

Dr. Arpita Mandal

Publications

Peer Reviewed Journals

1. H Glas, G Deruyter, P De Maeyer, A Mandal (2016) Analyzing the sensitivity of a flood risk assessment model towards its input data. *Natural Hazards and Earth System Sc*, (16), pp. 2529-2542.
2. A.Mandal, D.Smith, M.Wilson, M.Taylor, A.Nandi and S.Otuokon (2016) Climate Change and Flood Risk – Challenges for Jamaican towns and communities. Inside Story, Climate Development and Knowledge Network. (<http://cdkn.org/resource/inside-story-climate-change-flood-risk-challeng...>)
3. A.Mandal, T.Stephenson, A.Brown, J.Campbell, M.Taylor and T.Lumsden (2016) Rainfall-runoff simulations using the CARIWIG Simple Model for Advection of Storms and Hurricanes and HEC-HMS: Implications of Hurricane Ivan over the Jamaica Hope River watershed. *Natural Hazards*, 83, (3), pp 1635–1659.
4. A.Nandi, A. Mandal, M. Wilson and D. Smith (2016) Integrated Flood Hazard mapping using Principal Component Analysis and Logistic Regression: a case study for Jamaica – a Small Island Developing State of the Caribbean. *Environmental Earth Sciences*, 75 :465.
5. S. Mitchell, S.James Williamson, D.Miller and A.Manda (2015) Comment on: “Geomorpho-tectonic evolution of the Jamaican restraining bend” by Leomaris Domínguez-González, Louis Andreani, Klaus P. Stanek and Richard Gloaguen. *Geomorphology*, 228, pp. 320–334.
6. C. Burgess, M. Taylor, T. Stephenson, A. Mandal and L. Powell (2015) A Macroscale Flood Risk Model for Jamaica with impact of climate variability. *Natural Hazards*. 78 (1) pp 231-256.
7. C.Burgess, M.Taylor, T.Stephenson and A.Mandal (2015) Frequency analysis, infilling and trends for extreme precipitation for Jamaica (1895 to 2100). *Journal of Hydrology: Regional Studies* 3, pp 424443.
8. S.Miller, D.A. Rowe, L. Brown and A. Mandal (2014) Wave-emplaced boulders: implications for development of "prime real estate" seafront, North Coast Jamaica. *Bulletin of Engineering Geology and the Environment*, 73(1) pp 109-122.
9. A.Mandal and A.Maharaj (2013) Flooding in Jamaica with assessment of riverine flooding of Port Maria, St Mary, Jamaica. *Bulletin de la Societe Geologique de France* , vol 184 (1).
10. A.Mandal and M.Vutchkov (2011) Heavy Metals in Soils around Cement Factory in Rockfort, Kingston, Jamaica. *International Journal of Geosciences* 2011, 2, 48-54.
11. A.Mandal and A.Haiduk (2011) Hydrochemical characteristics of Groundwater of the Kingston Basin. *Environmental Earth Sciences* Vol 62 no 2, pg 415-424

12. A.Mandal and A.Haiduk (2010) Assessment of the water quality of the groundwater in the wells of the Kingston Basin, Jamaica. *Advances in Geosciences* vol 23, Hydrological Sciences.
13. A.Mandal and D.Sengupta (2007) Geochemical hazard by coal ash from a coal based thermal power plant in Kolaghat. West Bengal, India. *Geochemica et Cosmochimica Acta*. vol 71 (15), pp. A617, August 2007.
14. A. Mandal, D.Sengupta and S.P.Sharma (2007). Mapping of groundwater contamination in and around ash-disposal site of Kolaghat thermal power plant, West Bengal, India using D.C. resistivity studies, *Journal of the Geological Society of India-INDIA* , vol 69 pp.373-380. Feb 2007
15. T.Mondal, D.Sengupta and A.Mandal (2006) Natural Radioactivity of ash and coal in major thermal power plants of West Bengal, India, *Current Science* , vol. 91(10), pp.1387-1392, November 2006.
16. A. Mandal and D.Sengupta (2006). An assessment of soil contamination around coal-based thermal power plant in India, *Environmental Geology - Springer-Verlag, Germany*, vol 51 (3) pp. 409-420 (2006).
17. A. Mandal and D. Sengupta (2005). Radionuclide and trace element contamination around Kolaghat thermal power plant, West Bengal, *Current Science,-IIAS INDIA* 88(4), 617-24.
18. A. Mandal and D.Sengupta (2003) Radioelemental study of Kolaghat Thermal Power Plant, West Bengal India, *Possible Environmental Hazards. Environmental Geology*., Springer-Verlag, Germany, vol 44(2) 2003. pp. 180-187.
19. A. Mandal and D.Sengupta (2002) Characterisation of Coal and Fly Ash from Coal-Fired Thermal Power Station at Kolaghat- *Possible Environmental Hazards. Indian Journal of Environmental Protection*(2002), Kalpana Corporation, India. ISSN –0253-7141, vol 22(8), pp. 885-891.
20. D. Sengupta and A. Mandal (2002). Radioactivity in Coal and Fly Ash of Coal Fired Thermal Power Plant at Kolaghat , West Bengal, India, *Cahiers de Physique, University of Luxembourg*.,Luxembourg. ISBN 2-87971-245-9, p 119-129.

Book Chapter

Taylor, M. A, A. Mandal, C. Burgess and T. Stephenson, (2014): Flooding in Jamaica: Causes and Controls. In *Flooding and Climate Change: Sectorial Impacts and Adaptation Strategies for the Caribbean Region*. By Dave D. Chadee (Editor), Joan M. Sutherland (Editor), John B. Agard (Editor) ISBN-13: 978-1629483177 ISBN-10: 1629483176 **Publisher: Nova Science Publ Inc**

Papers Presented at Academic Conferences and Workshops

1. Attended the Resilient Cities, 2017 conference at Bonn, Germany from July 4-9th, 2016. Panelist at the forum on Managing Ecosystems for more resilient cities in India, Bolivia and Jamaica.

2. Paper presented at the Annual Conference of Caribbean Water and Waste Water Association, Miami, August, 2015. **A. Mandal**, S. Mitchell and D. Miller, "Geological Mapping For Water Resources, Parish Of St Catherine, Jamaica : A Case Study".
3. Paper presented at the CARIWIG stakeholder workshop held in Barbados, Feb 10-12, 2015.
4. Paper presented at the Annual Conference of the Jamaica Institute of Engineers , Sept, 2014, **A. Mandal, R. Richards, A. Nandi and M. Codling(2014)** Flood Hazards in Jamaica: The impact of hurricanes, tropical storms, and the development of a Parish Based Disaster Risk Information Platform (DRIP).
5. Paper presented at the 23rd Annual Caribbean Water and Wastewater Association Conference , Oct 6-10, 2014, Bahamas. **A.Maharaj and A. Mandal(2014)** The Importance Of Hydroinformatics In Hazard Assessment: The Use Of HEC-HMS & HEC-GEOHMS To Analyze Flooding In Port Maria, St. Mary, Jamaica.
6. Paper presented at the WCRP Conference for Latin America and the Caribbean : Developing linking and applying climate knowledge , March 17-21, Montevideo, Uruguay, 2014. Title "**Hydrological Simulation of Extreme Events in Jamaica : Case studies of Hope, Yallahs and Outram river watershed**" – **A.Mandal, M.Wilson, A.Maharaj, D.Smith and L.Barrett.**
7. Paper presented at the WCRP Conference for Latin America and the Caribbean : Developing linking and applying climate knowledge , March 17-21, Montevideo, Uruguay, 2014. Title "**Flood Risk and Climate Change in Negril, Jamaica - An assessment of combined terrestrial and coastal flood risk driven by projections of future climate** – **M.Wilson, A.Mandal, M.Taylor, C.Burgess, J.Campbell and T.Stephenson**
8. Lectured a session on **Hydrological Models in the Regional Climate Change workshop** organised by Dept of Physics, UWI MONA and CCCCC, January 9th, 2014.
9. Paper presented at Developing Sustainable Networks of Women Scientists for Addressing Issues of Hydrologic Events and Hazards Buenos Aires, Argentina November 3 – 6, 2013. Title "**Flood Hazards in Jamaica : Modelling and Uncertainties**" **A.Mandal , A.Maharaj, M. Wilson, M.Taylor, T.Stephenson and C.Burgess**
10. Paper presented at the International Conference on Flood Resilience: Experiences in Asia and Europe. 5-7th September, 2013 Exeter, UK. Title "**Hydrological Modelling for simulation of Flooding from extreme events in Jamaica - Case study of the Hope River Watershed- A. Mandal, L.Barrettand D.Smith.**
11. Paper presented at the VAMOS-CORDEX Climate conference in Peru , September 2013.Title "**Terrestrial Flood Risk and Climate Change in the Yallahs River, Jamaica: an assessment of future flood risk using hydrodynamic models driven by projections of future climate. Matthew Wilson, Arpita Mandal, Michael A. Taylor, Christopher Burgess, Jayaka Campbell and Tannecia Stephenson.**
12. 1. Oral presentation at the annual meeting of Association of Environmental and Engineering Geologists. Salt Lake City, Utah, Sept 15-23, 2012. Title "Flood hazards in Jamaica - Impact on infrastructures and water supply systems. Does Climate Change play a role ? By A.Mandal and L.Barrett.

13. 2. Lectured a session on Hydrological Models in the Regional Climate Change workshop organised by Dept of Physics, UWI MONA, August 22nd , 2012.
14. 3. Attended the IWRM (Integrated Water Resource Management) Toolbox and Consulting Partner's meeting for the Global Water Partnership at Stockholm, Sweden, Aug 25-26th 2012.
15. 4. Presented at the workshop on findings of the results of the study on Flood Modelling and Mapping of the Hope River Watershed as a part of the Caribbean Disaster Risk Atlas Project. Funded By World Bank And Institute Of Sustainable Studies UWI MONA, JUNE 28th 2012 Ocho Rios, Jamaica,
16. 5. Attended Training Workshop on Hazard Risk Calculation as a part of the Caribbean Disaster Risk Atlas Project. Funded By World Bank And Institute Of Sustainable Studies Uwi Mona, April 2nd- 4th 2012, UWI ST AUGUSTINE .
17. 6. Paper presented at the Asia Oceania Geosciences Union (AOGS) August 8-12, 2011, Title “ Climate Change and Rainfall Induced River Flooding with Special reference to Port Maria, St Mary, Jamaica.” A.Mandal and A.Maharaj.
18. 7. Paper presented at the Asia Oceania Geosciences Union (AOGS) August 8-12, 2011, Title “ Water Resources and Challenges of the Kingston Basin.” A.Mandal
19. 8. Paper Presented at the AWRA Spring Speciality Conference , 18-20th April 2011, Baltimore, USA. Title “Analysing High-Intensity, Rainfall-Driven, River Flooding in Port Maria, St. Mary, Jamaica. How Has Climate Change Exacerbated the Situation?. A.Maharaj and A.Mandal.
20. 9. Poster presentation at the 5th Caribbean Conference on Comprehensive Disaster Management, at Rose Hall, Montego Bay , Dec 2010. Title “ Modelling of High-Intensity Rainfall driven river flooding of Port Maria, Jamaica. by A.Maharaj and A.Mandal.
21. 10. Paper presented at the International Conference on Disasters in Cuba, June 2010. Title “Rainfall induced river flooding of Port Maria, Jamaica” . by A.Mandal and A.Maharaj.
22. 11. Paper presented at the Asia Oceania Geosciences Union (AOGS) 2009, Singapore . Title:”Assessment of the water quality of the groundwater of the Kingston Basin, Kingston, Jamaica” by A.Mandal and A.Haiduk. Paper selected as one of the selected papers for registration fee waiver.
23. 12. Poster Presentation at the Conference of Faculty of Pure and Applied Sciences, UWI MONA, 2008, Title : “Geochemistry Of Soils Around The Carib Cement Factory In Kingston, Jamaica “ by A.Mandal, M.Voutchkov, R.Maharaj and M. Madourie.
24. 13. Paper presented in the Annual Meeting of the Geological Society of America, Oct 26-31, 2007 in Denver , Colorado, Title : “Radionuclide And Trace Element Contamination From Coal Combustion From Kolaghat Thermal Power Plant, India, by A. Mandal and D. Sengupta
25. 14. Paper presentation at the National Seminar on Mineral- Based Industries, organised by Geological Society of India and Andhra University, 5th -7th December 2001. Title: Environmental Impact Of The Coal - Based Thermal Power Plants At Kolaghat by A. Mandal and D. Sengupta
26. 15. Paper presented at 1st Workshop on Natural Radionuclides in Hydrology and Hydrogeology, at University of Luxemborg, July 2002. Title : Radioactivity in Coal and Fly

Ash of Coal-Fired Thermal Power Plant at Kolaghat, West Bengal by D.Sengupta and A.Mandal

27. 16. Paper presented at the International Conference on Role of NATURAL Resources in Sustainable Development, organised by Geological Society of Bangladesh and SEGMITE, at Dhaka, January 2003 . Title : Radionuclide And Trace Element Contamination Around A Coal-Based Thermal Power Plant At Kolaghat by A.Mandal and D.Sengupta.