Papia F. Rozario

Instructional Assistant Professor, Dept. of Marine Sciences	Contact: 409.740.4819
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Texas A&M University, Galveston	Office: 107B Library(Bldg. 3010)

EDUCATION

North Dakota State University,   Fargo, ND
Ph.D., Environmental & Conservation Sciences   May 2017
Dissertation Title: Quasi-Empirical and Spatio-Temporal Vulnerability
Modeling of Environmental Risks Posed to a Watershed.
Advisor: Dr. Peter Oduor
Research focused on:
- Developing stochastic and deterministic models for land-use land-cover (LULC) changes with a focus on water quality
- Utilized remote sensing algorithms to predict the direction of change and quantify change in LULC

Areas of specialization: Remote sensing analysis of environmental systems, Geostatistical modelling and human-environment interactions

University of Madras,   Chennai, India
M.S., Geography   September 2010
Thesis Title: Landuse patterns of rural areas in the Western Ghats, India. *Advisor:* Dr. M. Premeela
Thesis focused on:
- Qualitative approach towards accessing the changing LULC patterns in a mining town.
- Utilized qualitative methods of surveying and cartographic analysis.

University of Calcutta,   Kolkata, India
B.S., Geography   July 2007
Project Title: Socio-economic study of the mining town of Kalasa, India. *Advisor:* Soma Ganguly

ACADEMIC POSITIONS

Texas A&M University, Galveston,   Galveston, TX
Instructional Assistant Professor,   January 2019 - present
Marine Sciences

Texas A&M University, Galveston,   Galveston, TX
GIS Library Outreach Liaison,   January 2019 - present
Jack K. Williams Library

Carleton College,   Northfield, MN
Visiting Assistant Professor & GIS Specialist,   August 2017 – December 2018
Environmental Studies

Welland Gouldsmith School,   Kolkata, WB, India
Assistant Teacher,   August 2015 – December 2016
Geography

St. Andrews Public School,   Kolkata, WB, India
Assistant Teacher,   August 2009 – December 2010
Geography

ADVISING AND MENTORING	Committee member, Bianca Broman, MS,
	Marine Resource Management, Texas A&M University, Galveston. In progress.

COURSES TAUGHT

Texas A&M University, Galveston, Galveston, TX
Department of Marine Sciences
- MARS 626 - Advanced GIS for Marine Coastal Systems Spring 2020
- MARS 325 - Introduction to GIS for Marine Sciences
- MARS 325 - Introduction to GIS for Marine Sciences Fall 2019
- MARS 325 - Introduction to GIS for Marine Sciences Spring 2019

Carleton College, Northfield, MN
Department of Environmental Studies
- ENTS 120.52 Introduction to Geospatial Analysis & Lab Fall 2018
- ENTS 120.53 Introduction to Geospatial Analysis & Lab
- ENTS 120.52 Introduction to Geospatial Analysis & Lab Spring 2018
- ENTS 120.53 Introduction to Geospatial Analysis & Lab

∗ **North Dakota State University,** Fargo, ND
Department of Geosciences
- GEOG 455/655 Introduction to Geographic Information Systems Fall 2011
- GEOG 161 World Regional Geography Spring 2012
  ∗ *served as a teaching assistant.*

RESEARCH EXPERIENCE

North Dakota State University, Fargo, ND
Mapping Technician, June 2011 - August 2011
North Dakota Forest Service June 2016 - May 2017
Duties:
- Identifying acreage changes in Shelterbelts and Riparian Forests within North Dakota: Ramifications of Basal Loss on Water Quality
- Implemented spatial analysis in pursuit of producing high quality cartographic maps (57 pages map catalog) of inundated riparian forests along Missouri River at Bismarck-Mandan Wildland Urban Interface in North Dakota

North Dakota State University, Fargo, ND
Graduate Research Assistant, January 2011 - June 2012
Dept. of Geosciences *Advisor:* Dr. Peter G. Oduor
US Forest Service Award #10-DG-11010000-011.CFDA
(Catalog of Federal Domestic Assistance) Cooperative
Forestry Assistance #10.664 and US Forest Service, award
#13-DG-11010000-004. CFDA Cooperative Forestry
Assistance, #10.664.
Duties:
- Updated the North Dakota Forest Service (NDFS) GIS database with a quantitative estimate of current windbreak acreage and ascertained their percentage changes.
- Provided geospatial elements required for North Dakota's Forest Action Plan (FAP) in risk assessment, establishing economic data in line with Great Plains initiative, and riparian forest restoration.
- Applied statistical models like Cellular Automata Markov Chain to access change in landuse patterns.

RELEVANT ACADEMIC EXPERIENCE	**Carleton College**, **Guest Instructor of GIS**, Global Environmental Policy class	Northfield, MN January 2018 – March 2018
	St. Olaf College, **GIS Consultant**, Dept. of Information Technology	Northfield, MN July 2018 – September 2018
	North Dakota State University, **GIS Teaching Assistant**, ND Teacher Resource Coalition Workshop	Fargo, ND June 2011

ACADEMIC SCHOLARSHIPS AND PRIZES

- Faculty Development Travel Grant, Jack K. Williams Library, Texas A&M University, $3000 — Galveston, TX
- Faculty Development Travel Grant, Dept. of Environmental Studies, Carleton College, $2500 — Northfield, MN
- College of Science & Mathematics Graduate Student Travel Grant, North Dakota State University, $750 — Fargo, ND
- ND View Scholarship, University of North Dakota, $750 — Grand Forks, ND
- North Dakota Forest Service / USDA / CFDA Grant, $12,270 — Fargo, ND
- Certificate of Recognition for Student Presentation at the World GIS and Remote Sensing Conference. — New Orleans, LA
- "Best Poster" Award, the 14th World Lake Conference, $1000 — Austin, TX
- Certificate for Proficiency in Geography, 2007, Loreto College — Kolkata, India
- Award for 'All Round Contribution to College Life', 2007, Loreto College — Kolkata, India
- Certificate of Merit in Geography, 2005-2006, Loreto College — Kolkata, India

PROFESSIONAL SERVICES

- Invited talk 'GIS Services at The Commons', Graduate Student Orientation, Texas A&M University, Galveston — Fall 2019
- Committee Member, CLIDE (Civic Literacy, Inclusion, Diversity, and Equity Committee), Texas A&M University, Galveston — 2019 - present
- Reviewer, Multidisciplinary Digital Publishing Institute (MDPI) — 2019 - present
- Reviewer, Journal of Remote Sensing & GIS (OMICS) — 2018 - present
- Reviewer, Journal of Geoscience and Environment Protection (SCIRP) — 2017 - 2019
- Steering Committee member, Dept. of Environmental Studies, Carleton College — 2017 - 2018
- Faculty member, Quantitative Inquiry, Reasoning, and Knowledge (QUIRK) initiative at Carleton College, MN — 2017 - 2018
- Student Representative, Search Committee for Tenure-track Assistant Professor of Geography, North Dakota State University, ND — 2011 - 2012
- Event Facilitator for Remote Sensing group, Science Olympiad, North Dakota State University, ND — 2011 - 2012

PROFESSIONAL DEVELOPMENT AND CERTIFICATIONS

- NOAA CoastWatch Satellite Course,   2019
  Texas A&M University Galveston Campus, TX
- Faculty Search Committee Members Workshop,   2019
  Texas A&M University Galveston Campus, TX
- ACRL Research Data Management Workshop for Liaisons,   2019
  Baylor University, TX
- 'Demystifying your Dissertation' workshop,   2018
  North Dakota State University, ND
- College Teaching Workshop,   2016
  North Dakota State University, ND
- Teachers Training Certificate Program,   2014
  The Assembly of God Church Junior College, India

PROFESSIONAL MEMBERSHIPS

- IEEE Geoscience and Remote Sensing Society
- American Association of Geographers
- National Center For Faculty Development & Diversity
- Association of College & Research Libraries - Map & Geospatial Information Round Table (MAGIRT)

JOURNAL PUBLICATIONS

Rozario P.F., and Gomes, R. "Analyzing kernel variants in a Convolutional Neural Network with Cellular automata for Land Use Land Cover change modelling." *(In – review), 2019.*

Gomes, R., and **Rozario P.F.** . An interactive clustering-based Genetic Algorithm for shortest path analysis using OpenStreetMap" *(In – review), 2019.*

Rozario P.F., Madurapperuma, B., and Wang, Y. "Remote Sensing Approach to Detect Burn Severity Risk Zones in Palo Verde National Park, Costa Rica." *Remote Sensing, 10(9), 1427, 2018*

Rozario P.F., Oduor, P., Kotchman, L. and Kangas, M. "Transition Modeling of Land-Use Dynamics in the Pipestem Creek, North Dakota, USA." *Journal of Geoscience and Environment Protection, 5(03), p.182, 2017*

Rozario P.F., Oduor, P., Kotchman, L. and Kangas, M. "Uncertainty Analysis of Spatial Autocorrelation of Land-Use and Land-Cover Data within Pipestem Creek in North Dakota." *Journal of Geoscience and Environment Protection, 5, 71-88, 2017 doi: 10.4236/gep.2017.58008.*

Rozario P.F., Oduor, P.G, Kotchman, L. and Kangas, M. "Quantifying Spatiotemporal Change in Landuse and Land Cover and Assessing Water Quality: A Case Study of Missouri Watershed James Sub-Region, North Dakota." *Journal of Geographic Information System, 8, 663-682, 2016.*

Madurapperuma B.D., **Rozario P.F.**, Odour, P.G. and Kotchman, L.A. "Landuse and Landcover Change Detection in Pipestem Creek watershed, North Dakota". *U.S.A in International Journal of Geomatics and Geosciences Volume 5 No.3, 2015.*

CONFERENCE PROCEEDINGS

: <u>Name</u> indicates author was a student of mine at the time of research

Rozario, P.F., Madurapperuma B.D., and <u>Yijun Wang</u>. "Geospatial Modeling of human-induced wetland fire of Semi-fossorial turtles in Palo Verde, Costa Rica." *Proceedings of Association of American Geographers Annual Meeting 2018.*

Rozario, P.F., Oduor, P., Kotchman, L. and Kangas, M. "Uncertainty Analysis of Spatial Autocorrelation of Landuse and Landcover data." *Proceedings of Association of American Geographers Annual Meeting 2017.*

Rozario, P.F., Oduor, P.G, Kotchman, L. and Kangas, M. "Spatial Dependence of Land-use/cover Predictions within Pipestem Creek, North Dakota." *ND EPSCoR 2017 Annual State Conference, Fargo, ND.*

Rozario, P.F., Oduor, P.G., Kangas,M, Kotchman, L.A. "Quantifying Spatiotemporal Change in Landuse and Land cover and accessing water quality: A Case study of Missouri Watershed James Sub-region, North Dakota." *World Congress of GIS & Remote Sensing 2016, New Orleans, Louisiana*

Rozario, P.F., Oduor, P.G., Kotchman, L. "Assessing Forest Cover Dynamics for Missouri Watershed Region: Ramifications on Watershed Water Quality." *2011 NDSU Graduate Research and Arts Forum session, North Dakota State University.*

Rozario, P.F., Oduor, P.G., Kotchman, L.A. "Change Detection in Landuse and Land cover Using Remote Sensing - A Case Study of Missouri Watershed James Sub-region, North Dakota" *ND-SD 2011 Joint EPSCoR Conference, North Dakota State University.*

Rozario, P.F., Oduor, P.G., Kotchman, L.A. "Impact of Forest Cover Dynamics on water quality of Missouri Watershed Region in North Dakota" *14th World Lake Conference 2011, Austin, Texas.*

Rozario, P.F., Anar, M.J., Wamono, A.W. and Madurapperuma, B.D. "An assessment of inundated riparian forests along Missouri River at Bismarck-Mandan Wildland Urban Interface in North Dakota." *Proceedings of the North Dakota GIS Users Conference 2011, Grand Forks, ND.*

Oduor, P.G., Kangas, M., Kotchman, L., Claeys, T., **Rozario, P.F.**, Anar, M.J., Wamono, A.W. and Madurapperuma, B.D. "A Map Odyssey on 2011 Record Flooding in North Dakota: Ramifications on Riparian Forests." *Proceedings of the North Dakota GIS Users Conference 2011, Grand Forks, ND.*