

ADRIAN MIKHAIL PALACI GARCIA

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EDUCATION

2022 (expected)	PhD – <i>Applied Ocean Science & Engineering</i> , MIT-WHOI Joint Program Advisor: Dr. Rocky Geyer
2016	BSc – <i>Civil & Environmental Engineering</i> , University of Pittsburgh

Short Courses

Aug. 2015	Center for Research and Education of the Amazonian Rainforest (CREAR) <i>2-week course (in Spanish) on science, culture, & engineering in the Peruvian Amazon</i>
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RESEARCH

I am interested in *environmental fluid mechanics*, particularly the impact of channel morphology on hydrodynamics and mixing. My current research project is on understanding mechanisms of tidal dispersion in the North River, a meandering salt-marsh creek in Marshfield, MA. Ultimately, I hope to become involved in riverine & estuarine restoration projects.

Research Interests: *environmental fluid mechanics, mixing processes, secondary flows, coastal restoration, channel morphology, fieldwork, numerical modeling*

AWARDS & HONORS

Graduate

2018	Ford Foundation Fellowship – Honorable Mention
2017–2018	Michael J. Kowalski Fellowship in Ocean Science & Engineering
Fall 2017	MIT Office of the Dean of Graduate Education – Diversity Fellowship

Undergraduate

2017	Ford Foundation Fellowship – Honorable Mention
2016	Best Paper in Agricultural, Civil, Environmental, & Biological Engineering (SHPE National Engineering Science Symposium)
2016	MIT Summer Research Program Conference Travel Grant
2015, 2016	SHPE Foundation Undergraduate Scholarship
2015	Georgia Tech FOCUS Scholar
2014, 2016	University of Michigan Graduate Engineering Symposium Travel Grant
2012–2016	University of Pittsburgh Academic Scholarship
2012	Bushkill Lions Club Scholarship

PUBLICATIONS

Peer-Reviewed Journals

- [1] M. Maza, K. Adler, D. Ramos, A. M. P. Garcia, and H. M. Nepf, "Velocity and drag evolution from the leading edge of a model mangrove forest," *Journal of Geophysical Research: Oceans*, vol. 122, no. 11, pp. 1–22, Nov. 2017, ISSN: 21699275. DOI: 10.1002/2017JC012945. [Online]. Available: <http://doi.wiley.com/10.1002/2017JC012945>.

Conference Papers

- [1] S. J. Dickerson, S. P. Jacobs, A. M. P. Garcia, and D. V. P. Sanchez, "Joint assessment and evaluation of senior design projects by faculty and industry," *Proceedings - Frontiers in Education Conference, FIE*, pp. 1–7, 2016, ISSN: 15394565. DOI: 10.1109/FIE.2016.7757395.

CONFERENCES

Oral Presentations

- [1] A. M. P. Garcia and H. M. Nepf, "An experimental study of an artificial mangrove forest: Determination of drag and turbulence," in *Society of Hispanic Professional Engineers - Engineering Science Symposium*, Seattle, WA, 2016.
- [2] A. M. P. Garcia and J. D. Abad, "La evolución morfodinámica del Río Amazonas peruano : Un análisis planimétrico," in *Congreso Lationamericano de Hidráulica*, Lima, Peru, 2016.

Poster Presentations

- [1] A. M. P. Garcia, J. D. Abad, C. Ortals, and C. E. Frias, "Insight on the Peruvian Amazon River: A Planform Metric Characterization of its Morphodynamics," in *River, Coastal and Estuarine Morphodynamics*, Iquitos, Peru, 2015.
- [2] —, "Insight on the Peruvian Amazon River: A Planform Metric Characterization of its Morphodynamics," in *American Geophysical Union*, San Francisco, California, 2014.

Non-Presenter

- [1] W. M. Kranenburg, G. A. M. P., W. R. Geyer, and D. K. Ralston, "The Influence of High Curvature Bends On Flow and Salinity Structure in a Partially Mixed Salt-Marsh Creek," in *International Symposium on Environmental Hydraulics*, Notre Dame, IN, 2018.
- [2] J. Zappitelli, D. Sanchez, K. MacEneaney, and A. Garcia, "Evaluation of Supervised Learning to Identify Trends in River Water Quality," in *PIANC-SMART Rivers*, Pittsburgh, PA, 2017.
- [3] J. D. Abad, C. Escobar, A. M. P. Garcia, C. Ortals, C. E. Frias, and J. Vizcarra, "Rivers as Political Boundaries: Peru and its Dynamic Borders," in *American Geophysical Union*, San Francisco, California, 2014.

OTHER PRESENTATIONS

- [1] A. M. P. Garcia and H. M. Nepf, "Determination of drag coefficient for mangrove trees : An experimental study in an artificial mangrove forest," in *MIT Summer Research Program*, Cambridge, MA, 2016.

- [2] A. M. P. Garcia and J. D. Abad, "The morphodynamic evolution of the Peruvian Amazon: A planimetric analysis," in *Congreso Latinoamericano de Hidráulica*, Lima, Peru, 2016, pp. 485–486.
- [3] —, "Migration rates and metrics of the Amazon River," in *Pitt EXCEL Summer Research Internship*, Pittsburgh, PA, 2013.

UNDERGRADUATE PROJECTS

2016–2017	REMOTE SENSING OF PITTSBURGH WATER QUALITY University of Pittsburgh, Dr. David Sanchez
Fall 2016	FRANKLIN-GLASS DAM REMOVAL (SENIOR DESIGN) University of Pittsburgh, Lisa Hollingsworth-Segedy (American Rivers)
Summer 2016	DRAG COEFFICIENT OF MANGROVE TREES Massachusetts Institute of Technology, Dr. Heidi Nepf
2013–2016	MORPHODYNAMICS OF THE PERUVIAN AMAZON RIVER University of Pittsburgh, Dr. Jorge Abad

WORK EXPERIENCE

2016–2017	Mascaro Center for Sustainable Development, Pittsburgh, PA <i>Data Analyst, Research Assistant (Engineering Education)</i>
2014–2015	PCL Civil Constructors, Seattle, WA <i>Field Engineering Intern, Estimating Intern</i>

TEACHING

University Level

Summer 2018	WHOI Summer Math Review, Woods Hole Oceanographic Institution <i>Course Instructor for Precalculus, Calculus I, and Calculus II</i>
Spring 2017	CEE 0109 – Computer Methods for Civil Engineering, University of Pittsburgh <i>Course Co-Instructor (Lecturer for AutoCAD, Teaching Assistant for MATLAB)</i>

Other Teaching

2016–2017	Goldstein Test Prep, Pittsburgh, PA <i>SAT Course Instructor; Math Tutor for Algebra, Precalculus, & Calculus</i>
2016–2017	Fund for Advancement of Minorities through Education (FAME), Pittsburgh, PA <i>STEM Coach for First Lego League & Ten80 Competitions; Spanish Tutor</i>

OUTREACH & MENTORSHIP

2015–2017	Society of Hispanic Professional Engineers – Noche de Ciencias
2015	Pitt Scientists, Engineers, & Mathematicians for Service (SEMFS)
2013–2016	Pitt EXCEL Peer Mentor
2013	Pitt EXCEL Summer Engineering Academy Peer Counselor
2012–2013	CTSI Science Education Outreach Program

ACTIVITIES

Graduate

2017–Present	Academic of Courageous Minority Engineers (ACME) <i>Treasurer (2018)</i>
Summer 2018	MIT-WHOI Joint Program Annual BBQ Planning Committee
Spring 2018	Graduate Student Leadership Institute

Undergraduate

2012–2017	Society of Hispanic Professional Engineers <i>Fundraising Chair (2013), Co-President (2014), Vice President (2015)</i> <i>Pennsylvania Sub-regional Student Representative (2015)</i>
2012–2017	Pitt EXCEL (<i>Engineering Diversity Program</i>)
Aug. 2015	River, Coastal, & Estuarine Morphodynamics – Conference Staff