

Veronica Ruiz Xomchuk

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RESEARCH INTERESTS

Numerical simulation in coastal and continental shelf environments, continental shelf hypoxia, coastal shelf dynamic

EDUCATION

Texas A&M University, College Station, Texas.

Ph.D. in Physical Oceanography, Fall 2014-Present

Research topic: Scales of spatial and temporal variability of bottom hypoxia in the Texas Louisiana Shelf

Advisor: Dr. Robert Hetland

Gent University, Gent, Belgium

M.Sc. in Marine & Lacustrine Sciences, 2003

Dissertation title: "Seasonal variation of surf zone hyperbenthos associated with penaeid shrimp larvae at Ecuadorian sandy beaches"

Advisor: Prof. Dr. Magda Vincx

Escuela Superior Politecnica del Litoral, Guayaquil, Ecuador

B.Sc. in Oceanography, 2001

Dissertation title: "Preliminary study on the temporal variation of intertidal hyperbenthos in a sandy beach in Guayas Province (CENAIM, San Pedro, Ecuador)"

Advisor: Dr. Maria del Pilar Cornejo

RESEARCH EXPERIENCE

Ph.D Student, Texas A&M, Oceanography Department, Physical Oceanography Numerical Group; College Station, Texas 2014-Present

Estimating bottom hypoxia from numerical simulations (Regional Ocean Modeling System)

Researcher, Oceanographic Research Institute of the Ecuadorian Navy;

Guayaquil, Ecuador 2012-2014

Numerical modeling division - Early warning, forecast system (waves and ocean circulation). Coordinator of the modeling component on a Project to develop the Early Warning System for Ocean related hazards for Ecuador.

Researcher, Water and Sustainable Development Research Center;

Guayaquil, Ecuador 2000-2010

Sandy beach ecosystems - Benthos monitoring program. Fieldwork, laboratory identification of organism, statistical analysis, and supervising undergrad and graduate students.

Research Assistant, National Center for Aquaculture and Marine Science Research;

San Pedro, Ecuador 1999

Oceanographic Station monitoring, water/sediment quality analysis lab.

TEACHING EXPERIENCE

Graduate Assistant Lecturer,

Texas A&M University;

College Station, TX Spring 2017

Introduction to Oceanography, OCNG 251

Teaching Assistant, Texas A&M University;

College Station, TX Spring 2016, Summer 2016, Fall 2016

Oceanography Lab, OCNG 252

Lecturer, Universidad de Especialidades Espíritu Santo;

Guayaquil, Ecuador 2011-2013

Multivariate Statistics for Environmental Engineers - Undergraduate Level

Introduction to Oceanography - Undergraduate Level

Marine Fauna Management - Undergraduate Level

Guest Lecturer, Escuela Superior Politecnica del Litoral;

Guayaquil, Ecuador 2004-2008

Training on Software for Multivariate Analysis for Biologists/Environmental Scientist - Graduate and Professional level

PROJECTS AND OTHER EXPERIENCE

Grantee for the Tsunami Warning System Workshop. Project: Enhancement of Tsunamigenic Earthquake Monitoring Capability, collaboration between Japan and Ecuador. JICA. Tokyo, Japan. July 2014

Research Advisor of the Ecuadorian Commission at the XXVII Antarctic Treaty Consultative Meeting. RTSA. Brasilia, Brazil. May, 2014

Project Coordinator. Implementation of the ocean hindcast and forecast system for the Ecuadorian region, based on the ocean model ROMS. INOCAR. Guayaquil-Ecuador. 2012-2014.

Instructor on Coastal Biodiversity for the Training Program for Natural guides in a coastal Reserve in Santa Elena, Ecuador. 2011

Independent environmental consultant. Consultancy in coastal environmental and biodiversity monitoring, and multivariate statistical analysis of environmental and ecological data. 2010-2012.

Research grant recipient for a pilot study on the taxonomy and classification of species from the Order Isopoda (Subphylum Crustacea), as a basis to establish of a toolbox for Ecuadorian coastal Marine taxonomy. We developed a taxonomic reference collection (around 600 species), and a national digital database. 2004

HONORS AND AWARDS

2016 Ralph Rayburn Texas Sea Grant Scholarship

2015 David W. McGrail Scholarship

2002 VLIR-ESPOL Scholarship

PUBLICATIONS

Ruiz V., Dominguez L., Marín J, Miño S. 2005. Guide of the intertidal fauna of the Sandy beaches of continental Ecuador. VLIR-ESPOL publication. ISBN: 9978-310-12-6.

Dominguez L., **Ruiz V.** and Fockedey N. 2004. “Hiperbenthos in Ecuador: 4 years of research”. Revista Tecnológica de la ESPOL. Volumen 17(1): 124-132

Calles A., Domínguez L., Guartatanga S., **Ruiz V.**, Gonzalez K., Cornejo M. P., Vincx M. 2002. “Interannual Variability of the Meiobenthos and Hyperbenthos Communities from two Ecuadorian sandy beaches (1999-2001)”. Revista de Investigaciones Marinas. Universidad Católica de Valparaiso, Volume 30 (1): 135-137.

Guartatanga S., **Ruiz V.** 2001. Benthos sampling: protocol and procedures. Internal Report. VLIR – ESPOL project.

CONFERENCE PRESENTATIONS

Hetland, R., **Ruiz-Xomchuk, V.**, DiMarco, S., Fennel, K., and Zhang, W. Modulation of bottom hypoxia by submesoscale shelf eddies in the Northern Gulf of Mexico. Ocean Science Meeting, 2016. Session : Coastal Submesoscale Processes: Physics, Biogeochemistry, and Their Interactions.

Ruiz X. Verónica, Domínguez Luis G., García Sixto, Cornejo María del Pilar. National biodiversity database: a proposal. International Biodiversity Conference. Baños, Ecuador, July 29-August 3. 2008

Ruiz, V., Dominguez L., Marín-Jarrín J. & S. Miño. Pilot study on the classification and identification of species from the Order Isopoda (Subphylum Crustacea). Oral presentation. ESPOL Seed Projects Workshop. Guayaquil, Ecuador. July 2004.

Ruiz, V., Dominguez L., Marín-Jarrín J. & S. Miño. Generating knowledge on the coastal biodiversity in Ecuador: small organisms in sandy beaches. Poster presentation. ESPOL Ciencia 2004. Guayaquil, Ecuador. November 2004.

Ruiz V., Fockedey N. 2002. Penaeid shrimp post larvae and they accompanying fauna in a surf zone ecosystem. ESPOL Ciencia. Guayaquil, Ecuador. 2003.

Ruiz V., Guartatanga S., Fockedey N. 2002. Monitoreo de la variación temporal del hiperbentos intermareal. ESPOL Ciencia. Guayaquil, Ecuador. 2002.

FIELD EXPERIENCE

Macro, meio, hiper and epi benthos monitoring in sandy beach environments. Developing of sampling and safety protocols. 1999-2010.

Physical oceanographer in the annual Ecuadorian regional cruise “Orion”, from continental Ecuador to Galapagos. Summer 2015.

PROFESSIONAL QUALIFICATIONS/SPECIAL SKILLS

Certifications: CPR, First Aid, SNSI-Advanced Open Water Diver.

Languages: English, Spanish and Russian.

Programing languages: Python, FORTRAN

Experience with Linux system administration, and parallel computing.

SERVICE

Volunteer during outreach activities for the Oceanography Department, Texas A&M University. Spring 2017.

Invited speaker in “Tsunami awareness” seminar for local population and stakeholders in Playas Villamil Ecuador, organized by the Red Cross- Ecuador. December 2016.

Volunteer on National Seafloor SCUBA Cleaning Event in Ecuador. June 2012. May 2013.

Volunteer in the “Tortuga Program” for the ONG Equilibrio Azul in Puerto Lopez, Ecuador. I helped to develop a beach profile monitoring protocol in a protected nesting sandy beach. Jun, 2011.