hurricanes – Difference in Mitigation Strategies. Invited talk at the Department of Civil Engineering, Kyoto University, Japan, July 27, 2012.

10. Nirupama, N. (2012). Encouraging Public Participation for Furthering Community Resilience in Time of Crisis, Research Celebration Week, York University, March 12-15.
11. Nirupama, N. (2011). Disaster Risk and Vulnerability, Research Buffet Seminar Series, School of Administrative Studies, York University, November 24, 2011.
12. Nirupama, N. and Armenakis, C. (2011). Use of GIS in Disaster Management, GIS Day presentation, York University, November 16, 2011.
13. Nirupama, N. (2011). Risk and Vulnerability to Indian Railways due to Natural Hazards, Indian Railways, Kolkata, India, Feb 19, 2011.
14. Nirupama, N. (2011). Vulnerability Reduction using Stress Management Techniques, Educare, Lucknow, India, Jan 21, 2011.
15. Speaker, New College Seminar Series, Faculty of Liberal Arts and Professional Studies, York University, 2010.
16. Invited speaker at Disaster Recovery Information Exchange (DRIE) meeting, Toronto, March 3, 2009.
17. Nirupama N (2008). Disaster risk management – theory, practice and policy, *Invited* speaker, Public Safety and Emergency Preparedness Canada, Ottawa, December 1, 2008.
18. Brown bag seminar speaker at Atkinson School of Administrative Studies, York University, February 2007.
19. Invited speaker at Emergency Management Ontario Learning Series, Toronto, December 2006.
20. Civil Seminar speaker at the Department of Civil and Environmental Engineering, The University of Western Ontario, London, October 2001.

#### **Invited Book Reviews – Editor Reviewed**

1. Book review: All standing: the remarkable story of the Jeanie Johnston, the legendary Irish famine ship (Kathryn Miles), *Marine Geodesy*. 36 (3): 347-348. (2013).
2. Book Review: Systems Approach to Management of Disasters: Methods and Applications (Simonovic, SP), Wiley, 2009, 308 p *Disaster Prevention and Mitigation*, Emerald, 20(4) (2011).

#### **Other Publications and Contributions**

3. Contributor to “Technical guideline: Inundation mapping”, sub-working group inundation mapping, CDA August 2016.
4. Contributor to the report, “Canadian Dam Safety and Emergency Management: A Need for Regulation, Canadian Dam Association, August 2016.
5. Foreword *In* Disaster Risk Management - Conflict and Cooperation, (Eds) S.R. Sensarma and A. Sarkar. Concept Publishing Company Private Ltd., New Delhi, India (2012).
6. Nirupama, N. Disaster Risk Management: Theory, Practice and Policy. Report prepared for Public Safety Canada, Government of Canada, Ottawa, December 2008.
7. Web content (quiz questions and cases-in-point) for *Natural Hazards and Disasters*, First Canadian Edition, Nelson, 526pp, May 2008.
8. Murty T.S., N. Nirupama and A.D. Rao Why the Earthquakes of 26 December 2004 and the 27th March 2005 Differed so Drastically in their Tsunamigenic Potential, *Newsletter: Voice of the Pacific*, 21 (2), 2005.
9. Murty T.S., N. Nirupama and A.D. Rao. Tsunami Warning System for the Indian Ocean, Proc. Brain Storming Session, Department of Science and Technology, New Delhi, India, Jan 21-22, 2005.
10. Murty T.S., N. Nirupama and A.D. Rao Historical Tsunami Data for the Indian Ocean with Special Reference to India, Proc. Brain Storming Session, Department of Science and Technology, New Delhi, India, Jan 21-22, 2005.
11. Nirupama, and S.P. Simonovic. A Spatial Fuzzy Compromise Approach for Flood Disaster Management, Institute of Catastrophic Loss Reduction, London, Ontario, 2002.
12. Nirupama, and S.P. Simonovic. Role of Remote Sensing in Disaster Management, Institute for Catastrophic Loss Reduction, London, Ontario, 2002.

## **PROFESSIONAL DEVELOPMENT- CONFERENCE/WORKSHOPS ATTENDED**

1. Provincial flood forecasting and warning workshop 2017, Toronto and Region Conservation Authority, Pearson Convention Centre, Brampton, Sep 20-21, 2017.
2. GoToWebinar - FEMA P-320 – Taking Shelter from the Storm: Building a Safe Room for Your Home or Small Business, May 22, 2017.
3. Citing ASIAs: Asian studies, Munk School of Global Affairs, University of Toronto, Nov 4, 2016
4. State of resilience leadership forum and community workshop, Webcast, Resilient America, Office of special projects policy and global affairs. July 2016.
5. Life Safety Model workshop organized by Canadian Dam Association, Ontario Power Generation, Toronto, April 9, 2015.
6. Assessment and reduction of risk caused by natural catastrophes, Center for the Resilience of Critical Infrastructure, University of Toronto, June 20-21, 2014.
7. Good practice review of interdisciplinary working in disaster research. ANDROID Disaster Resilience Network Online Seminar, School of Geography and Archaeology, National University of Ireland, Galway, Ireland, May 21, 2014.
8. Spillway System Reliability Project Workshop, Toronto, April 29-30, 2014.
9. Flood Happens Municipal Workshop, Toronto, April 1, 2014.
10. A Framework for Public Health Emergency Preparedness: Setting Research Priorities, Public Health Ontario, Toronto, April 8-9, 2013.
11. Global Geospatial Conference, GOIDE 2012, Quebec City, Canada, May 14-17, 2012.
12. Anti-Poverty Action Conference: Agencies Exercising Agency in Poverty Reduction, CASSA, Toronto, March 22, 2010.
13. QSR International Training workshop on NVivo 8 Qualitative Analysis, Toronto, May 10-14, 2010.
14. Principles and Practice of Questionnaire Design (2009). York University, May 19.
15. Survey Design Workshop (2009). York University, May 20.
16. Survey Data Collection (2009). York University, May 21.
17. An Introduction to Survey Data Analysis (2009). York University, May 22.
18. Conducting Focus Groups for Social Research (2009). York University, May 25.
19. Interpreting Qualitative Data: An Overview (2009). York University, May 27.
20. Business Continuity Management - Business Impact Analysis, Continuity Link Training course, Toronto, June 25-26, 2009.
21. Exercising the Business Continuity Plan, Vanguard EMC, Toronto, April 15-16, 2009.
22. Z1600 Essentials – Emergency Management and Business Continuity Programs, Canadian Standards Association (CSA) Training course, Toronto, March 9-10, 2009.
23. CSA Z1600 – Emergency Management and Business Continuity Executive Roundtable seminar, Toronto, October 16, 2008.
24. Disaster Strikes, Online disaster and emergency simulation exercise, Centennial College, Toronto, ongoing until 3 November 2007.
25. Introduction to Disaster Management, Red R Canada, Toronto, 12-13 July 2007
26. Using Computer in Qualitative Analysis: An NVivo Workshop, York University, July 2007
27. Business Continuity and Pandemic Preparedness: Planning, Partnership, and Participation Conference , Toronto, May 15-16, 2007.
28. Emergency Management Ontario – York University Learning Series, Toronto, April 2007.
29. Higher Education in Emergency Management, Public Safety and Emergency Preparedness Canada (PSEPC), Ottawa, Canada, 16 November 2006.
30. Ethics and Emergencies. The Centre for the Study of Democracy, Queens University, Canada, October 23, 2006.

31. International Workshop on Hazard Mitigation and Disaster Management, University of Ottawa, Ottawa, Canada, June 22-23, 2006.
32. Emergency Management and Homeland Security/Defence Higher Education Conference, FEMA Emergency Management Institute, Emmitsburg, Maryland, U.S.A, June 6-8, 2006.
33. GIS in Emergency Management and Homeland Security, Federal Emergency Management Agency, Emmitsburg, MD, USA, June 5, 2006.
34. Principles of Disaster Management. Centre for Environment, University of Toronto, Canada, June 2, 2006.
35. Emergency Preparedness: Joint Responses to Common Challenges, Foundation for Educational Exchange between Canada and the United States of America, Ottawa, Canada, March 23-24, 2006.
36. Improving National and Regional Disaster Response Capacity, Wilton Park Conferences, Steyning, UK, December 2-5, 2005.
37. Emergency management education in Canada workshop, Metropolitan hotel, Toronto, Nov 16, 2005.
38. A Paediatric Disaster Exercise, Toronto Academic Health Science Network Emergency Planning Group and Ministry of Health Emergency Management Unit, Toronto, October 30, 2005
39. Field Trip – Red River Flood Mitigation Structures, 1st Annual CRHNet Symposium, Winnipeg, November 17, 2004.
40. Teaching: Doing it Right, Brandon University, Canada, March 26, 2004.
41. Environmental Assessment Workshop, Manitoba Eco-Network, February 21, 2004.
42. CISM Updates, Research & Practice. Manitoba Emergency Services Conference, Brandon, Manitoba, Canada, October 16-18, 2003.
43. Teaching at the University Level, The University of Western Ontario, London, 21-23 August 2002.

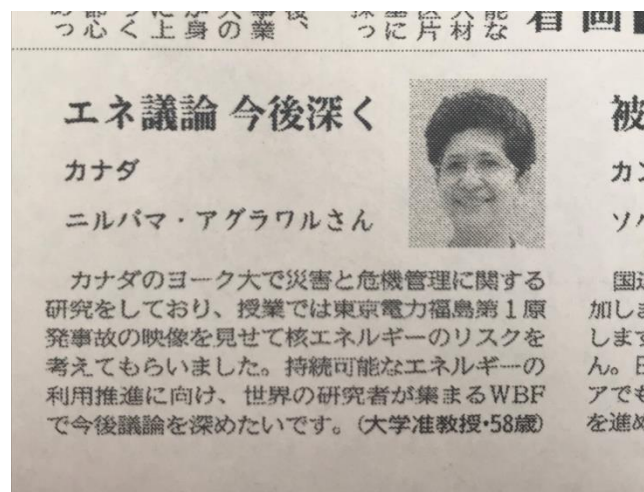
### **Scholarly Activities and Service to the Profession**

- Working Group, Technical Committees, and Session Chair –
  - Public Safety Canada, Contributed to the emergency management strategy review and feedback, 2018.
  - Canadian Dam Association (CDA), Emergency Management and Preparedness, since 2014.
  - Canadian Dam Association (CDA), Inundation Mapping, since 2015.
  - Sheridan College's Community Safety Degree Working Group, Toronto, July 2015.
  - 1ST International Conference on Water Resources, Coastal and Ocean Engineering ICWRCOE'15, Mangalore, India, March 2015.
  - Canadian Risk and Hazards Network (CRHNet) Symposium, Toronto, Oct 2014.
  - Session Chair, 4<sup>th</sup> International Conference on Building Resilience, Salford Quays, UK, September 9-11, 2014.
  - Emergency Management Forum, Ontario, since Sep 2013.
  - Education committee, Ontario Association of Emergency Managers (OAEM), since 2012.
  - Academic Network for Disaster Resilience to Optimise Educational Development (ANDROID), University of Salford, UK (2013-2015).
  - 5th GiT4NDM conference, Toronto, Oct 9-11, 2013.
  - CIG 2013, Ryerson University, Toronto, June 5-7, 2013.
  - Session Chair, 1st Anniversary of the Tohoku Earthquake, Conference, Faculty of Liberal Arts & Professional Studies, York University, March 9, 2012.
  - International Institute for Infrastructure Renewal and Reconstruction (IIIRR), since 2011.
  - IEEE Toronto International Conference – Science and Technology for Humanity, Toronto, September 27-29, 2009.
- Grant Reviewer –
  - Shastri Research Student Fellowship (SRSF), since 2011.

- Social Science and Humanities Research Council (SSHRC), since 2007.
- Economic and Social Research Council (ESRC) and NERC, UK, since 2018.
- Scholarly Journal Peer Reviewer –
  - Applied Geography, Applied Geomatics, Canadian Water Resources, Civil Engineering and Environmental Systems, Geomatics, Hazards and Risks, Int. J Disaster Resilience in the Built Environment, J Canadian Foreign Policy, J Flood Risk Management, J Int. Development, J Rural and Community Development, J Water Resources Management, Marine Geodesy, Natural Hazards, Natural Hazards Review, Regional Science, Policy and Practice, US Geological Survey.
- Contributor to –
  - York University stakeholder group feedback on the Emergency Management Strategy of Canada, Public Safety Canada, 2018.
  - Technical Bulletin on Inundation Mapping, Canadian Dam Association (CDA), 2016.
  - 20th World Congress for Disaster and Emergency Medicine Toronto Feb 2015.
- Editorial board member of the *Natural Hazards* journal, Springer, the Netherlands, since 2005.

## MEDIA PRESENTATIONS/INTERVIEWS

- FYile York University newsletter published a piece on my latest textbook – Sep 3, 2018.  
<http://yfile.news.yorku.ca/2018/09/03/new-textbook-examines-natural-disaster-and-risk-management-in-canada/>
- CBC “Current” team contacted in March 2018, post Grand River flooding but I was overseas so couldn’t participate.
- Sendai, Japan, BOSAI Global Risk Forum conference, Nov 24-27, 2017. Local press interviewed me and published it in the media in Japanese, November 26, 2017.



- AM640 Radio live participation regarding the Hurricane Harvey’s impact on Texas, USA and climate change impacts in Canada, August 2017.
- CBC interviewed by Carly Thomas on devastating impacts of Hurricane Harvey in Texas, USA, Aug 28, 2017.
- DeSmog magazine published an article on climate change with my expert opinion included <https://www.desmog.ca/2017/09/21/what-canada-needs-do-now-isn-t-prevent-worst-impacts-climate-change-0>

- Media relations of York University put me in touch with Toronto media community to comment on Toronto Island flooding in April 2017.
- Toronto Observer's Paul Hantiuk on Environmental infrastructure in an urban centre in light of recent disasters in Toronto, Feb 20, 2014.
- IDRC [https://www.youtube.com/watch?v=eytyFw1\\_vFk](https://www.youtube.com/watch?v=eytyFw1_vFk)
- Humber media interview by phone on Typhoon Haiyan in the Philippines, Nov 2013.
- University Affairs comment: <http://www.universityaffairs.ca/bc-makes-free-online-textbooks-available.aspx#comments>
- Y-File coverage on current research "Visualizing an Emergency in Three Dimensions", Jan 30, 2012. <http://yfile.news.yorku.ca/2013/01/29/aif-visualizing-an-emergency-in-three-dimensions/>
- Featured research in the e-magazine, The Drum Beat. [http://www.comminit.com/global/drum\\_beat\\_623.html](http://www.comminit.com/global/drum_beat_623.html)
- Interviewed by Toronto Star, Dec 1, 2012.
- Research video on York website: <http://www.youtube.com/watch?v=j09KYI8wM54>
- Nib and Page Media of Toronto, interview on Mitigation and Preparedness, July 2008.
- Encore, York University's magazine, interview, 2006.
- Media coverage in Asian Chapter of Toronto on "Strong Canadian presence" at the Federation of Indian Chambers of Commerce and Industry conference, Chennai, India, July 3-5, 2006.
- Brandon Sun, Brandon, Manitoba, interview on the 2004 Indian Ocean Tsunami, 2005.
- Quill, Brandon University magazine and Brandon University news, Spring/Summer 2005. <https://www.brandonu.ca/alumni/files/.../2005SS.AlumniNews.pdf>

## TEACHING

### Certificates Acquired

- University Teaching and Learning, University of Western Ontario, Canada, August 2002.
- Japanese Language, Kyoto University, Japan, March 1993.

## CURRICULUM DEVELOPMENT

- As a founding member of the Disaster and Emergency Management (DEM) program at York University, I was given the opportunity to fully develop and teach original courses that covered a diverse range of DEM topics, namely, disaster risk management, business continuity planning, natural disasters, research methods, research seminar, and field experience.
- I designed and developed a 'York Abroad' course, DEMS 6040: Hazard Risk Analysis: Practical Experience Abroad. The course has been approved by the Faculty of Graduate Studies.
- I Contributed to revising and overhauling of the "Certificate in Emergency Management" program curriculum toward reducing the duration of the program to one year, while maintaining academic rigour, relevance, and competitiveness in the field.
- Lead role on the development of the Bachelor of DEM (BDEM) program curriculum, which was successfully launched in 2010. I was principally involved in, the inception and development, to the consultation processes and the design of degree options and new courses, to the final approval at all levels. Additionally, according to the new requirement by the Province of Ontario, I developed learning objectives and calendar descriptions for all courses.
- Business Continuity Plan Testing Exercise developed under the Teaching Research, Experiments, Engagement and Sharing Funding, May 2009, \$1,500.
- I designed and developed CEE 471 (details below), at the Western University, Canada, first of its kind in the department at the time.

### **GRADUATE teaching at York University, Canada**

- DEMS 5080 Practicum in Disaster & Emergency Management, since 2016.
- DEM5040 Natural Disasters, since 2007.
- DEM5081 Applied Topics in Disaster & Emergency Management, 2012.
- DEM5031 Topics in Business Continuity, 2011.
- DEM5050 Qualitative Research Methods in Disaster Management, 2007.

### **Graduate teaching at Western University, Canada**

- CEE (Civil & Environmental Engineering) 471: Remote sensing and Geographic Information System (GIS) techniques for Civil Engineers, Civil & Environmental Engineering, University of Western Ontario, 2002.

### **UNDERGRADUATE teaching at York University, Canada**

- ADMS 3701 Disaster Risk Management - in class and online, since 2005.
- ADMS 4708 Seminar in Disaster & Emergency Management, since 2013.
- ADMS 3703 Business Continuity Planning, 2007-2010.

### **Brandon University, Canada (2003-05)**

- 40:253 (2nd Year) Hazard and Risk Assessment
- 40:391 (3rd Year) Environmental Disasters
- 40:251 (2nd Year) Natural Disasters: Causes and Physical Dynamics
- 40: 498 (4th Year) Disaster modelling
- 40: 398 (3rd Year) Organisational Responses to Disasters and Emergencies
- 40:499 (4th Year) Directed readings: Disaster relief related logistics and supply chain
- 40:399 (3rd Year) Directed studies: Hazardous materials research and implications
- 40:499 (4th Year) Directed readings: Chemical Biological Radiological & Nuclear (CBRN) Response

### **Supervision – Major Research Paper/Thesis**

Note: (\*) Tri-Council funded High Quality Professional Training

1. 2017 Colleen Kennedy, Topic: Recovering from natural disaster in developed communities: a disability perspective, Graduate Program in Critical Disability Studies, York University.
2. 2015 Judith Jubril, Topic: Social capital, public education, and community outreach: effective tools for emergency managers, MDEM York University.
3. 2015 Lauren Hebert, Topic: Are teachers concerned with school-based emergencies? MDEM York U, Canada.
4. 2015 Yassin Oleiwan, PhD candidate, Northcentral University, Hawaii. Supervised her research survey questionnaire based on my work.
5. 2014 Katie Subbotini, Topic: Natural disaster and health of internationally deployed responders, MDEM York U.
6. 2014 Agada, Susan, Topic: The failure of sovereignty as responsibility and the making of disaster: A case study of the 2012 flooding disaster in Nigeria, MDEM, York U.
7. 2013 Sarah-Maude Guindon, Topic: Integration of disaster risk reduction approach to urban planning, MDEM, York University.
8. 2013 Alicia Benton, Topic: Emergency Management and Health Emergencies, MADEM, Royal Roads University, Canada.
9. 2013 Claire McDonald, Topic: Hazard Prediction and Responsibility, MDEM, York University, Canada.

10. 2012 Timothy Walshaw. Topic: Evacuation plans for the pre-disaster homeless in the event of a catastrophe, MADEM, Royal Roads University, Canada.
11. 2012 Daddar, Sabrina. Topic: The potential of recurrent epidemics & pandemics in a highly mobile global society, MADEM, York University, Canada.
12. 2012 Gentles, Charmaine. Topic: A comparative analysis of the Disaster Preparedness Public Education programs in Jamaica and Canada, MADEM, York University, Canada.
13. (\*) 2011 Ashton, Daniela, Topic: Emergency Management and First Nations in James Bay, Ontario, MADEM, York University. Research Assistant, Topic: Emergency Management in Canada: Taking Stock
14. 2010 Khan, Arshad, Topic: Disaster Risk Reduction and Development Planning in Pakistan: An Analysis, MADEM, York University.
15. 2009 Olanubi, Timilehin, Topic: Crisis Management and Psychosocial Intervention: Perception of Immigrants, MA in Disaster & Emergency Management (DEM), York University.
16. 2009 Haford, Shereen, Co-supervisor, Master's Thesis, Coastal Disasters, Masters in Geomatics, York University.
17. 2008 Ituen, Ima. Graduate Thesis, co-Supervisor, Topic: Vegetation maintenance for powerline systems towards effective risk management: A case study, Faculty of Environmental Studies, York University.
18. 2005 Wainright, R. Undergraduate Practicum, Co-supervisor, Title: Ensure E2 Compliance at Many Locations and Update Emergency Plans, Department of Applied Disaster & Emergency Studies, Brandon University.
19. 2005 Dykstra, S. Undergraduate Practicum, Co-supervisor, Title: Ensure E2 Compliance at Many Locations and Update Emergency Plans, Department of Applied Disaster & Emergency Studies, Brandon University.

#### **External Examiner**

1. 2015 Amin Owraangi, PhD exam. Topic: An approach to developing a spatio-temporal composite measure of climate change related human health impacts in urban environments, Dept. of Civil Engineering, Western University, Canada.
2. 2014 Durge, Samantha, PhD exam. Topic: Mitigation of the Impact of Tornadoes in the Canadian Prairies. Civil Engineering, University of Calgary, Canada.
3. 2009 Mohopatra, Romasa. PhD exam. Topic: Effective theories and models of post-disaster reconstruction, School of Planning, University of Waterloo.
4. 2009 Olanubi, Timilehin, MRP, Topic: Crisis Management and Psychosocial Intervention: Perception of Immigrants, MA in Disaster & Emergency Management (DEM), York University.
5. 2009 Zuo, Jie. Summer Research Assistant, Topic: Propane Explosion, Graduate Geomatics Engineering, York University.
6. 2009 Mohopatra, Romasa. PhD Defence External examiner, Topic: Effective theories and models of post-disaster reconstruction, School of Planning, University of Waterloo.
7. 2008 Westland, Scott. Graduate thesis, External examiner. Topic: Use of Geomatics in disaster management, Environmental Studies, University of Manitoba.
8. 2008 Bhutia, Sangay. MSc thesis, Chair, exam committee. Topic: Importance of the fire-induced circulations on brand propagation, Faculty of Science and Engineering, York University.
9. 2007 Mohopatra, Romasa. PhD Comprehensive, External examiner, Topic: Effective theories and models of post-disaster reconstruction, School of Planning, University of Waterloo, External Examiner.
10. 2007 Jinsong Xie. Graduate thesis, External examiner, Title: Numerical modelling of tsunami waves, University of Ottawa, Ottawa.
11. 2007 Stewart, RM, PhD examiner. Title: Sustainable Floodplain Management, Natural Resources Institute, University of Manitoba, Winnipeg.

#### **Graduate/Research Assistant**

Note: (\*) Tri-Council funded High Quality Professional Training



1. (\*)2017 Mark Elliott, Research Assistant, Integrated approach for resilience estimation and disaster risk reduction, NSERC CREATE funded project (Nov 2016-Aug 2017)
2. (\*)2016 Victoria Stevens, Research Assistant, Integrated approach for resilience estimation and disaster risk reduction, NSERC CREATE funded project (Nov 2016-Jan 2017)
3. (\*)2015 Sarah Irwin, Research Assistant, Quantitative Resilience Simulator, NSERC CREATE funded project (with Slobodan Simonovic, Western University).
4. 2015 Colleen Simpson, Graduate Assistant. Tornado response in Vaughn. Oct 2015
5. 2014 Ali Sheybani, Graduate Assistant, topic – Natural hazards of Ontario.
6. 2014 Indra Adhikari, Graduate Assistant, topic - Explaining the role of expert analysis in the 2013 Toronto flooding using chaos theory.
7. 2014 Harshita Mathur, Graduate Assistant, topic: New students' handbook and organizing a job fair for disaster and emergency management students.
8. 2014 Sarah Jacob, Graduate Assistant, topic –. New students' handbook and organizing a job fair for disaster and emergency management students.
9. 2014 Barlu Dumbuya, Poster competition, 2nd annual Undergraduate Research Fair, York University.
10. 2013 Sarah-Maude Guindon, Graduate Assistant: Geoinformation-based disaster management training facility – prototype set-up.
11. 2013 Sarah Oberholzer, Graduate Assistant, topic –Geoinformation-based disaster management training facility – prototype set-up.
12. 2013 Tammy Popper, Graduate Assistant, topic – Response/intervention dynamics on scene during disasters. Supervised with Prof. K. Thomson.
13. 2012 Marina Kompaniyets, Graduate Assistant, topic: Is York prepared for the 2015 games? MDEM York U.
14. 2011 Cheung, Gilda, Graduate Assistant, topic: natural hazards, 2010 summer.
15. 2011 Brasche, Hart. Graduate Assistant. Worked on preparing disaster scenarios for undergraduate class on disaster risk management.
16. (\*) 2010 Maula, Amanda. Research Assistant, Topics: (i) Building Resilient Communities, (ii) Emergency Management in Canada: Taking Stock, MA-DEM, York University.
17. 2009 Zuo, Jie. Summer Research Assistant, Topic: Propane Explosion, Graduate Geomatics Engineering, York University.
18. 2009 Girin, Ignat. RAY student, Topic: Demographics of neighbourhood of Toronto propane explosion.
19. 2007 Dave, Tanmay. Independent Studies, Co-supervisor, Topic: AIDS: Slow onset disaster, Faculty of Health, York University.

### **Supervisory Committee Member**

1. 2013 Wendel Chan, Graduate thesis committee. Topic: 3D environment for simulation of emergencies and decision making training, Master in Geomatics Engineering, York U.
2. 2014 Nicole Wilson, MRP committee. Topic: The mitigation of stress in business organizations, MDEM York University.
3. 2011 Latendresse, Lori, MRP Committee. Topic: Professional & Personal Emergency Preparedness: Assessing the Need for the Development of a National Employee & Family Preparedness Program for the RCM, MADEM, York University.
4. 2011 Anjum, M.I., MRP Committee. Topic: The 2010-Flood and Small Businesses in Pakistan: Impact and Recovery Issues, MADEM, York University.
5. 2011 Shah, Abdulla, MRP Committee. Topic: interagency logistical cooperation among disaster relief agencies in the preparedness phase, MADEM, York University.
6. 2007 Stewart, RM, PhD Advisory Committee. Topic: Sustainable Floodplain Management, Natural Resources Institute, University of Manitoba, Winnipeg.

### **Directed Readings**

1. 2017 Imran Aslam Khan, topic: Earthquake protection in urban and rural environment – case of Pakistan.
2. 2016 Zaheer Zia, topic: World Risk Index – a review
3. 2014 McNeil, Cheryl, topic: Business continuity planning for the police, MDEM, York U.
4. 2013 Zoe Kavanagh, topic: Slow-onset Disasters in Emergency Management: HIV/AIDS, MDEM York U.
5. 2013 Hedieh Hafezi, topic: School bus accidents – taking stock: The case of North American accidents, MDEM, York U.
6. 2013 Tammy Popper, topic: First respondents' experiences, MDEM, York University.
7. 2013 Sarah-Maude Guindon, topic: Disaster risk reduction and resilient communities, MDEM, York University.
8. 2012 Rana, Marriyam, topic: From Terrorist Activities, Socio-Economic Troubles to Regional Destabilization: The High Price of a Refugee. MADEM, York University.
9. 2012 Hoque, Waheed, topic: Community disaster perception and preparedness study, MADEM, York University, Canada.
10. 2009 McArthur, Allison, topic: Business Continuity, SAS, York University.
11. 2008 Storm Sarah, topic: Terrorism, Risk Assessments & Counter-Terrorism in Emergency Management, SAS, York University.
12. 2007 Dave, Tanmay, topic: AIDS: Slow onset disaster, Faculty of Health, York University.

### **SERVICE**

#### **YORK UNIVERSITY (July 2005 – Present)**

##### **Department Level**

- Chair, T&P File Preparation Committee (FPC) of a DEM colleague; responsible for Professional Contribution and Standing component of the file, 2018 - in progress.
- Chair, School of Administrative Studies (SAS) Research Committee, since 2018. Responsibilities include, Research Release Program, Dean's award for Distinction in Research, students' research and ethics related issues etc.
- Member, SAS Research Committee, since 2016.
- Teaching and Service referee role for many colleagues for their T&P files, since 2008.
- FPC member, responsible for the service component of a Full Professor promotion file, 2017.
- Ad-Hoc T&P review committee member, by invitation, 2016.
- Chair, by turn, SAS monthly meetings as DEM area representative.
- Volunteer faculty invigilator at weekend deferred exams scheduled by SAS.
- Coordinators and Curriculum (C & C) Committee member, SAS, 2007-2010; 2012-13.
- Lead role in achieving registration of the BDEM program with Public Service Canada <https://www5.psc-cfp.gc.ca/coop/noitcat/usermargorphcraeswohs.do>
- DEM Area Coordinator, 2007-2010; 2012-2013.
- Orientation day presentation on Emergency Management certificate, 2008-2010.
- Communication and External Relations Committee member, 2006-2008, lead role on developing content for the Emergency Management area website.
- Committee on Teaching and Learning (2006-2008): Facilitated social events, such as Part Time Teaching Award evening (13 Feb 2007) and Teaching Lunch (22 March 2007); Faculty Handbook update for new faculty members, Apr -Aug 2008.
- T&P File Preparation Committee member – Service component, June-Sep 2008.

### Faculty Level

- Member, Academic Planning and Policy Committee (APPC), LA&PS, 2018 – present.
- Member, T&P Committee, LA&PS, 2016-2018.
- Hiring Committee, Disaster and Emergency Management area, 2016.
- AA representative on hiring committee, Disaster and Emergency Management, 2015.
- Organize (periodically) guest lectures by Canadian Armed Forces Disaster Assistance Response Team (DART), since 2013.
- T&P Ad-Hoc Committee – Full Professor File from the School of Human Resources, 2014.
- Graduate Program Director (GPD), Master of Disaster & Emergency Management (MDEM), 2013-2015.
- Committee on Research Policy and Planning, 2011-2013.
- T&P File Preparation Committee member on Service component for the School of Human Resources, Full Professor file, 2012-2013.
- Interim Chair, Committee on Research Policy and Planning (CRPP), Sep-Dec 2012.
- Grant Adjudication Sub-committee of the Committee on Research Policy and Planning, 2011-2012.
- Curriculum Committee - actively and dutifully participated in discussions on new degree proposals, new course proposals, and changes in existing courses 2008-2010.
- Chair, Hiring Committee, Disaster and Emergency Management, 2007-2008.
- Consultation with George Brown College to develop a concurrent degree program in Disaster and Emergency Management and utilize their Emergency Simulation Centre for our students, 2007-2008.

### University Level

- Senate T&P committee member, since 2018-present.
- T&P Appeals Committee member for a librarian colleague who is responsible for DEM area, 2016.
- Search/hiring Committee, Civil Engineering, Lassonde School of Engineering, York University, 2013 and 2015.
- Cyclical Program Review process for DEM programs - Lead role, 2014 – 2015.  
Responsibilities included:
  - designing program specific questions to be included in the standard student survey
  - developing content for Self-Study Report/binder
  - conducting Self-Study Retreat, presenting material to participating members (Director, SAS, BAS CPR Lead, Full/part time faculty in the program) and noting their input
  - working with York University Quality Assurance Office regarding external reviewers for the process of vetting, shortlisting, and final selection of two external reviewers
  - Itinerary, invites to participants and invitees for meetings
  - logistics for the site visit of the two External Reviewers
  - Internal reviewer's participation in the process along with scheduled meetings
  - Follow up with York University and everyone involved in the process
- Academic and Administrative Program Review (AAPR), Lead Contributor on the two Disaster & Emergency Management (DEM) programs, 2014.
- Senate Committee on Academic Standards, Curriculum & Pedagogy (2012-2014)
- Senate subcommittee on Quality Assurance (2012-2014)
- Geoinformatics Stakeholder Group, York University– specific tasks include: participation in the GIS Day and exploring collaborative research and student training ideas using GIS (Geographic Information System) at York.
- Emergency Preparedness Advisory Committee (since 2005) – Consultation on Hazard Identification and Risk Analysis (HIRA) for York University campus. Engaged in York University initiatives on emergency mitigation, preparedness and response planning
- Ontario Universities Fair, 2006-2010.
- Spring Open House, programs offered by School of Administrative Studies, including DEM, 2008-2015.

- Fall Campus Day, programs offered by School of Administrative Studies, including DEM, 2008-2015.
- YUFA Steward, School of Administrative Studies representative, 2007-2008.
- York University and Centennial College Alliance working group, 2006-2008.
- Reference letters to aspiring students toward their job/scholarship/award applications, ongoing.
- York Foundation contributor towards Student Financial Aid, since 2006-2011.

### **Service to the Local Community**

- South Asian Women's Centre (SAWC), Toronto – member of the Governing Board since 2017; Chair, Board of Governor since 2018; collaboration on grant proposals; fund raising committee; new initiatives, since 2017.
- Advisory Committee, South Asian Women's Centre (SAWC), Toronto, since 2007.
- Essencia Art Collective for social change and community empowerment, Toronto, Aug 2014.
- Endowment fund "Nivedita and Nandita Bursary" establishment for cash award for an outstanding DEM undergrad student every year, since 2013.
- Natural disasters discussion with Grade 7 students, via Skype and facilitated by their teacher Ms. Amanda Trentin, Lady of Lourdes School, Brampton, Ontario. March 21, 2014.
- Senior Centres in Brampton and Mississauga – public engagement on resilience building and disasters in ethnic communities, 2013-2014.
- Ryerson University students consulted with me on their project InNEED - a localized system that aids in natural disaster management at the community level, 2010.
- Canadian Agencies for Serving South Asians (CASSA), Toronto, since 2006.
- Salvation Army Shelter, Downtown Toronto, exercise on Hazard Risk Identification and Vulnerability Assessment carried out (with David Etkin) and published for the benefit of the staff and residents of the shelter, 2006.

### **Brandon University, Canada (2003-05)**

#### **Faculty Level**

- Department Chair (May-June 2005)
- Graduate Studies Committee, 2003-2005.
- Scholarships Committee: Involved in candidate nomination and selection processes, 2003-2005.

#### **University Level**

- Committee to Administer Knowles Douglas Visiting Professorship, 2003-2005.
- Senate Award for Excellence in Research Committee, 2003-2005.
- Senate By-Laws Revision Committee, 2004-2005.
- Canada Research Chair Tier 2 Selection Committee, 2004-2005.
- International Activities Committee, 2004-2005.

#### **Local Community**

- Rotary International, member, participation in Literacy Program by weekly tutoring 2<sup>nd</sup> Grade students of the Beverly Park Primary School on reading skills, 2003-2005.
- Participated in various community service programs initiated by the Rotary International.