Curriculum Vitae

Jorge D. Abad

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EDUCATION

PhD, May 2008, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, Urbana, IL, USA. Advisor: Marcelo H. Garcia

M.S., December 2002, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, Urbana, IL, USA. Advisor: Marcelo H. Garcia

B.S., July 1997, Department of Civil Engineering, National University of Engineering, Lima, PERU.

PROFESSIONAL POSITIONS

Director of the Environmental Fluid Mechanics (EFM) Laboratory, University of Pittsburgh, PA, USA. http://www.engineering.pitt.edu/efml/. October 2009-present.

Assistant Professor, Department of Civil and Environmental Engineering, University of Pittsburgh, PA, USA, October 2009-present.

Secondary Appointment, Department of Geology and Planetary Sciences, University of Pittsburgh, USA, Fall 2011 – present.

Co-founder and Academic Director, Center for Research and Education of the Amazonian Rainforest. (CREAR) www.crearamazonia.org. November 2011-present.

External Advisor, Directorate of Hydrography and Navigation of the Peruvian Navy, Peru, August 2013-Present.

Core faculty, Center for Simulation & Modeling, www.sam.pitt.edu/. October 2009-present.

Core faculty, Center for Latin American Studies, www.ucis.pitt.edu/clas/. October 2009-present.

Postdoctoral Research Associate, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, IL, USA. June 2008 - August 2009. Supervisor: Marcelo H. Garcia

Visiting professor, short course on "Shallow water flows: basic physics and models". Department of Mathematics and Computation, University of Sao Paulo, San Carlos, Brazil. August 2008.

Graduate Research Assistant, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, IL, USA. August 2000 - May 2008.

HONORS AND AWARDS

AWARDS/HONORS MADE TO DR. ABAD

1. **The Lorenz Straub Award, St. Anthony Falls Laboratory** (received in October, 2012 at University of Minnesota, Minneapolis, MN, USA). This Award is given for the most meritorious PhD dissertation in hydraulic engineering, ecohydraulics, or related field for the year in which the recipient´s dissertation was completed (2008). http://www.safl.umn.edu/about/awards/lorenz-straub/winners.
2. **Co-recipient of the BSG (British Society for Geomorphology)'s Willey Blackwell Award 2012** (received at BSG annual meeting, Nottingham, UK, June 25-27, 2012). The Award is given to the best paper published in the BSG's Journal Earth Surface Processes and Landforms, http://www.geomorphology.org.uk/award/6/winner/77.
3. **Co-recipient of the Wesley W. Horner Award**, **American Society of Civil Engineers 2011** (received at ASCE-EWRI conference 2012, Albuquerque, NM, USA, May 20-24, 2012). The Award recognizes papers that have contributed to the areas of hydrology, urban drainage, or sewerage, http://www.asce.org/Content.aspx?id=17486.
4. **2012 Outstanding Reviewer**, Journal of Hydraulic Engineering, American Society of Civil Engineers, ASCE.

AWARDS/HONORS MADE TO GRADUATE AND UNDERGRADUATE ADVISEES

1. **2014: Adrian Garcia**, University of Michigan Graduate Engineering Symposium Travel Grant.
2. **2014: Kristin Dauer**, CLAS (Center for Latin American Studies, University of Pittsburgh) Fellowship to carry out field measurements in the Amazon River, Peru.
3. **2013: Kristin Dauer**. Student travel grant (American Geophysical Union, 2013) to give an oral presentation in the AGU Fall Meeting 2013. San Francisco, CA, USA.
4. **2013: Kristin Dauer**, CLAS (Center for Latin American Studies, University of Pittsburgh) Fellowship to carry out field measurements in the Amazon River, Peru.
5. **2013: Kristin Dauer**, ASCE Freeman Travel Fellowship, ASCE, http://www.asce.org/Student-Organizations/Scholarships-and-Fellowships/2012-National-Scholarship-and-Fellowship-Winners/
6. **2012: Ronald Gutierrez**, ASCE Freeman Travel Fellowship, ASCE, http://www.asce.org/Student-Organizations/Scholarships-and-Fellowships/2012-National-Scholarship-and-Fellowship-Winners/
7. **2011: Ronald Gutierrez**. Student travel grant (American Geophysical Union, 2011) to give an oral presentation in the AGU Fall Meeting 2011. San Francisco, CA, USA.
8. **2010: Ronald Gutierrez**, International Student Fund Scholarship (Center for International Studies of the University of Pittsburgh, 2010) to carry out one-month preliminary fieldwork in the Amazon River, Peru.
9. **2011: Christian Frias, best TA,** Department of Civil and Environmental Engineering, University of Pittsburgh
10. **2010: Christian Frias**, International Student Fund Scholarship (Center for International Studies of the University of Pittsburgh, 2010) to carry out one-month field measurements in the Amazon River, Peru.

11. **2011: Ross Volkwein, Best technical paper, undergraduate competition,** The World Environmental & Water Resources Congress, American Society of Civil Engineers, 2011 EWRI-ASCE (http://www.engineering.pitt.edu/News.aspx?id=2147484396).

PUBLICATIONS

REFEREED PUBLICATIONS:
BOOK CHAPTERS

1. Rhoads, B. L., García, M. H., Rodriguez, J., Bombardelli, F., **Abad, J. D.** and Daniels, M. (2008). "*Methods for evaluating the geomorphological performance of naturalized rivers: examples from the Chicago metropolitan area*". In Uncertainty in River Restoration, edited by David Sears and Steve Darby, John Wiley & Sons, UK.
2. Odgaard, A. J., **Abad, J. D.** (2008). "*Chapter 8: River meandering and channel stability*". In ASCE Manual of Practice 110: Sedimentation Engineering," M.H. Garcia (ed), Reston, VA, USA, pp. 439-459.
3. Rhoads, B. L., Engel, F. L. and **Abad, J. D.** (2011). "*Pool-Riffle Design Based on Geomorphological Principles for Naturalizing Straight Channels*", In Stream Restoration in Dynamic Fluvial Systems: Scientific Approaches, Analyses, and Tools, edited by Simons, A., Bennett, S. J., and Castro, J. M., Geophysical Monograph Series, Vol. 194, 544 pp.

REFEREED PUBLICATIONS:
JOURNAL ARTICLES (Published)
(*) Undergraduate student
(**) Graduate student
(***) Postdoc

Dr. Abad has published in different journals (impact factor) such as: *Science* (**33.6**), *Journal of Geophysical Research – Earth Surface* (**3.621**), *International Journal of Coal Geology* (**3.157**), *Water Resources Research* (**3.149**), *Sedimentary Geology* (**2.564**), *Geomorphology* (**2.552**), *Hydrological Processes* (**2.497**), *Earth Surface Processes and Landforms* (**2.49**), *Journal of Sedimentary Research* (**2.33**), *Water Resources Management* (**2.259**), *Computers & Geosciences* (**1.992**), *Journal of Hydro-Environment Research* (**1.961**), *Journal of Hydraulic Engineering* (**1.862**), *Ocean Engineering* (**1.448**), *Journal of Environmental Engineering* (**1.31**).

1. Gutierrez, R. (**), **Abad, J. D.**, Choi, M (*), Montoro, H. (2014) "*On the morphodynamics of free meanders confluences at the Upper Amazon Basin*", Geomorphology, 220: 1-14.
2. Gutierrez, R. (**), **Abad, J. D.**, (2014) "*On the analysis of the medium term planform dynamics of meandering rivers*", Water Resources Research, 50, doi:10.1002/2012WR013358.
3. Motta, D. (**), Langendoen, E. J., **Abad, J. D.,** Garcia, M. H. (2014) "*Meander migration in horizontally and vertically heterogeneous floodplains: how and why bank mass failure process matter*", Journal of Geophysical Research-Earth Surface, AGU, 119, doi:10.1002/2013JF002952.
4. El Kadi Abderrezzak, K., **Abad, J. D.**, Langendoen, E. (2014) "*Moveable-bed models*", Journal of Hydro-Environment Research, 8 (2): 75-76.
5. Latrubesse, E., Wilkinson, J. **Abad, J. D.** (2014) "*Large rivers and megafans*". Sedimentary Geology, 301: 91-92.
6. Brantley, S. L., Yoxtheimer, D., Arjmand, S. (**), Grieve, P., Vidic, R., **Abad, J. D.**, Simon, C. (**), Pollak, J. (2014) "*Using publicly available data to assess water resource impacts during unconventional shale gas development: the Pennsylvania experience*", Journal of Coal Geology, 10.1016/j.coal.2013.12.017.
7. Frias, C. (**), **Abad, J. D**. (2013). *"Mean and turbulent flow structure during the amalgamation process in fluvial bed forms"*, Water Resources Research, 49: 6548–6560, doi:10.1002/wrcr.20456.
8. **Abad, J. D.**, Frias, C. (**), Buscaglia, G., Garcia, M. (2013). "*Modulation of the flow structure by progressive bedforms in the Kinoshita Meandering channel*", Earth Surface Processes and Landforms, 38: 1612–1622.
9. Gutierrez, R. (**), **Abad, J. D.**, Parsons, D. R., Best, J. L. (2013) *"Discrimination of bedforms scales using robust spline and wavelet transforms: methods and application to Synthetic Signals and the Parana River, Argentina"*, Journal of Geophysical Research-Earth-Surface, 118: 1400–1419, doi:10.1002/jgrf.20102.
10. Vidic, R., Brantley, S. L., Vandenbossche, J. M., Yoxtheimer, D., **Abad, J. D.** (2013). "*Impact of Shale Gas Development on Regional Water Quality*". Science, 340, 1235009, doi: 10.1126/science.1235009.
11. Catano, Y., **Abad, J. D.**, Garcia, M. H. (2013). "*Experimental and numerical study of the flow structure around two partially buried objects on a deformed bed"*. Journal of Hydraulic Engineering, 139 (3): 269-283.
12. **Abad, J. D.**, Montoro, H., Latrubesse, E. (2013). "*TROPICAL RIVERS 2012: IGCP Annual Symposium, August 8 to August 12 of 2012",* EOS, AGU, 94 (3), pp. 32.
13. Brantley, S.L., Wilderman, C., **Abad, J.D.** (2012), "*Workshop Discusses Database for Marcellus Water Issues*", EOS, 93 (34), pp. 328.
14. Motta, D. (**), **Abad, J. D.**, Langendoen, E. J., Garcia, M. H. (2012). "*The effects of floodplain soil heterogeneity on meander planform shape*", Water Resources Research, 48, W09518, 17 pp.
15. Guneralp, I., **Abad, J. D.**, Zolezzi, G., Hooke, J. (2012). *"Advances and challenges in meandering channels research"*, Geomorphology, 163-164: 1-9.
16. Motta, D. (**), **Abad, J. D.**, Langendoen, E. J. and Garcia, M. H. (2012). "*A simplified 2D model for long-term meander migration with physically-based bank evolution*", Geomorphology, http://dx.doi.org/10.1016/j.geomorph.2011.06.036, 163-164: 10-25.
17. **Abad, J. D.,** Sequeiros, O. E., Spinewine, B., Pirmez, C., García, M. H. and Parker, G. (2011) *"Secondary current of saline underflow in a highly meandering channel: experiments and theory"*. Journal of Sedimentary Research, 81 (11).
18. Parker, G., Shimizu, Y., Wilkerson, G. V., Eke, E. C. **Abad, J. D.**, Lauer, J. W., Paola, C., Dietrich, W. E. and Voller, V. R. (2011). *"A new framework for modeling the migration of meandering rivers".* Earth Surface Processes and Landforms, 36: 70-86.
19. Motta, D. (**), **Abad, J. D.** and Garcia, M. H. (2010). *"A modeling framework for organic sediment resuspension and oxygen demand: the case of Bubbly creek in Chicago, Illinois"*, Journal of Environmental Engineering, 136 (9): 952-964.
20. Catano, Y., **Abad, J. D.** and Garcia, M. H. (2009). *"Characterization of bedform morphology using wavelet analysis"*. Ocean Engineering, 36: 617-632, doi:10.1016/j.oceaneng.2009.01.014.
21. **Abad, J. D.**, and M. H. Garcia (2009), *"Experiments in a high-amplitude Kinoshita meandering channel: 1. Implications*

of bend orientation on mean and turbulent flow structure", Water Resources Research, 45, W02401.

22. **Abad, J. D.,** and M. H. Garcia (2009), "*Experiments in a high-amplitude Kinoshita meandering channel: 2. Implications of bend orientation on bed morphodynamics*", Water Resources. Research, 45, W02402.
23. **Abad, J. D**., Rhoads, B. L., Guneralp, I., García, M. H. (2008) "*Flow structure at different stages in a meander-bend with bendway weirs*". Journal of Hydraulic Engineering, 138 (8): 1052-1053.
24. **Abad, J. D.,** Buscaglia, G. and Garcia, M. H. (2008) "*2D Stream Hydrodynamic, sediment transport and bed morphology model for engineering applications*". Hydrological Processes, 22: 1443-1459.
25. Muller, D., **Abad, J. D.,** Garcia, C., Gatner, J. W. and Garcia, M. H. (2007) "*Errors in Acoustic Doppler Velocity measurements caused by flow disturbance*". Journal of Hydraulic Engineering, 133 (12): 1411-1420.
26. **Abad J. D.** and García, M. H. (2006). "*RVR Meander: A toolbox for re-meandering of channelized streams*". Computers & Geosciences, 32: 92-101.
27. **Abad, J. D**. and García, M. H. (2006). Discussion of "*Efficient algorithm for Computing Einstein Integrals by Junke Guo and Pierre Y. Julien*" (Journal of Hydraulic Engineering, Vol. 130, No. 12, pp. 1198-1201, 2004). Journal of Hydraulic Engineering, ASCE, 132 (3): 332-334, 2006.
28. Rodriguez, J. F., Bombardelli, F. A., García, M. H., Frothingham, K., Rhoads, B. L., **Abad, J. D**. (2004). "*High-resolution numerical simulations of flow through a highly sinuous river reach*". Water Resources Management, 18: 177-199, Kluwer Academic Publishers.

REFEREED PUBLICATIONS:
JOURNAL ARTICLES
(In review)
(*) Undergraduate student
(**) Graduate student
(***) Postdoc

1. Mendoza, A. (***), Frias, C. E. (**), Collin, O. (*), **Abad, J. D.**, Paredes, J., Vizcarra, J., Montoro, H. "*Dynamics of the Amazonian anabranching structure near Iquitos City*". In review, Earth Surface Processes and Landforms.
2. Frias, C. E. (**), Mendoza, A. (***), **Abad, J. D.**, Paredes, J., Dauer, K. (**), Montoro, H. "*Morphodynamic stages of the anabranching in the upper Amazon River basin*", in review, Water Resources Research.
3. Simon, C. (**), Neal, A., **Abad, J. D.,** Brantley, S., "*Application of In-Situ Spectrophotometry for Water Quality Analysis*". In review, Applied Geochemestry.
4. Konsoer, K., Rhoads, K., Best, J. L., Langendoend, E., Ursic, M., **Abad, J. D.**, Garcia, M. H. "*Spatial variability in floopdplain resistance to erosion on a large meandering, mixed bedrock-alluvial river*". In review, Geomorphology.
5. Frias, C. E. (***), **Abad, J. D.,** Konsoer, K. Best, J., Rhoads, B., Langendoen, E., K., Garcia, M. H. "*Modulation of the flow structure by progressive bedforms at field scale, the Wabash River*". In review, Water Resources Research.
6. Langendoen, E., Mendoza, A. (***), **Abad, J. D.**, Tassi, P., Wang, D., Ata, R., El Kadi Abderrezzak, K., Hervouet, J-M. "*Improved numerical modeling of morphodynamics of rivers with steep banks*". In review, Advances in Water Resources.
7. Tassi, P., Wang, D., El Kadi Abderrezzak, K., Mendoza, A. (***), **Abad, J. D.**, Langendoen, E. "*Flow and bed morphology in large-amplitude meanders, comparison of two and three-dimensional numerical models*". In review, Advances in Water Resources.
8. Han, Y. (**), Arjmand, S. (**), **Abad, J. D.**, Wilderman, C., Brantley, S. L., Fu, C., Simon, C. (**), Vidic, R. "*Developing an approach for characterizing watersheds that are most vulnerable to the effects of accidental spills from unconventional drilling sites*". In review, Environmental Science & Technology.
9. Mendoza, A. (***), **Abad, J. D.**, Langendoen, E., Wang, D., Tassi, P., Abderrezzakk, E. K. "*Effect of sediment transport boundary conditions on the numerical modeling of bed morphodynamics*", in review, Journal of Hydraulic Engineering.
10. Simon, C. (**), Mendoza, A. (***), Langendoen, E., **Abad, J. D.** "*On the governing equations for vertical versus horizontal coupling of one- and two-dimensional open channel flows*", in submission, Journal of Hydraulic Research.

REFEREED PUBLICATIONS:
CONFERENCE PROCEEDINGS
(*) Undergraduate student
(**) Graduate student
(***) Postdoc

1. Good, D., **Abad, J. D.,** Khanna, V. (2014). "*Life Cycle Assessment of air toxics for natural gas production, transport and power generation in the Marcellus Shale region*". ASCE Shale Energy Engineering Conference, Pittsburgh, July 21-23, 2014.
2. Gutierrez, R. (**), Choi, M. (*), **Abad, J. D.,** Montoro, H. (2014). "*Characterization of confluences of free meander trains at the upper Amazon basin*". River Flow 2014, IAHR (International Association for Hydro-Environmental Research) conference, Laussane, Switzerland, September 3-5, 2014.
3. **Abad, J. D.,** Frias, C. (**), Langendoen, E., Best, J., Rhoads, B., Konsoer, K., Garcia, M. H. (2014). "*Modulation of the flow structure by progressive bed forms in the Meandering Wabash River*". River Flow 2014, IAHR (International Association for Hydro-Environmental Research), Laussane, Switzerland, September 3-5, 2014.
4. Wang, D., Mendoza, A. (***), Tassi, P., Abderrezzakk, E. K., **Abad, J. D.,** Langendoen, E. (2014). "*2D and 3D numerical simulations of morphodynamics structures in large-amplitude meanders*". River Flow 2014, IAHR (International Association for Hydro-Environmental Research), Laussane, Switzerland, September 3-5, 2014.
5. Mendoza, A. (***), **Abad, J. D.** (2014). "*Bars in the high-amplitude high-curvature upstream- and downstream-oriented Kinoshita meandering channel, a numerical approach*". River Flow 2014, IAHR (International Association for Hydro-Environmental Research), Laussane, Switzerland, September 3-5, 2014.
6. Mendoza, A. (***), Wang, D., **Abad, J. D.,** Tassi, P., Abderrezzakk, E. K., Langendoen E. (2014). "*Numerical modeling of dunes progression in the high-amplitude Kinoshita meandering channel*". River Flow 2014, IAHR (International Association for Hydro-Environmental Research), Laussane, Switzerland, September 3-5, 2014.
7. Frias C. (**), **Abad J.D.,** Montoro H., Paredes J., Holguin C., Vizcarra J. (2013) "*On the interaction of flow-morphodynamics of the Upper Amazon anabranching structures*", in 35th IAHR world congress, Chengdu, China, September, 2013.
8. Bonthius, C. M. (**), Latrubesse, E. M., **Abad, J. D.,** Stevaux, J. C., Filizola, N., Aquino, S. (2013). "*Channel morphology and morphodynamics of the Madeira River in Brazil*". 8th IAG International Conference on Geomorphology, Paris, France, August 2013.

9. **Abad, J. D.,** Vizcarra, J., Paredes, J., Montoro, H., Frias, C. (**), Holguin, C. (2013). "*Morphodynamics of the Upper Peruvian Amazonian Rivers, Implications into Fluvial Transportation*". First International Conference IDS2013 – Amazonia, July 17-19, Iquitos, Peru.
10. Frias C. (**), **Abad J.D.,** Montoro H., Paredes J., Holguin C., Vizcarra J. (2013) "*Modelling the effect of sinuosity in modern anabranching structures of the Upper Amazon Basin*", 10th International Conference on Fluvial Sedimentology, Leeds, UK. July 2013.
11. Gutierrez, R. R. (**), Choi, M. (*), and **Abad, J. D.** (2013). "*Dynamics of meander train confluences*", 8th Symposium on River, Coastal and Estuarine Morphodynamics, RCEM 2013. Santander, Spain, June 09-13.
12. Gutierrez, R. R. (**) and **Abad, J. D.** (2013). "*Conservation of meander dynamics, from cutoff to migration processes*", 8th Symposium on River, Coastal and Estuarine Morphodynamics, RCEM 2013. Santander, Spain, June 09-13.
13. Gutierrez, R. R. (**), **Abad, J. D.**, Parsons and J. Best (2013). "*Characterization of bedforms, application to the Parana River*", 8th Symposium on River, Coastal and Estuarine Morphodynamics, RCEM 2013. Santander, Spain, June 09-13.
14. Frias C. (**), **Abad J.D.**, Montoro H., Paredes J., Holguin C., Vizcarra J. (2013) "*Influence of the main channel sinuosity on the morphodynamics of the Upper Amazon anabranching structures*", in 8th Symposium on River, Coastal and Estuarine Morphodynamics (RCEM), Santander, Spain, June, 09-13.
15. Frias C. (**), **Abad J.D.**, "*On the turbulent flow structure of fluvial bedforms amalgamation processes*", in 8th Symposium on River, Coastal and Estuarine Morphodynamics (RCEM), Santander, Spain, June 09-13.
16. Bonthius, C. M. (**), Latrubesse, E. M., **Abad, J. D.**, Stevaux, J. C., Filizola, N., Aquino, S. (2013). "*Morphodynamics of the Madeira River in Brazil: Analyses of channel morphology and flow structure in a threatened fluvial system*". River Coastal and Estuarine Morphodynamics (RCEM), 2013, Santander, Spain, June 09-13.
17. Frias, C. (**), **Abad, J. D.** (2012). "*Large Eddy Simulation (LES) of the ripple-dune amalgamation process, implications for free surface and coherent flow structure interactions*". Third International Symposium on Shallow Flows, University of Iowa, Iowa City, IA, USA, June 4-6.
18. Frias, C. (**), **Abad, J. D.** (2012). "*Numerical flow field characterization of the ripple-dune amalgamation process*". River Flow 2012, September 5-7, San Jose, Costa Rica.
19. **Abad, J. D.,** Peralta, B., Paredes, J., Frias, C. (*), Gutierrez, R. (*), Montoro, H. (2012). "*The meandering Ucayali River, a cyclic adaptation of cutoff and planform migration*". River Flow 2012. September 5-7, San Jose, Costa Rica.
20. Frias, C. (**), **Abad, J. D.** (2012). "*Caracterization numerica del campo de flujo en el proceso de amalgamiento rizo-duna*". XXIV Congreso Latinoamericano de Hidraulica, San Jose, Costa Rica., September 9-12.
21. Bryk, A., Best, J., **Abad, J. D.,** Garcia, M. H. (2012). "*The influence of channel-skewed bedforms on secondary flows in high curvature meander bends*". Third International Symposium on Shallow Flows, University of Iowa City, IA, USA, June 4-6.
22. Arjmand, S. (**), **Abad, J. D.**, Liang, X. (2012). "*Coupled flow and contaminant transport models for toxic elements associated with the Marcellus Shale flowback and produced water; it's application to human exposure and risk assessment*". Computational Methods in Water Resources, June 17-21, Urbana, IL. USA.
23. Frias, C. (**), **Abad, J. D.** (2012). "*Numerical flow field characterization of the ripple-dune amalgamation process*". Computational Methods in Water Resources, June 17-21, Urbana, IL, USA.
24. Simon, C. A. (**), Langendoen, E., **Abad, J. D.** (2012). "*Coupling 1D and 2D hydrodynamic equations for stream and floodplain interaction*". Computational Methods in Water Resources, June 17-21, Urbana, IL, USA.
25. **Abad, J. D.**, Motta, D. (**), Langendoen, E. J., Fernandez, R., Oberg, N., Garcia, M. H. (2012). "*Restoration of meandering channels: The need for the development of physically-based mathematical GIS platforms – RVR Meander*", ASCE-EWRI, Albuquerque, NM, USA, May 20-24.
26. Motta, D. (**), **Abad, J. D.**, Langendoen, E. J., Garcia, M. H. (2011). "*Floodplain heterogeneity and meander migration*". In proceedings of River and Coastal Estuarine Morphodynamics, RCEM 2011, Beijing, China, September 6-8.
27. **Abad, J. D.**, Paredes, J. R., Montoro, H. (2011). "*Similarities and differences between a large meandering river and an anabranching river: the Ucayali and Amazon River cases*". ASCE EWRI conference, Palm Springs, CA, USA. May 22-26.
28. Frias, C. (**), **Abad, J. D.** (2011). "*Large Eddy Simulation for superimposed bedforms in fluvial channels"*. ASCE EWRI conference, Palm Springs, CA, USA, May 22-26.
29. Gutierrez, R. (**), **Abad, J. D.**, Parsons, D., Best, J., Orfeo, O. (2011). "*Wavelets application to study the bedforms of Parana River*". ASCE EWRI conference, Palm Springs, CA, USA, May 22-26.
30. Gutierrez, R. (**), **Abad, J. D.**, Parsons, D., Best, J., Orfeo, O. (2011). "*Wavelets application to study the bedforms of Parana River*", XXXIV International Association of Hydraulic Engineering and Research (IAHR) Congress, Brisbane, Australia.
31. Garcia, M., Motta, D. (**), **Abad, J. D.**, Langendoen, E. (2010). "*A computational platform for physically-based bank evolution and long-term meander migration*". In Proceedings of the 1st Congreso Internacional de Hidrologia de Llanuras, September 21-24, Buenos Aires, Argentina, 8 pp.
32. Langendoen, E.J., Motta, D. (**), **Abad, J.D.**, Garcia, M.H., (2010). "*An improved meander migration formulation based on streambank erosion processes*". River Flow Conference, Braunshweig, Germany. September 8-10.
33. Gutierrez, R. R. (**), **Abad, J. D.,** Parsons, D., Best, J., Orfeo, O. (2010). "*Applicacion de Wavelets en el studio de formas en el Rio Parana*". Proceedings of the XXIV Latin-American Congress in Hydraulics, Punta del Este, Uruguay, November 21-25.
34. Motta, D. (**), **Abad, J.D.,** Garcia, M.H., (2010). "*A modeling approach for organic sediment resuspension and oxygen demand in Bubbly Creek, Chicago, Illinois*". ISEH VI Conference, Athens, Greece. http://www.semide.net/thematicdirs/events/2010/06/iseh-vi-6th-international-symposium-environmental
35. Nanía, L.S., **Abad, J.D.**, Cataño-Lopera, Y.A., Bladé, E., and García, M.H., (2010). "*Estudio experimental y numérico 2d y 3D del flujo supercrítico en cruce de calles*." Proceedings of the XXIV Latin-American Congress in Hydraulics,

Punta del Este, Uruguay, November 21-25.

36. Garcia, M. H., Motta, D. (**), **Abad, J. D.,** Langendoen, E. J. (2010). "*A computational platform for physically-based bank evolution and long-term meander migration*". I Congreso International de Hidrologia de Llanuras, Azul, Buenos Aires, Argentina, September 21-24.
37. Motta, D. (**), **Abad, J.D.**, Garcia, M.H., (2009). "*Short and long term two-dimensional water quality modeling for Bubbly Creek, Chicago, Illinois*". UCOWR Conference, Chicago, IL, USA, July 7-9.
38. Motta, D. (**), **Abad, J.D.**, Liu, X., Garcia, M.H., (2009). "*Two-dimensional BOD and DO water quality model for engineering applications: the case of Bubbly Creek in Chicago, Illinois*". EWRI Conference, Kansas City, MO, USA.
39. Motta, D. (**), **Abad, J.D.**, Langendoen, E.J., Garcia, M.H., (2009). "*Merging of RVR Meander with CONCEPTS: simplified 2D model for long-term meander evolution*". RCEM Conference, Santa Fe, Argentina September 21-25.
40. **Abad, J.D,** Garcia, M.H., Parker, G. (2009). "*Bed morphology in Kinoshita meandering channels*". RCEM Conference, Santa Fe, Argentina September 21-25.
41. Motta, D. (**), **Abad, J. D.**, and García, M. H. (2009). "*A modeling approach for organic sediment resuspension and oxygen demand*". XXXIII International Association of Hydraulic Engineering and Research (IAHR) Congress. August 9-14. Vancouver, Canada.
42. Motta, D. (**), **Abad, J. D.**, Liu, X., and García, M. H. (2009). "*Two-dimensional bod and do water quality model for engineering applications: the case of Bubbly creek in Chicago, Illinois*". World Environmental & Water Resources Congress, ASCE, Kansas City, MO, USA, May 17-21.
43. Cataño-Lopera, Y.A., **Abad, J.D.**, and García, M.H., (2009). "*Numerical Simulation of the Flow Structure around a partially Buried Object on a Deformable Bed*." 2009 Flow-3D World Users Conference, September 17-18, Seattle, WA,USA, Oral Presentation.
44. Cataño-Lopera, Y., **Abad, J. D.** and Garcia, M. H. (2009). "*Análisis estadístico de formas de fondo*". Simposio sobre métodos experimentales en hidráulica, June, 3-5. Córdoba, Argentina. (in Spanish)
45. Cataño-Lopera, Y., **Abad, J. D.** and Garcia, M. H. (2009). "*Flow structure and hydraulic capacity for dropshafts: Application to Tunnel and Reservoir Plan (TARP) project, Chicago, Illinois*". Urban Water Management: issues ad opportunities. UCOWR/NIWR Annual Conference, July 7-9, Chicago, IL, USA.
46. **Abad, J. D.**, Cataño-Lopera, Y., and Garcia, M. H. (2009). "*Flow structure and hydraulic capacity for dropshafts: Application to Tunnel and Reservoir Plan (TARP) project, Chicago, Illinois*". XXXIII International Association of Hydraulic Engineering and Research (IAHR) Congress. August 9-14. Vancouver, Canada.
47. **Abad, J. D.**, Sequeiros, O. E., Spinewine, B., Garcia, M. H. and Parker, G. (2009). "*Secondary flow in meandering channels on submarine fans: implications for channel morphodynamics and architecture*". Annual Convention & Exhibition, American Association of Petroleum Geologists, June, 7-10, Denver, CO, USA.
48. **Abad, J.D.,** Cataño-Lopera, Y.A., Viparelli, E., and García, M.H., (2009). "*Flow Structure and Hydraulic Capacity of Dropshafts: Application to Tunnel and Reservoir Plan Project, Chicago, Illinois.*" Proceedings of the 33rd IAHR Water Engineering for a Sustainable Environment, August 9-14, Vancouver, Canada
49. **Abad, J. D.,** Waratuke, A., Barnas, C. and Garcia, M. H. (2009). "*Hydraulic Model Study of Canoe Chute and Fish Passage for the Chicago River North Branch Dam*". World Environmental & Water Resources Congress, ASCE. Kansas City, MO. May 17-21.
50. Cataño-Lopera, Y., **Abad, J. D.** and Garcia, M. H. (2008). "*Analisis estadistico de formas de fondo generadas por olas y corrientes: 2 casos estudiados*". Congreso Latinoamericano de Hidráulica, Colombia. September 2-6 (In Spanish).
51. **Abad, J. D.**, Garcia, M. H. (2007). "*Bed morphology experiments in an asymmetric Kinoshita-generated meandering channel*". 5th IAHR Symposium on River, Coastal and Estuarine Morphodynamics, University of Twente, Enschede, The Netherlands, September 17-21.
52. **Abad, J. D.**, Ancalle, J. Garcia, M. H. (2007). "*Mean and Turbulence Flow Structure in a High-amplitude Kinoshita-generated Meandering Channel*". Hydraulics Measurement & Experimental Methods. Lake Placid, NY. September 10-12.
53. **Abad, J. D.**, Ancalle, J., Buscaglia, G. and Garcia, M. H. (2007). "*Effect of bend orientation on the Hydrodynamics of Kinoshita-generated meandering channels. Experimental and Numerical approaches*". XXXII International Association of Hydraulic Engineering and Research (IAHR) Congress. July 1-6. Venice, Italy.
54. **Abad, J. D.**, Ancalle, J., Buscaglia, G. and Garcia, M. H. (2007). "*Hydrodynamics of high-amplitude Kinoshita meandering channels*". National Surface-Water Conference and Hydroacoustics Workshop, April 2-6, St. Louis, MO, USA.
55. **Abad, J. D.**, Spalletti, P. D., García, M. H., Brea, J. D. (2006). "*Efecto de la construcción del puente Lavalle en la evolución de meandros en el río Bermejo*". XXII Congreso Latinoamericano de Hidráulica, Venezuela, October 9-11. (In Spanish)
56. **Abad, J. D.** and Garcia, M. H. (2005). "*Hydrodynamics of Kinoshita-generated meandering bends*". 4th IAHR Symposium on River, Coastal and Estuarine Morphodynamics, University of Illinois, Urbana, IL, USA, October 4-7.
57. **Abad, J. D.** (2005) "*CFD simulations of asymmetric Kinoshita-generated meandering bends*". Proc., XXXI International Association of Hydraulic Engineering and Research (IAHR) Congress (CD-Rom), September 11-16, Seoul, Korea.
58. **Abad, J. D.** and García, M. H. (2004) "*Conceptual and Mathematical Model for Evolution of Meandering Rivers in Naturalization Processes*". World Water & Environmental Resources Congress, Salt Lake City, UT, USA.
59. **Abad, J. D.**, Musalem, R. A., García, C. M., Cantero, M. I. and García, M. H. (2004). "*Exploratory study of the influence of the wake produced by acoustic Doppler Velocimeter probes on the water velocities within control volume*". World Water & Environmental Resources Congress, Salt Lake City, UT, USA.
60. **Abad, J. D.** and García, M. H. (2004). "*Modeling of Submerged Vanes for Bank Erosion Control*". Illinois Water conference, Urbana, Illinois.
61. **Abad, J. D**., Guneralp, I., García, M. H. and Rhoads, B. (2004). "*Bank erosion control: CFD modeling of Submerged*

Vanes". FLOW-3D World User Conference, Chicago, IL, USA. September 20-21.

62. **Abad, J. D.**, Cantero, M. I., Niño, Y. I., Bombardelli, F. A. and García, M. H. (2003). "*Resuspensión de sólidos mediante el uso de múltiples chorros de agua*". XIV Congreso Nacional de Ingeniería Civil, Iquitos, PERU, (in Spanish).
63. **Abad, J. D.** and García, M. H. (2003). "*Modelo Conceptual y Matemático para la Evolución de Ríos Sinuosos*". XIV Congreso Nacional de Ingeniería Civil, Iquitos, PERU (in Spanish).
64. Avila, R. and **Abad, J. D.** (1999). "*ASDIC, Asistente para el diseño de canales*". XII Congreso Nacional de Ingeniería Civil, Huanuco, PERU, (in Spanish)

REFEREED PUBLICATIONS:
ABSTRACTS /TALKS/ POSTERS
(*) Undergraduate student
(**) Graduate student
(***) Postdoc

1. Gutierrez, R. (**), Choi, M. (*), **Abad, J. D.,** Montoro, H. (2014). "*Characterization of confluences of free meander trains at the upper Amazon basin*". World's Large Rivers, Manaus, Brazil, July 21-25, 2014.
2. Gutierrez, R.(**), **Abad, J. D.** (2014). "*Temporal frequency balance and classification of meandering channels*". World's Large Rivers, Manaus, Brazil, July 21-25, 2014
3. **Abad, J. D.**, Frias, C.(**), Langendoen, E., Best, J., Rhoads, B., Konsoer, K., Garcia, M. H. (2014). "*Modulation of the flow structure by progressive bed forms in the Meandering Wabash River*". World's Large Rivers, Manaus, Brazil, July 21-25, 2014
4. Torres, Z.(*), Dauer, K. (**), Bardales, J., Montoro, H., Vizcarra, J., **Abad. J. D.** (2014). "*How can river migration ompact the twon of Jenaro-Herrera?*". World's Large Rivers, Manaus, Brazil, July 21-25, 2014
5. Dauer, K. (**), **Abad, J. D.**, Frias, C. (**), Paredes, J., Vizcarra, J., Holguin, C. (2014). "*Morphodynamics of the Ucayali River*". World's Large Rivers, Manaus, Brazil, July 21-25, 2014.
6. Dauer, K. (**), **Abad, J. D.**, Espinoza, J. C., Lavado, W. (2014). "Can we observe a morphodynamic signature due to changes in Hydrology along the Amazonian Rivers?". World's Large Rivers, Manaus, Brazil, July 21-25, 2014.
7. Dominguez, R. L., Szupiany, R., **Abad, J. D.**, Ramonell, C., Farias, H. D. (2014). "Flow structure, bed morphology and sediment transport in a large meandering river". World's Large Rivers, Manaus, Brazil, July 21-25, 2014
8. Garcia, K. (*), Dauer, K. (**), Vargas, J., Vizcarra, J., **Abad, J. D.** (2014). "Impacts of alluvial gold mining in the Putumayo River Basin". World's Large Rivers, Manaus, Brazil, July 21-25, 2014
9. Mendoza, A. (***), Frias, C. (**), **Abad, J. D.**, Garcia, A. (*), Paredes, J., Vizcarra, J., (2014). "Iquitos anabranching structure in the Peruvian Amazon River – bed morphology modeling". World's Large Rivers, Manaus, Brazil, July 21-25, 2014
10. Frias, C. (**), Garcia, A. (*), Vizcarra, J., Paredes, J., **Abad, J. D.** (2014). "On the baseline characterization of the anabranching structures along the upper Peruvian Amazon River". World's Large Rivers, Manaus, Brazil, July 21-25, 2014
11. Frias, C. (**), Mendoza, A. (***), Dauer, K. (**), Garcia, A. (*), **Abad, J. D.** (2014). "Experimental study of bed form dynamics on anabrnaching structures and its importance to the Amazon river evolution". World's Large Rivers, Manaus, Brazil, July 21-25, 2014
12. Frias, C. E. (**), **Abad, J. D.**, Konsoer, K., Best, J., Rhoads, B., Langendoen, E., Garcia, M. H., Fazio, D. (2014). "Modulation of bank shear stresses due to bedforms in a meandering river: field scale results from the Wabash River, IL-IN, USA", Geology Society of America, North-Central Sectional Meeting, Lincoln, Nebraska, April 24-25.
13. Langendoen, E. J., **Abad, J. D.**, Frias, C. E. (***), Mendoza, A. (***), Ata, R., Abderrezzak, K., Hervouet, J-M., Tassi, P., Wang, D. (2014). "Improved numerical modelling of river morphodynamics near actively eroding streambanks". European Geophysical Union, April 27 – May 2, Vienna, Austria.
14. Neal, A., Mendoza, A., Simon, C., **Abad, J. D.**, Vidic, R., Yoxtheimer, D., Vastine, J., Wilderman, C., Brantley, S. (2013) "Using the NSF-funded Shale Network Database and Critical Zone Observatories to Assess Water Quality Concerns in Areas of Shale-Gas Development", AGU Science Policy Conference, Washington, DC, June 24-26.
15. Konsoer, K., Rhoads, B. L., Best, J., Langendoen, E., Ursic, M., **Abad, J. D.**, Garcia, M. H. (2013). "Scales of form roughness on riverbanks with different riparian vegetation". AGU Fall Meeting, San Francisco, USA, December 2013.
16. Rhoads, B. L., Konsoer, K. M., Best, J., Garcia, M. H., **Abad, J. D.** (2013). "Planform dynamics of a mixed bedrock-alluvial meandering river". AGU Fall Meeting, San Francisco, USA, December 2013.
17. Latrubesse, E., Bonthius, C., **Abad, J. D.**, Stevaux, J., Filizola, N., Frias, C. E. (*) (2013). "Morphodynamics and anabranching patterns generated in the Madeira River, Brazil". AGU Fall Meeting, San Francisco, USA, December 2013.
18. Brantley, S., Yoxtheimer, D., Arjmand, S. (**), Grieve, P., Vidic, R., **Abad, J. D.**, Simon, C. (**), Pollar, J. (2013). "Water resouce impacts during unconventional Shale Gas development: The Pennsylvania Experience", AGU Fall Meeting, San Francisco, USA, December 2013.
19. **Abad, J. D.**, Frias, C.(**), Langendoen, E., Best, J., Rhoads, B., Konsoer, K., Garcia, M. H. (2013). "Bed forms modulating temporal peaks on near-bank shear stresses, the Wabash River case". AGU Fall Meeting, San Francisco, USA, December 2013.
20. Mendoza, A. (***), Frias, C. (**), Langendoen, E. J., **Abad, J. D.** (2013). "Bank erosion modulated by exposed roots from riparian vegetation in small gravel-bed streams". AGU Fall Meeting, San Francisco, USA, December 2013.
21. Frias, C. (**), Mendoza, A. (***), Dauer, K. (**), **Abad, J. D.**, Montoro, H., Paredes, J., Vizcarra, J. (2013). "Study of the anabranch dynamics for different sinuosity stages in the Upper Amazon River basin". AGU Fall Meeting, San Francisco, USA, December 2013.
22. Dauer, K. (**), Frias, C. (**), **Abad, J. D.**, Paredes, J., Vizcarra, J., Holguin, C., (2013). "How do morphodynamic signatures vary along the Ucayali, a large transitional river?". AGU Fall Meeting, San Francisco, USA, December 2013.
23. Arjmand, S. (**), **Abad, J. D.**, Brantley, S. (2013). "Assessment and design of water quality monitoring networks with respect to Shale gas activities in Pennsylvania". AGU Fall Meeting, San Francisco, USA, December 2013.
24. Langendoen, E. J., **Abad, J. D.**, Motta, D., Frias, C. (**), Wong, M., Barnes, B. J., Anderson, C. D., Garcia, M. H.,

MacDonald, T. E. (2013). "Designing and assessing restored meandering river planform using RVR Meander", AGU Fall Meeting, San Francisco, USA, December 2013.

25. Simon, C. A. (*), Arjmand, S. (**), **Abad, J. D.**, Vidic, R. D., Brantley, S. L., Yoxtheimer, D. (2013) "*Shale Gas Contamination – Water Quality Monitoring Network in the Tenmile Creek Watershed*". 2013 Shale Network Workshop, State College, PA, USA. May 19-20.
26. Arjmand, S. (**), **Abad, J. D**. (2013) "*Groundwater Contamination Problems Associated with the Shale Gas in Pennsylvania*". 2013 Shale Network Workshop, State College, PA, USA. May 19-20,
27. Arjmand, S. (**), **Abad, J. D.** (2013) "*Shallow Groundwater Contamination–Major Environmental Concerns associated with Unconventional Gas Drilling Activities*". Pennsylvania Groundwater Symposium, Penn State University, State College, PA, USA, May 8.
28. Frias C. (**), **Abad J.D.** (2012). "*Turbulence characterization on the ripple dune Amalgamation stage: importance for bed Morphodynamics patterns*", in AGU fall meeting, San Francisco, USA. December 2012.
29. Gutierrez, R. R. (**) and **Abad, J. D.** (2012). "*Statistical analysis of meandering rivers using wavelet transforms and principal component analysis*", American Geophysical Union (AGU), Fall Meeting 2012, San Francisco, USA. December 2012.
30. Arjmand, S. (**), **Abad, J. D.** (2012) "*Application of a Coupled Flow and Contaminant Transport Model to Investigate the Environmental and Health Effects of Unconventional Gas Drilling Activities in Southwestern Pennsylvania*", ShaleGas-2012 Health Effects of Shale Gas Extraction, Pittsburgh, November 9, 2012
31. Arjmand, S. (**), **Abad, J. D.**, Liang, X. (2012). "*Shallow Groundwater Contamination Risks of Toxic Elements and Dissolved Methane from Gas Drilling Activities in the Marcellus Shale*", WaterQUEST-2012 State of the Monongahela River Research Symposium, Pittsburgh, PA, USA, November 8, 2012.
32. Gutierrez, R. R. (**), Mendoza, A. (***), **Abad, J. D.**, Frias, C. (*), Simon, C. (*) (2012). "*Baseline characterization of streamflow at Fonner and Bates Creeks*", WaterQUEST-2012 State of the Monongahela River Research Symposium, Pittsburgh, PA, USA, November 8, 2012.
33. Gutierrez, R. R. (**) and **Abad J. D.** (2012). "*Statistical analysis of meandering rivers using wavelet transforms and principal component analysis*", Tropical Rivers Conference, Iquitos, Peru, August 2012.
34. **Abad, J. D.**, Peralta, B., Paredes, B., Frias, C. (**), Gutierrez, R. R. (**), Montoro, H. (2012). *"Cyclic adaptation of a large meandering channel, from cutoff to planform migration*". American Association of Geographers, AAG Annual Meeting, New York, New York, USA. February 24-28.
35. **Abad, J. D.**, Parker, G., Sequeiros, O., Spinewine, B., Garcia, M. H., Pirmez, C. (2011). "*Flow structure in submarine meandering channels, a continuous discussion on secondary flow*". AGU Fall Meeting, San Francisco, CA, USA..
36. Motta, D. (**), **Abad, J. D.**, Langendoen, E., Garcia, M. H. (2011). *"Meander migration in horizontally and vertically heterogeneous floodplains*". AGU Fall Meeting, San Francisco, CA, USA.
37. Gutierrez, R. R. (**), **Abad, J. D.**, Parsons, D. (2011). "*On the separation of bedforms by using robust spline filters and wavelet transform, application on the Parana River, Argentina*". AGU Fall Meeting, San Francisco, CA, USA.
38. **Abad, J. D.**, Peralta, B., Paredes, J., Frias, C. (**), Gutierrez, R. (**), Montoro, H. (2011). "*Self-adaptive planform patterns in the meandering Ucayali river*", AGU Fall Meeting, San Francisco, CA, USA.
39. Frias, C. (**), **Abad, J. D.** (2011). "*Turbulence characterization on the ripple-dune amalgamation stage: importance of bed morphodynamic patterns*", AGU Fall Meeting, San Francisco, CA, USA.
40. Catano-Lopera, Y., **Abad, J. D.** (2011). "*Unsteady characteristics of the flow structure around a partially buried object and surrounding bedforms in a river bed*". AGU Fall Meeting, San Francisco, CA, USA.
41. Volkwein, M. (*), **Abad, J. D.**, Engel, F., Rhoads, B. (2011). "*Comparison and analysis of hydrodynamic models for restoration projects: the case of pool-riffle structures"*. Mid-Atlantic Stream Restoration Conference, Washington, is this Washington, MD, November 15-17.
42. Gianvito, J. (**), **Abad, J. D.** (2011). "*Minimizing land disturbance through efficient sewage pump station design*". Engineering Sustainability Conference, Pittsburgh, PA, USA. April 10-12.
43. **Abad, J. D.**, Paredes, J. R., Montoro, H. (2011). "*Similarities and differences between a large meandering river and an anabranching river: the Ucayali and Amazon River cases*". International Conference on the status and future of the World's Large Rivers, Vienna, Austria. April 11-14.
44. **Abad, J.** D., Motta, D. (**), Langendoen, E., Garcia, M. H. (2011). "*Restoration of meandering channels: the need for the development of physically-based mathematical GIS platforms*", International Conference on the status and future of the World's Large Rivers, Vienna, Austria April 11-14.
45. **Abad, J. D.**, Sequeiros, O., Spinewine, B., Pirmez, C., Garcia, M. H., Parker, G. (2010). "*Flow structure in submarine meandering channels created by turbidity currents*". Geological Society of America (GSA) Annual Meeting, Denver, CO, USA. , October 31-November 3.
46. Volkwein, M. (*), **Abad, J. D.** (2010). "*Comparison and analysis of hydrodynamic models for restoration projects: the case of pool-riffle structures"*, Science 2010-Transformations, University of Pittsburgh, October 7-8, Pittsburgh, PA, USA.
47. **Abad, J. D.**, Paredes, J. R., Montoro, H. (2010). "*Similarities and differences between a large meandering river and an anabranching river: the Ucayali and Amazon River cases*". AGU Fall Meeting, San Francisco, CA, USA.
48. **Abad, J. D.**, Parker, G., Sequeiros, O., Spinewine, B., Garcia, M. H., Pirmez, C. (2010). "*Flow structure in submarine meandering channels created by turbidity currents*". XXXI Iberian-Latin-American Congress on Computational Methods in Engineering, November 15-18, Buenos Aires, Argentina.
49. Motta, D. (**), **Abad, J.D.**, Langendoen, E.J., Garcia, M.H., (2010). *"Physically-based bank evolution and long-term meander migration: a computational platform".* AGU Meeting of The Americas, Foz do Iguassu, Brazil. August 8-12.
50. **Abad, J. D.**, Gutierrez, R. R. (**), Guneralp, I. (2010). *"Analysis of bend migration patterns of meandering channels using Wavelets".* 2010 Annual Meeting, Association of American Geographers, Washington, DC, USA. April 14-18.

51. Frias, C. E. (**) and **Abad, J. D.** (2010). "*Comparación de Modelos Numéricos de Turbulencia LES".* 2nd Congreso Nacional del Agua, National University of Engineering, Lima, PERU, April 7-9. In Spanish.
52. Gutierrez, R. R. (**), **Abad, J. D.** (2010). *"Aplicación de Wavelets en el estudio de ríos meandrícos".* 2nd Congreso Nacional del Agua, National University of Engineering, Lima, PERU, April 7-9. In Spanish.
53. Motta, D., **Abad, J.D.**, Langendoen, E.J., Garcia, M.H., (2009). *"A simplified 2D model for long-term meander migration with physically-based bank evolution".* AGU Fall Meeting, San Francisco, CA, USA.
54. **Abad, J.D.** (2009). *"Planform dynamics of meandering channels based on Wavelet analysis".* AGU Fall Meeting, San Francisco,CA, USA.
55. Cataño-Lopera, Y.A., **Abad, J.D.**, and García, M.H., (2009). *"Statistical Analysis of Bedforms."* I Symposium on Experimental Methods in Hydraulics, Villa Carlos Paz, June 3-5, Cordoba, Argentina.
56. **Abad, J.D.**, Cataño-Lopera, Y.A., and García, M.H., (2009). *"Flow Structure and Hydraulic Capacity of Dropshafts: Application to Tunnel and Reservoir Plan Project, Chicago, Illinois."* UCOWR/NIWR Annual Conference, Urban Water Management: Issues and Opportunities, July 7-9, Chicago, IL, USA.
57. **Abad, J. D**, and Garcia, M. H. (2008) *"Bedforms in high-amplitude meandering channels".* European Geophysical Union (EGU). Vienna, Austria, April 13-18.
58. **Abad, J. D.**, Guneralp, I., Garcia, M. H. and Rhoads, B. L. (2005) "*Two case studies in river naturalization: planform migration and bank erosion control".* AGU Joint Assembly, New Orleans, LA, USA. May 23-27.
59. **Abad, J. D**. "*Exploratory study of the influence of the wake produced by hydroacoustic instruments (ADCP) on the water velocities within control volume".* (2004). Hydroacoustics workshop. March 22-26, San Diego, CA, USA.
60. **Abad, J. D**., Guneralp, I., Bombardelli, F., Garcia, M. H. and Rhoads, B. (2004). "*Bank erosion control by bendway weirs".* Joint International Geomorphology Conference. Glasgow, Scotland. August 17-20.
61. **Abad, J. D.,** Bombardelli, F., Garcia, M. H., Rhoads, B. and Guneralp, I. (2004) "*Numerical experiments on the mechanics of flow in bendway weirs".* World Water & Environmental Resources Congress, Salt Lake City, UT, USA. June 27-July 1.

NON-REFEREED PUBLICATIONS:
INVITED TALKS

Dr. Abad has given presentations at several institutions around the world including several countries (Argentina, Brazil, Canada, Chile, China, Italy, Mexico, Peru, Spain, UK and USA**) and institutions (**University of British Columbia, University of Trento, University of Padova, University of Texas at Austin, Mexican Institute of Water Technology, University of Cantabria, Saint-Venant Laboratory for Hydraulics, Peruvian National Authority of Water, Massachusetts Institute of Technology, National Autonomous University of Mexico, University of Minnesota, Texas A&M University, University of Leeds, University of California, Berkeley, Virginia Tech and Pennsylvania State University among others**).**

1. **[03/25/2015] Seminar's speaker:** "*River Modeling for Engineering and Geological Applications", Ciencias Básicas e Ingeniería, Universidad Autónoma Metropolitana (UAM), Mexico DF,* **Mexico.**
2. **[03/19/2015] Seminar's speaker:** "*River Research and Education Experience in the Upper Amazon River", Department of Geography, The University of British Columbia, Vancouver,* **Canada.** *http://www.geog.ubc.ca/community/events/*
3. **[01/14/2015] Seminar's speaker:** "*Podemos caracterizar los cambios antropogénicos en los ríos amazónicos?", Peruvian National Authority of Water, Lima,* **Peru.**
4. **[11/18/2014] Invited speaker:** "*Interaction of hydrodynamics, sediment transport and morphodynamics for understanding river dynamics", III Regional Congress and I international Conference, Civil Engineering, Department of Civil Engineering, Senor de Sipan University, Chiclayo,* **Peru.** *http://www.uss.edu.pe/uss/eventos/Congreso_Regional_Internacional_Civil/ponentes.html*
5. **[10/24/2014] Invited speaker:** "*Morphodynamic modeling of fluvial systems", Workshop on Hydrography and Navigation, organized by International Hydrographic Association (IHO) and Peruvian Navy, Iquitos,* **Peru.**
6. **[09/02/2014] Invited speaker:** "*Research experiences in the Upper Peruvian Amazon River", Department of Civil and Environmental Engineering, University of Padova,* **Italy.**
7. **[09/01/2014] Invited speaker:** "*Research experiences in the Upper Peruvian Amazon River", Department of Civil and Environmental Engineering, University of Trento,* **Italy.**
8. **[06/13/2014] Invited speaker:** "*Experiences on field and numerical modeling of large river systems",* Universidad Juárez Autónoma de Tabasco, Villahermosa, **Mexico.**
9. **[04/17/2014] Invited speaker:** "*The Amazon River: the dynamic political boundaries of Peru, Colombia and Brazil*", Workshop on "Current Watershed Management Issues in Brazil: An Overview of River and Water Resources Research Needs and Applications", Brazilian Center-Teresa Lozano Institute of Latin American Studies-LLILAS, The University of Texas at Austin, Texas, **USA.**
10. **[04/11/2014] Seminar speaker "***Research Experience in the Upper Peruvian Amazon River***",** Department of Civil and Environmental Engineering, University of Pittsburgh, Pittsburgh, PA**, USA.**
11. **[03/18/2014] Invited speaker: "***River bedforms, characterization and modeling of large scale dunes***",** Paul Rizzo

Associates, Inc., Pittsburgh, PA, **USA.**

12. **[02/19/2014] Invited speaker: "***The Amazon basin: a place for large river systems***",** Taylor Allderdice High School, Pittsburgh, PA, **USA.**
13. **[10/25/2013] Invited speaker:** "Modelación Numérica y Física del Meandreo de Ríos", IV Seminario de Potamología "José Antonio Maza Álvarez", Mexican Institute of Water Technology (IMTA), Morelos, **México.**
14. **[10/24/2013] Invited speaker: "**Morfología y procesos fluviales: estudios en la Cuenca del Amazonas", IV Seminario de Potamología "José Antonio Maza Álvarez", Mexican Institute of Water Technology (IMTA), Morelos, **México.**
15. **[10/03/2013] Invited speaker:** "*The Marcellus Shale Research Network: A collaboration between research and citizen science to collect and share data around Marcellus Shale and fracking*", Society for Advancing Hispanic, Chicanos and Native Americans into Science (SACNAS), San Antonio, Texas, **USA.**
16. **[08/20/2013], Keynote lecturer:** "Variabilidad en los patrones geomorfológicos de los ríos en la Cuenca amazónica", XX CONEIC, Congreso de Estudiantes de Ingenieria Civil, Universidad Nacional del Centro del Peru, Huancayo, Junin, **Peru.**
17. **[06/11/2013], Keynote lecturer:** "*Channel pattern variability, hydrodynamics and morphodynamics of the Upper Amazon System*", 8th River Coastal and Estuarine Morphodynamics (RCEM) conference, University of Cantabria, Santander, **Spain** (*http://www.rcem2013.com/*)
18. **[06/06/2013], Invited speaker:** "*Research experience in meandering and anabranching channels in the Upper Amazon basin*", Saint-Venant Laboratory for Hydraulics, Electricity of France (EDF), Chatou, **France.**
19. **[05/13/2013], Invited speaker:** "*Research experience in meandering and anabranching channels in the Upper Amazon basin*", Dept. of Civil Engineering, University of Santa Maria, Valparaiso, **Chile.**
20. **[03/13/2013], Invited speaker:** "*Computational Fluid Dynamics (CFD) applied to Hydraulics*", KHL consultant company, Pittsburgh, PA, **USA.**
21. **[03/05/2013], Invited speaker:** "*Channel pattern variability and morphodynamics of the Upper Amazon System, a place for meandering and anabranching structures*", Dept. of Civil and Environmental Engineering, Massachusetts Institute of Technology (MIT), Boston, **USA.**
22. **[02/22/2013], Invited speaker:** "*Experiencias de investigación y educación en ríos amazónicos*", Colegio de Ingenieros del Peru (CIP), Lima, **Peru.**
23. **[02/01/2013], Seminar's speaker:** "*Channel pattern variability and morphodynamics of the Upper Amazon System*", Dept. of Civil and Environmental Engineering, Univ. of Texas at San Antonio, Texas, **USA.**
24. **[01/23/2013], Seminar's speaker:** "*Dinámica de Ríos Amazónicos*", Mexican Institute for Water Technology (IMTA), Cuernavaca, **Mexico.**
25. **[01/22/2013] Seminar's speaker:** "*Dinámica de Ríos Amazónicos*", University of Queretaro, Queretaro, **Mexico.**
26. **[01/17/2013] Short course and seminar's speaker:** "*RVR Meander: modelando migración de ríos en múltiples escalas*", National Autonomous University of Mexico (UNAM), **Mexico.**
27. **[12/06/2012] Invited speaker:** "*Experiments in meandering and anabranching channels*", AGU session on Advances in Experimental Earth Surface Processes, AGU Fall 2012, San Francisco, **USA.**
28. **[11/12/2012] Keynote lecturer:** "*Monitoring river systems, from satellite images to hydrodynamic and morphodynamic field measurements*", Inland ENC Harmonization Group (IEHG) Meeting, organized by Peruvian Navy. http://www.hydro-international.com/news/id5879-Fluvial_Hydrography_Workshop_in_Peru.html, Iquitos, **Peru.**
29. **[11/09/2012] Invited speaker:** "*Mediciones de campo y aplicación de modelos numéricos en hidrología fluvial en los ríos de la Amazonia peruana*", Directorate of Hydrography and Navigation, Peruvian Navy, Lima, **Peru**.
30. **[10/19/2012] Invited speaker:** "*Hydrodynamics and morphodynamics in Kinoshita meandering channels*", Saint Anthony Falls Laboratory, University of Minnesota, **USA.**
31. **[10/12/2012] Invited speaker:** "*The Marcellus Shale Research Network: organizing, collecting and interpreting water data to track potential impacts of Marcellus Shale Activity*", Society for Advancing Hispanic, Chicanos and Native Americans into Science (SACNAS), Seattle, **USA.**
32. **[06/25/2012], Invited speaker:** "*Hidrodinámica, morfodinámica de ríos: desde mediciones a modelamiento matemático*", Instituto de Investigaciones de la Amazonia Peruana (IIAP), Iquitos, **Peru.**
33. **[03/28/2012], Seminar's speaker:** "*Secondary flows in submarine meandering channels and its importance for subaqueous bed morphodynamics*", Dept. of Civil and Environmental Engineering, University of Pittsburgh, PA, **USA.**
34. **[03/14/2012], Invited speaker:** "*Secondary flows in submarine meandering channels and its importance for subaqueous bed morphodynamics*", Workshop on Environmental and extreme multiphase flows, University of Florida, Gainesville, FL, **USA** *(http://conferences.dce.ufl.edu/flow/).*

35. **[03/09/2012], Invited speaker:** "*CREAR y sus trabajos de investigación para entender la dinámica de los ríos de la Amazonia Peruana*", Dept. of Fluid Mechanics, Universidad Nacional Mayor de San Marcos, Lima, **Peru.**
36. **[03/08/2012], Invited speaker:** "*CREAR y sus trabajos de investigación para entender la dinámica de los ríos de la Amazonia Peruana*", Dept. of Civil Engineering, National University of Engineering, Lima, **Peru.**
37. **[12/09/2011], Invited speaker:** "*Flow structure in submarine meandering channels, a continuous discussion on secondary flow*", AGU session on Submarine Meandering Channels, AGU Fall 2011, San Francisco, CA, **USA.**
38. **[11/22/2011], Invited speaker:** "*Dinámica de ríos amazónicos, importancia para el desarrollo nacional*", Semana de la Ingeniería Civil, Colegio de Ingenieros del Perú, Lima, **Peru.**
39. **[10/28/2011], Invited speaker:** "*Morphodynamics and river modeling*", CSDMS 2011: Impact of time and process scales, University of Colorado, Boulder, CO, **USA** *(http://csdms.colorado.edu/wiki/CSDMS_meeting_2011)*
40. **[09/30/2011], Keynote lecturer:** "*Importancia del estudio de la dinámica de ríos amazónicos*", XVIII CONIC, Colegio de Ingenieros del Perú (National Engineering Association), Cajamarca, **Peru.**
41. **[08/10/2011], Keynote lecturer:** "*La ingeniería Hidráulica, aplicaciones no convencionales en áreas no convencionales, avances en métodos experimentales, mediciones de campo y modelamiento matemático*", VII COINEIC, XIX CONEIC, Universidad San Antonio de Abad, Cusco, **Peru.**
42. **[02/24/2011], Seminar's speaker:** "*Flow structure in submarine meandering channels created by turbidity currents"*, Dept. of Civil and Environmental Engineering, Texas A&M University, College Station, TX, **USA.**
43. **[02/22/2011], Seminar's speaker:** "*Channel pattern variability and morphodynamics of the Upper Amazon System*", Dept. of Geography and the Environment, University of Texas at Austin, TX. **USA.**
44. **[08/12/2010], Invited speaker:** "*Modelamiento matemático y su aplicación para resolver problemas ambientales*", Mesa de Concertación para la lucha contra la pobreza, Huancayo, **Peru.**
45. **[06/21/2010], Invited speaker:** "*Morfología de ríos amazónicos, trabajos desarrollados con el SHNA y proyecciones*", Seminar at Anniversary of DHN, *Peruvian Navy, Iquitos,* **Peru.**
46. **[06/04/2010], Invited speaker:** "*Investigaciones sobre la dinámica de los ríos amazónicos y su implicancia para el desarrollo regional"*", Dept. of Civil Engineering, *Universidad Científica del Peru, Iquitos,* **Peru.**
47. **[06/04/2010], Invited speaker:** "*Experiencias de modelamiento para ríos meandrícos (2D y 3D)*", *Instituto de Investigaciones de la Amazonia Peruana,* Iquitos, **Peru.**
48. **[10/29/2009], Seminar's speaker:** "*Morphodynamics of transitional meandering channels: a closer look into planform evolution*", Dept. of Geology and Planetary Sciences, University of Pittsburgh, PA, **USA.**
49. **[03/20/2009], Invited speaker:** Directorate of Hydrography and Navigation, *Peruvian Navy, Lima,* **Peru.**
50. **[03/02/2009], Seminar's speaker:** Dept. of Civil and Environmental Engineering, *University of Pittsburgh, PA,* **USA.**
51. **[02/18/2009], Seminar's speaker:** Dept. of Civil and Environmental Engineering, *Auburn University, Auburn, AL,* **USA.**
52. **[02/09/2009], Seminar's speaker:** Dept. of Civil and Environmental Engineering, *Texas A&M University, College Station,* TX, **USA.**
53. **[11/18/2008], Seminar's speaker:** School of Earth and Environment, *University of Leeds,* **UK.**
54. **[11/10/2008], Seminar's speaker:** Dept. of Civil Engineering, *Universidad Nacional Federico Villarreal, Lima,* **Peru.**
55. **[11/07/2008], Seminar's speaker:** Dept. of Agricultural Engineering, *Universidad Nacional Agraria La Molina, Lima,* **Peru.**
56. **[11/04/2008], Seminar's speaker:** Dept. of Civil Engineering, *National University of Engineering, Lima,* **Peru.**
57. **[05/28/2008], Seminar's speaker:** National Sedimentation Laboratory, *United States Department of Agriculture, USDA,* **USA.**
58. **[02/28/2008], Seminar's speaker:** Dept. of Civil and Environmental Engineering, *University of California at Berkeley, CA,* **USA.**
59. **[02/25/2008], Seminar's speaker:** Dept. of Civil and Environmental Engineering, *Virginia Tech., Blacksburg, VA, USA*
60. **[04/04/2007], Seminar's speaker:** Dept. of Civil and Environmental Engineering, *Pennsylvania State University, State College, PA,* **USA.**
61. **[Feb 2005], Seminar's speaker:** Dept. of Civil and Environmental Engineering, *University of Illinois at Urbana-Champaign,* **USA.**

NON-REFEREED PUBLICATIONS:
TECHNICAL REPORTS
(*) Graduate student
(*U) Undergraduate

1. Gutierrez R. R. (*) and **Abad J. D.** (2012). "*Statistical Analysis of Meanders of the Red River and Its Tributaries*". Report to Barr Engineering Co. for the US Army Corps of Engineers.
2. Waratuke, A. R., **Abad, J. D.**, Barnas, C., Garcia, M. H. (2009). "*Design and modeling of a combined canoe chute/fish passage for the North Branch Dam, Chicago, Illinois*". Civil Engineering Studies, Hydraulic Engineering Series No. 93.
3. **Abad, J. D.,** Waratuke, A. R. and García, M. H. (2006). "*Numerical simulation of the Telegraph Drop-shaft – Baumgartner Tunnel System"*, St. Louis, MO, USA.

student
(**) Postdoc

4. **Abad, J. D.**, Bombardelli, F. A., Waratuke, A. R. and García, M. H. (2004) "*Modeling and alternative analysis for SEPA Station No. 3"*. In report "SEPA Station No. 3, Siltation Alleviation Study "from Greeley and Hansen LLC to Metropolitan Water Reclamation District of Greater Chicago, IL, USA.
5. García, M. H., Niño, Y., **Abad, J. D.**, Cantero, M., León, A., Mangini, S., Sequeiros, O. (2003). "*Sedimentation management in combined sewer overflow storage reservoirs using water jets"*. Metropolitan Water Reclamation District of Greater Chicago, IL, USA.

CONTRIBUTIONS TO TEACHING

COURSES TAUGHT

At University of Pittsburgh

(for syllabus on the following courses, please see http://www.pitt.edu/~jabad/pages/teaching/teaching.html):

1) **ENGRxxx/ANTHROxxx – An Overview into the Amazon Region** – undergraduate (a University Honors Course, elective). Dr. Abad has submitted a complete proposal (syllabus, logistics, speakers) to the Department of Civil and Environmental Engineering, the University Honors College, the Center for Latin American Studies. This course will include some pre-departure workshops at the University of Pittsburgh, and two-week field trip to the Peruvian Amazon. Topics such as Climate, Geography, Geology, Fluvial Geomorphology, Energy, History, Anthropology, Sociology, Ecology, among others are included in the syllabus. Field trips along the Amazon River are considered using the Peruvian Navy's vessels (open to undergraduate/graduates). Undergraduate level (~15-20 students). *This course could be offered in Summer 2016.* ***Dr. Abad is developing this course.***

2) **BUSSPP0037/ENGR0023** – International, interdisciplinary freshman undergraduate elective course offered in Engineering and Business Colleges, Plus3 Chile Program (http://www.chileplus3.pitt.edu/, http://plus3chile2011.blogspot.com/, http://plus3chile2012.blogspot.com/, http://plus3chile2013.blogspot.com/). This course includes pre-departure workshops at the University of Pittsburgh, a two-week field trip to Valparaiso, Chile and a post-field trip component in which the students write a research-type article and give presentations. Undergraduate level (~ 15-20 students). *This course was offered in Summer 2011, 2012, and 2013.*

3) **ENGR1623/2623: Engineering for a Better Environment: Brazil** – this course investigates renewable energy sources through exploration of Brazil's utilization of sustainable and clean power. The course is preparatory to a 10-day capstone study abroad field experience during August of each year in Brazil. The field experience will provide students with the opportunity to engage in dialogue with Brazilian leaders in sustainable energy development as well as experience Brazil through a variety of cultural and historical activities. Undergraduate/graduate level (~ 15-20 students). *This course is being offered in Summer 2014 and Summer 2015.*

4) **CEE 1401/2401: Open Channel Hydraulics –** undergraduate/graduate level (~ 50 students/semester). *This course was offered in Spring 2011, 2012, 2013 and 2014.*

5) **CEE 1410/2410: Water Resources Engineering** – undergraduate (~ 60 students/semester). *This course was offered in Fall 2013.*

6) **CEE 3408: Advanced Environmental Fluid Mechanics –** graduate level (~ 10 students/semester). *This course was offered in Fall 2011, 2012, Spring 2013, Fall 2013, 2014.* ***Dr. Abad has developed this course.***

7) **CEE 2416: Sediment Transport** – undergraduate/graduate level (~10 students/semester). *This course was offered in Spring 2010, and Fall 2014.* ***Dr. Abad has developed this course.***

8) **CEE 3416: River Mechanics and Morphodynamics** – graduate level (~10 students/semester). *This course was offered in Fall 2012.* ***Dr. Abad has developed this course.***

9) **CEE 0085: Sophomore Seminars –** undergraduate level (~ 50 students/semester). *This course will be offered in Fall 2014.*

10) **CEE 3485: CEE Graduate Seminars.** Dr. Abad has organized joint seminar among CEE, Geology and Planetary Sciences and the Center for Simulation and Modeling.

At Peruvian Naval Academy: Iquitos, Peru

11) **River Hydraulics** – this is a summer two-week short course offered to Naval officers from Peru and other South American countries. This summer course includes lectures on theory related to rivers and the Amazon basin and field trips to perform hydrodynamic and bed morphodynamic measurements along the Amazonian rivers. Officers from Colombia, Ecuador, Peru and Venezuela have taken this course. *This course was offered in Summers 2010, 2011, 2012, 2013, 2014, and 2015.* ***Dr. Abad has developed this course.***

SHORT-COURSES/ADDITIONAL LECTURES

Dr. Abad has given short courses in different countries such as: Argentina, China, Mexico, Peru, and USA.

Lecturer, "Assessment tools to evaluate stream restoration measures", Summer Workshop Series in

Environmental Restoration, University at Buffalo, The State University of New York, June 19-20, 2014. In collaboration with Eddy Langendoen (ARS-USDA), **New York, USA.**

Lecturer, "Morfologia y procesos fluviales" y "Modelacion numerica y fisica del flujo en cauces", short-course at IMTA (Mexican Institute of Water Technology), October 22 and 23, 2013, Jiutepec, Morelos, **Mexico.**

Lecturer, "Modeling of River Migration at Multiple Scales: A GIS-based toolbox for river restoration", short-course given at UNAM (National Autonomous University of Mexico), In collaboration with Eddy Langendoen (ARS-USDA) and Alejandro Mendoza (University of Pittsburgh), January 16-18, 2013, Mexico City, **Mexico**.

Lecturer, "Modeling of River Migration at Multiple Scales: A GIS-based toolbox for river restoration", short-course presented to USDA Forest Service, In collaboration with Eddy Langendoen (ARS-USDA), Davide Motta, Roberto Fernandez and Marcelo H. Garcia (University of Illinois at Urbana-Champaign). December 12-14, 2011. http://rvrmeander.org/shortcourses/2011/TAHOE/Presentations.html, Lake Tahoe, NV, **USA.**

Lecturer, "Modeling of River Migration at Multiple Scales", pre-course at RCEM Conference, 2011, In collaboration with Eddy Langendoen (ARS-USDA), Davide Motta, Roberto Fernandez and Marcelo H. Garcia (University of Illinois at Urbana-Champaign). September 3-5, 2011. http://www.rvrmeander.org and http://sklhse.tsinghua.edu.cn/rcem2011/rcem2011.html, Tsinghua University, Beijing, **China.**

Lecturer, "Assessment and Modeling of River Migration: Introducing a GIS-based toolbox for river restoration", pre-course at World Environmental & Water Resources Congress, ASCE 2011, In collaboration with Eddy Langendoen (ARS-USDA), Davide Motta, Roberto Fernandez and Marcelo H. Garcia (University of Illinois at Urbana-Champaign). May 22, 2011, Palm Springs, CA, **USA.**

Lecturer, "Modelamiento Hidráulico, evolución de ríos", pre-course at II National Peruvian Water Congress, 2010. In collaboration with Eddy Langendoen (ARS-USDA), Davide Motta and Marcelo H. Garcia (University of Illinois at Urbana-Champaign). National University of Engineering (in Spanish), April 5-6, 2010. Lima, **Peru.**

Lecturer, "Modelamiento Hidráulico, evolución de ríos". Short course, in collaboration with Eddy Langendoen (ARS-USDA), Davide Motta and Marcelo H. Garcia (University of Illinois at Urbana-Champaign). Universidad Nacional San Antonio de Abad (in Spanish), April 9-10, 2010, Cusco, **Peru**.

Lecturer, "Modeling of river meandering and streambank erosion", pre-course in River Coastal and Estuarine Morphodynamics (RCEM) conference, 2009. In collaboration with Eddy Langendoen. (http://info.rcem.serfe.com/pc_activities.html), September 15-17, 2009, Santa Fe, **Argentina.**

Invited instructor, "Low-slope sand-bed rivers course", May 2006, Johns Hopkins University, National Center for Earth-surface Dynamics (http://www.nced.umn.edu/Low_Slope_rivers_06.html), MD. **USA.**

Substitute lecturer, "GEOG 595/GEOL 593: Alluvial Boundary Layer Processes and Deposits", Instructors: Jim Best and Bruce Rhoads, Department of Geography and Department of Geology, University of Illinois at Urbana-Champaign, USA, Fall 2008, Illinois, **USA.**

Substitute lecturer, "CEE 598, GEOL 593: Turbidity currents: morphodynamics and deposits", Instructor: Gary Parker, Department of Civil and Environmental Engineering and Department of Geology, University of Illinois at Urbana-Champaign, USA, Fall 2008, Illinois, **USA.**

Substitute lecturer, **"CEE459: Sediment Transport",** Instructor: Marcelo H. García, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, Fall 2004, Illinois, **USA.**

Lecturer, "Hidráulica de Canales y Ríos: Teoría y Modelamiento Matemático". Department of Civil Engineering, National University of Engineering, January, 2004 (In Spanish), Lima, **Peru.**

CONTRIBUTIONS TO NON-CLASSROOM TEACHING

CREAR-ED-SPA: Ciencia y Tecnología para el conocimiento de la Amazonia (two-week short course in Spanish), organized by CREAR, http://crearamazonia.org/education/crear-ed-spa/ in Iquitos, Peru. This course is organized for Peruvian and international students (with emphasis on Latin American students). *This course was offered in Summer 2011, 2012, 2013, and 2014.*

CREAR-ED-ENG: Explore and Comprehend Amazonia Trough Science and Technology (two-week short course in English), organized by CREAR, http://crearamazonia.org/education/crear-ed-eng/ in Iquitos, Peru. This course will be organized for international students; currently students from Japan, USA, UK, and The Netherlands have showed some interest. *This course will be offered as a short course pre-conference RCEM (http://www.crearamazonia.org/rcem2015/) where Dr. Abad is the Chairman.*

AMAZONIAN RESEARCH EXPEDITION (under development): two-weeks in the Pacaya-Samiria National Reserve, Peru. Dr. Abad is planning to have this expedition sponsored by National Geographic and the Peruvian Navy. In summer 2014, there will be an exploratory trip to the Pacaya-Samiria region to finalize the planning. This expedition will be offered in 2016. ***Dr. Abad is developing this initiative.***

POSTDOCS AND STUDENTS

VISITING SCHOLARS

1. Lucas Dominguez Ruben (PhD candidate at University of Litoral, Santa Fe, Argentina). Advisor: Dr. Szupiany. January-August 2015.

POSTDOCS

2. Alejandro Mendoza (PhD, 2011, UNAM-Mexico) – Feb 2012-Sept. 2014. Support from Conacyt, Mexico. Sept. 2014-present. Funded by Electricity of France (EDF) project.

STUDENTS (GRADUATES)

1. Cesar Simon (PhD student) – Expected to graduate: Spring 2015. MSc in CEE (2013), MSc in Mathematics (2014). Funding from NSF: The Marcellus Shale Research Network.

2. Sina Arjmand (PhD student) - Expected to graduate: Summer 2015. Funding from TAs and Heinz Foundation (summer).
3. Zhi Li (PhD student)
4. Kristin Dauer (MSc student) – Expected to graduate: Fall 2014. *Funded by project with Electricity of France (EDF) and NSF: Collaborative Research: Morphodynamics of the Madeira River: An Amazonian Anabranching Mega River Facing Imminent Disruption.*
5. Meng Zhang (MSc) - Expected to graduate: Spring 2015. Own funding.
6. Di Jin (MSc) – Expected to graduate: Spring 2015. Own funding.
7. Jiaoli Ren (MSc) – Expected to graduate: Spring 2015. Own funding.
8. Joe Gianvito (part-time PhD student, working at KLH consultant company) – Expected to graduate: Spring 2015. Own funding.
9. Raziul Mollah (part-time PhD student, working at US Army Corps of Engineers) – Expected to graduate: Spring 2015. Own funding.
10. David Good (part-time PhD student), working at Allegheny – Expected to graduate: Fall 2015. Own funding.

STUDENTS (UNDERGRADUATES)

1. Renee Corbett (CEE Senior)
2. Adrian Garcia (CEE Junior)
3. Collin Ortals (CEE Junior)
4. Catalina Escobar (CEE Junior)
5. Chris Smallidge (CEE Junior)

STUDENTS (HIGH SCHOOL)

1. Zoe Legarrec (Junior, Taylor Allderdice High School, Pittsburgh, PA) – Fall 2014-present.

FORMER GROUP MEMBERS

Note: Dr. Abad has mentored one postdoc, already graduated 2 PhDs and several MSc students. Dr. Abad has also mentored several undergraduate and high-school students.

(POSTDOCS)

1. Christian Frias (Postdoctoral research associate, January-September 2014). Funded by Electricity of France (EDF) project.

(GRADUATES)

1. Christian Frias (MSc. 2011, PhD 2013) – Postdoctoral research associate (January-September 2014), Department of Civil and Environmental Engineering, University of Pittsburgh. Funding from NSF: Collaborative Research: Morphodynamics of the Madeira River: An Amazonian Anabranching Mega River Facing Imminent Disruption and NSF: Collaborative Research*: Morphodynamics of complex meander bends on large rivers*.
2. Gutierrez, R. R. (MSc 2011, PhD 2013) – Assistant Professor, Department of Civil Engineering, Pontifical University Catholic of Peru, Lima, Peru. http://www.pucp.edu.pe/ronald-gutierrez-llantoy/publicacion/. Funding from Heinz project 2012 and 2013.
3. Yue Han (MSc 2014) – 75% own funding, 25% funded by NSF: The Marcellus Shale Research Network.
4. Ran Huang (PMS. 2013), working at LEED Green Associates. Own funding.
5. Volkwein, Ross (PMS, 2011), working at KLH INC. Company. Own funding.
6. Adam Sam (PMS 2010), working at GAI Consultants, Inc. Own funding.

(UNDERGRADUATES)

1. Emily Zapinski (CEE freshman, 2014)
2. Jessica Garcia (CEE junior, 2013-2014)
3. Sara Watter (CEE senior, 2014)
4. Tolulope Dayo (CEE senior, 2014)
5. Brian Hone (CEE senior, 2013) – working at The Gateway Engineers, Inc., Greentree, PA.
6. Amira Aouni (CEE Senior, 2011-2012) – working in consultant company, Washington DC.
7. Marianne Choi (CEE senior, 2011) – (MSc., 2014), Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, Illinois, USA.
8. Volkwein, Ross (CEE senior, 2010) – working at KLH consultant company
9. Bradley J. Harken (CEE Senior, 2010) – studying PhD at University of California, Berkeley
10. Greg Turko (CEE Senior, 2010)
11. Zach Rinker (CEE Senior, 2010)

(HIGH-SCHOOL)

1. Emily Zapinski (Senior, Taylor Allderdice High School, Pittsburgh, PA) – Fall 2013, Spring 2014
2. Avi Grinberg (Senior, Taylor Allderdice High School, Pittsburgh, PA) – Spring 2014

PROFESSIONAL SERVICE ACTIVITIES

UNIVERSITY SERVICE:

1. Member of Advisory Board, Center for Latin American Studies (CLAS), University of Pittsburgh, 2012-2014.
2. Member of Graduate Student Field Research Grants Committee, Center for Latin American Studies (CLAS), University of Pittsburgh, 2012-present.
3. Academic Advisor, Plus3 Chile Program (2011, 2012, 2013), http://www.chileplus3.pitt.edu/. Freshman international elective course between Engineering and Business schools, University of Pittsburgh.

4. Academic Advisor, ENGR 1623/2623: Engineering for a Better Environment: Brazil (2013).
5. Academic Advisor, Summer 2014, Pitt Summer Excel program, College of Engineering, University of Pittsburgh – Adrian Garcia
6. Academic Advisor, College of Engineering Summer Fellowships, Ross Volkwein (2011), Brian Horne (2013), Catalina Escobar (2014), Collin Ortals (2014).

Civil and Environmental Engineering DEPARTMENT SERVICE

1. (**Member**), undergraduate committee, CEE
2. (**Advisor**), undergraduate students, CEE
3. (**Founder Faculty Advisor**), Student Chapter of International Association for Hydro-Environmental Research (IAHR, http://www.pitt.edu/~sorc/iahr/).
4. (**Founder Faculty Advisor**), Student Chapter of Environmental Water Research Institute, American Society of Civil Engineers (EWRI, https://sites.google.com/site/ewriupitt/). The EWRI and IAHR student chapters have organized the workshop on using HEC-HMS and HEC-RAS, March 29, 2014.
5. (**Organizer**), CEE Graduate Seminar, Spring 2011
6. (**Host)**, CEE Graduate Seminar, Several speakers per each year.
7. (**Organizer**), IRIC River Modeling short course, Hokkaido University and USGS, April 10-12, 2012. (http://i-ric.org/en/index.html). Short-course on river modeling organized at the University of Pittsburgh. Prof. Shimizu and his research group from Hokkaido University (Japan) and Dr. Nelson from USGS. Participants included students and faculty from the University of Pittsburgh, and personnel from USGS and US Army Corps of Engineers and local consultant companies.
8. (**Sponsor**), Seminars given by Doug Jerolmack (***University of Pennsylvania***), Panos Diplas (***Lehigh University***), Alan Howard (***University of Virginia***), Heidi Nepf (***Massachussetts Institute of Technology***), Edgardo Latrubesse (***University of Texas at Austin***), Anthony Ingrafea (***Cornel University***), Robert Anthony Dalrymple (***Johns Hopkins University***), Hugo Montoro (***Peruvian Navy***), Jim Best (***University of Illinois at Urbana-Champaign***), Gary Parker (***University of Illinois at Urbana-Champaign***), Michael Lamb (***Caltech***), Dan Parsons (***University of Leeds, UK***), Eddy Langendoen (***USDA***).
9. (**Organizer**), 2011, 2012 and 2013. Graduate Orientation Workshop for incoming students.
10. (**Organizer**), 2012 CEE Faculty Candidate visit.
11. (**Organizer**), 2010 and 2011 Meeting of Assistant Professors with the CEE Chair
12. (**Organizer**), Sophomore seminars CEE0085 – 2014-2015.
13. (**Presenter**), Sophomore Seminar on "Water Resources Group", Fall 2011, Fall 2013 (CEE0085 & CEE1085),

CHAIRMAN OF INTERNATIONAL CONFERENCES AND MEMBER OF THE LOCAL ORGANIZING COMMITTEE (LOC)

1. (**Member, LOC**). "2016 Latin American Hydraulics Conference", International Association for Hydro-Environment Research (IAHR), Lima, Peru, http://ladhi2016.org/.
2. (**Chairman, organizer**). "2015 River Coastal and Estuarine Morphodynamics (RCEM)", Iquitos, Peru. This conference has been previously organized in Italy (University of Genova), Japan (Hokkaido University), Spain (University of Catalunya, University of Cantabria), USA (University of Illinois at Urbana-Champaign), The Netherlands (University of Twente), Argentina (University of Litoral, Santa Fe), and China (Tsinghua University). This conference will be organized by CREAR and the University of Pittsburgh, www.crearamazonia.org/rcem2015/
3. (**Member, LOC**), "2013 Fluid Dynamics Meeting", Pittsburgh, PA, USA, American Physical Society, organized by the University of Pittsburgh, Carnegie Mellon University and other institutions. http://www.apsdfd2013.pitt.edu/
4. (**Chairman, organizer**). "2012 Tropical Rivers conference", International conference partially funded by UNESCO (United Nations Educational, Scientific and Cultural Organization) and organized by CREAR, (http://www.crearamazonia.org/tropicalrivers2012/index.html), August 8-11, Iquitos, Peru.

MEMBER OF THE INTERNATIONAL SCIENTIFIC COMMITTEE AND CHAIR OF SESSIONS

1. (**Member, International Scientific Committee**). *"13th International Symposium on River Sedimentation",* September 19-22, Stuttgart, Germany.
2. (**Member, International Scientific Committee**). *"River Flow 2014",* September 3-5, Lausanne, Switzerland, http://riverflow2014.epfl.ch/.
3. (**Member, International Scientific Committee**). *"Latin American Hydraulic Conference",* August 25-28, 2014, Santiago de Chile, Chile, http://www.hidrolatam2014.com/
4. (**Member, International Scientific Committee**), "*Sexto Simposio Regional sobre Hidráulica de Ríos (Ríos 2013)*", November 6-8, 2013, Santa Fe, Argentina, http://fich.unl.edu.ar/rios2013/

5. (**Chair**). Session on "Large River Systems, a place for interaction of several disciplines and its importance for earth's conservancy and sustainability". Annual Meeting, Society for Advancing Hispanics, Chicanos & Native Americans into Science (SACNAS), San Antonio, October 3-6, 2013.
6. (**Chair**). Session on "River Research Theory and its Importance for River Restoration Practices". Annual Meeting, Society of Hispanic Professional Engineers (SHPE), Indianapolis, IN, October 30-Novermber 3, 2013.
7. (**Chair**). Session on "*Fluvial Morphodynamics, Channels Patterns: How do River Patterns Come to be Different?*". American Geophysical Union (AGU), fall meeting in San Francisco, CA, December 2012.
8. (**Chair**). Session on "*Lowland Rivers*". Association of American Geographers (AAG) annual meeting, February. 2012, New York, New York, USA.
9. (**Chair**). Session on "*Fluvial Morphodynamics, Channels Patterns, and Megafans*". American Geophysical Union (AGU), fall meeting in San Francisco, CA, USA, December, 2011.
10. (**Chair**). Session on "*Challenges on Scaled Physical Modeling of Sediment Transport*". American Geophysical Union (AGU), fall meeting in San Francisco, CA, USA, December, 2011.
11. (**Chair**). Session on "*Fluvial Geomorphology: Progress and Challenges in River Meandering*". Association of American Geographers (AAG), annual meeting, Washington, DC, USA, April. 2010.
12. (**Chair**). Session on "*Meandering rivers, advances in research*". American Geophysical Union (AGU), fall meeting in San Francisco, CA, USA, December, 2009.
13. (**Chair**). Session on "Turbulence in open channel flows". American Society of Civil Engineers (ASCE). Every year, EWRI Conference.

MEMBER OF NATIONAL AND INTERNATIONAL COMMITTEES

1. (**Alternate representative**), University of Pittsburgh in the Consortium of Universities for the Advancement of Hydrological Sciences, Inc. (CUAHSI), 2010-Present
2. (**Secretary, 2010-2011**), Computational Hydraulics Committee, American Society of Civil Engineers, ASCE
3. (**Vice-president, 2012-2013**), Computational Hydraulics Committee, American Society of Civil Engineers, ASCE
4. (**Member, 2013-present**), Hydraulics and Waterways Council, American Society of Civil Engineers, ASCE
5. (**Member, Fluvial Hydraulics committee**), International Association for Hydro-Environment Research, IAHR, 2010-present.
6. (**Secretary of the International Advisory Committee**), River Coastal and Estuarine Morphodynamics, RCEM, 2011-present.

EDITOR - SPECIAL ISSUES IN INTERNATIONAL JOURNALS

1. (**Editor**). Special Issue on "Fluvial Morphodynamics, Channel Patterns". Earth Processes and Surface Landforms, Wiley, 2012-2013. *Status: last stage of reviews for two papers. Seven other papers have been already accepted.* ***Journal Impact Factor: 2.49.***
2. (**Co-editor**). Special Issue on "Large Rivers and Megafans". Sedimentary Geology, Elsevier, 2012-2013. *Status: in production.* ***Journal Impact Factor: 2.564.***
3. (**Co-editor**). Special Issue on "Moveable-bed models". Journal of Hydro-Environment Research, Elsevier, 2012-2013. *Status: in production.* ***Journal Impact Factor: 1.961.***
4. (**Editor**). Special Issue on "Meandering channels ", Geomorphology Journal, Elsevier 2010-2012. *Status: published. Guest Editors: Jorge D. Abad, Inci Guneralp and Guido Zolezzi, Vol 163-164, http://www.sciencedirect.com/science/journal/0169555X/163-164.* ***Journal Impact Factor: 2.552.***

PROPOSAL REVIEWER AND PANEL MEMBER

1. (**Reviewer**) Swiss National Science Foundation (SNSF) Mathematics, Physical and Engineering Sciences Division, Switzerland.
2. (**Reviewer**) NOW (Netherlands Organization for Scientific Research) Council for Earth and Life Sciences, The Netherlands. NWO funds thousands of top researchers at universities and institutes and steers the course of Dutch science by means of subsidies and research programs. NWO promotes quality and innovation in science.
3. (**Reviewer**) NSF (National Science Foundation), Geomorphology and Land Use Dynamics, USA. Geomorphology and Land-use Dynamics supports innovative research into processes that shape and modify landscapes over a variety of length and time scales.
4. (**Reviewer**) NSF, Hydrologic Sciences, USA. The Hydrologic Sciences Program focuses on the fluxes of water in the environment that constitute the water cycle as well as the mass and energy transport function of the water cycle in the environment. The Program supports studying processes from rainfall to runoff to infiltration and streamflow; evaporation and transpiration; as well as the flow of water in soils and aquifers and the transport of suspended, dissolved and colloidal components.

5. (**Reviewer**) NSF, Education and Human Resources, EAR, USA.
6. (**Reviewer**) NIWR (National Institute of Water Resources, USGS). Managing this critical resource is increasingly important, given the challenges from mankind and Mother Nature. That's where the National Institutes for Water Resources (NIWR) plays a major role, by providing a national platform for research, training and collaboration needed to manage our water resources. Housed in the country's top land-grant universities, NIWR's institutes are uniquely positioned to assist state and federal governments in advancing sustainable management of our water supply.
7. (**Reviewer**) National Research Funding, CONICYT, Chile.
8. (**Reviewer**) Internal Funding, Pontifical Catholic University of Peru, Peru.
9. (**Member, Panel 2012-2013**) NSF, Geomorphology and Land Use Dynamics.

JOURNAL REVIEWER

[1] Advances in Water Resources, **[2]** Canadian Journal of Civil Engineering, **[3]** Continental Shelf Research, **[4]** Environmental Science and Technology, **[5]** Earth Interactions, AGU, **[6]** Earth Surface Processes and Landforms, **[7]** Engineering Geology, **[8]** Environmental Fluid Mechanics, **[9]** Environmental Modeling & Software, **[10]** Environment International, **[11]** Environmental Geology, **[12]** European Journal of Fluid Mechanics, **[13]** Flow measurement and Instrumentation, **[14]** Geomorphology, **[15]** Geophysical Research Letters (AGU), **[16]** International Journal of Multiphase Flow, **[17]** International Journal of Sediment Research, **[18]** International Journal of River Basin Management, **[19]** Journal of Hydraulic Engineering, **[20]** Journal of Hydrologic Engineering, **[21]** Journal of Energy Engineering, **[22]** Journal of Engineering Mechanics, **[23]** Journal of Fluid Mechanics, **[24]** Journal of Geophysical Research – Earth Processes (AGU), **[25]** Journal of Hydraulic Research, **[26]** Journal of Hydro-Environmental Engineering, **[27]** Journal of Hydrology, **[28]** Journal of Natural Gas Science and Engineering, **[29]** Journal of Sedimentary Research, **[30]** Journal of South American Earth Sciences, **[31]** Journal of Visualization, **[32]** Ocean Engineering, **[33]** Proceedings of the National Academy of Sciences (PNAS), **[34]** Revista Tecnologia y Ciencias del Agua, IMTA-Mexico, **[35]** River Research and Applications, **[36]** Sedimentology, **[37]** Stochastic Environmental Research & Risk Assessment, **[38]** Water Resources Research (AGU), **[39]** Water Resources Management, **[40]** Wetlands Ecology and Management, **[41]** KSCE Journal of Civil Engineering, **[42]** United States Geological Survey (USGS)

CONTRIBUTIONS TO DIVERSITY

CHAIR OF SESSIONS IN CONFERENCES FOR UNDERREPRESENTED STUDENTS

1. (**Chair**). Session on "***Large River Systems, a place for interaction of several disciplines and its importance for earth's conservancy and sustainability***". Annual Meeting, Society for Advancing Hispanics, Chicanos & Native Americans into Science (SACNAS), San Antonio, October 3-6, 2013. More than 3,000 underrepresented students attend to this conference that is funded by several agencies such as NSF.

PRESENTATION IN CONFERENCES FOR UNDERREPRESENTED STUDENTS

1. (**Invited speaker**). Presentation on "The Marcellus Shale Network: a collaboration between research and citizen science to collect and share data around Marcellus Shale and fracking". Annual Meeting, Society for Advancing Hispanics, Chicanos & Native Americans into Science (SACNAS), San Antonio, October 3-6, 2013, https://sacnas.org/civicrm/event/info?reset=1&id=60. This session was organized by CUAHSI, http://www.cuahsi.org/.
2. (**Invited speaker**). Presentation on "The Marcellus Shale Research Network: organizing, collecting and interpreting water data to track potential impacts of Marcellus Shale activity". Annual Meeting, Society for Advancing Hispanics, Chicanos & Native Americans into Science (SACNAS), Seattle, October 11-14, 2012, http://sacnas.org/news/sacnas-seattle-2012. This session was organized by CUAHSI, http://www.cuahsi.org/.

MENTOR TO HIGH-SCHOOL/UNDERGRADAUTE /GRADUATE WOMEN AND UNDERREPRESENTED STUDENTS

1. (**Mentor, women**). Dr. Abad has mentored a high-school woman student. Emily Zapinski (Senior, Taylor Allderdice High School) during the 2013 academic year. Emily was performing some research on understanding precipitation patterns in the Amazon basin. She was involved in a science elective class at her high school. Dr. Abad was highly involved in recruiting Emily Zapinksi for attending undergraduate students at the University of Pittsburgh. Finally she is a PIT student.
2. (**Mentor, women**). Dr. Abad has mentored undergraduate women students from different ethnic groups. Marianne Choi (Asian-American), Amira Aouni (Arab), Kristin Dauer (American), Catalina Escobar (Hispanic), Tolulope Dayo (African American), Julissa Garcia (Hispanic).
3. (**Mentor**). Dr. Abad has mentored undergraduate underrepresented student: Adrian Garcia (Hispanic).
4. (**Mentor, women**). Dr. Abad has mentored graduate women students from different ethnic groups: Kristin Dauer (American), Nicole Anderson (African American), Yue Han (Asian), Meng Zhang (Asian).

EDUCATIONAL ACTIVITIES

1. (**Lecturer**) Dr. Abad has given a presentation at Taylor Allderdice High School in February 2014. Dr. Abad's talk was focused on research related to the Amazon basin, and several high-school students are interested for pursuing the elective class at their high school and interact with Dr. Abad.

2. (**Mentor**) Dr. Abad is the academic advisor for Plus3 Chile (2011, 2012, and 2013) and at least 50% of the students participating in this program (traveling to Chile) are women, and at least 10% of the total students are African Americans.

3. (**Organizer**). Dr. Abad is the Director of CREAR, and the activities that this center is developing in the Peruvian Amazon include women from different universities. The courses are offered to all countries, especially those in South America.

4. (**Organizer**). Dr Abad has hosted Dr. Heidi Nepf from the Department of Civil and Environmental Engineering of MIT. She has visited the Univ. of Pittsburgh for a seminar and research discussion.

CONSULTANT ACTIVITY

NORTH DAKOTA

AWD-0001 AMENDMENT 1: MEANDER BELT WIDTH ANALYSIS. Bars Engineers, Houston-Moore Group and the US Army Corps of Engineers funded this project. The project includes a low-flow channel (LFC) within a primary 36-mile North Dakota diversion channel. Under normal conditions the LFC would collect and convey drainage from stormwater and nearby agricultural runoff, ditches, etc. The cross section is designed such that sediment is effectively conveyed downstream, causing neither significant aggradation nor degradation. An additional goal of the LFC would be to mitigate the loss of approximately 5.5 miles of natural river reaches that will be cut off from their upstream watersheds at the diversion. This would be accomplished by constructing the LFC in a meandering pattern to mimic natural flow patterns and provide enhanced aquatic habitat. The environmental impact statement (EIS) proposed a target channel sinuosity of 1.5 for approximately 11 miles.

SUPPLEMENTARY INFORMATION

Impact factors of Journals where Dr. Abad has published

- Science, **33.6**
- Journal of Geophysical Research –Earth Surface, **3.621**
- International Journal of Coal Geology, **3.157**
- Water Resources Research, **3.149**
- Sedimentary Geology**, 2.564**
- Geomorphology, **2.552**
- Hydrological Processes, **2.497**
- Earth Surface Processes and Landforms, **2.49**
- Journal of Sedimentary Research, **2.33**
- Water Resources Management, **2.259**
- Computers & Geosciences, **1.992**
- Journal of Hydro-Environment Research, **1.961**
- Journal of Hydraulic Engineering, **1.862**
- Ocean Engineering, **1.448**
- Journal of Environmental Engineering, **1.31**
- EOS-**AGU,**

Google Scholar

index (accessed January 31, 2015)

	All	Since 2009
Citations	720	612
h-index	13	13
i10-index	15	15

ResearchGate index (accessed January 31, 2015)

RG score: 24.83

VISITING FACULTY AND SCIENTISTS

1. Lucas Dominguez, University of Litoral, Santa Fe, Argentina – January-August 2015
2. Leo Guerrero, University of Piura, Piura, Peru – February 2012-May 2012.
3. Eddy Langendoen, USDA-ARS, several opportunities, 2009, 2010, 2011, 2012, and 2013.
4. Fabian Rivera, Juan Barajas, University of Tabasco, Mexico. March 30-April 4, 2014.

SHORT-TIME VISITING FACULTY AND SCIENTISTS

1. Rolf Aalto, University of Exeter, UK
2. Doug Jerolmack, University of Pennsylvania, USA
3. Panos Diplas, Lehigh University, USA
4. Alan Howard, University of Virginia, USA
5. Heidi Nepf, Massachusetts Institute of Technology, USA
6. Edgardo Latrubesse, University of Texas at Austin, USA
7. Hugo Montoro, Peruvian Navy, Peru
8. Jim Best, University of Illinois at Urbana-Champaign, USA
9. Gary Parker, University of Illinois at Urbana-Champaign, USA
10. Michael Lamb, Caltech, USA
11. Dan Parsons, University of Leeds, UK
12. Guido Zolezzi, University of Trento, Italy

MSC/PHD committee

1. Edward Park (PhD student), Dept. of Geography and the Environment, University of Texas at Austin. Advisor: Dr. Latrubesse.
2. Gaston Priego (PhD student), Dept. of Civil Engineering, Univ. of Tabasco, Mexico. Advisor: Dr. Rivera.
3. German Villalba (PhD student), Dept. of Civil and Environmental Engineering, Univ. of Pittsburgh (2012). Advisor: Dr. Liang.
4. Leanna F. Seminsky (MSc student), Dept. of Civil and Environmental Engineering, University of Pittsburgh (2013). Advisor: Dr. Vallejo
5. Marina Moraiti (PhD candidate), Dept. of Mathematics, University of Pittsburgh (2013). Advisor: Dr. Leyton
6. Elisabetta Pistone (PhD student), Dept. of Civil and Environmental Engineering, Univ. of Pittsburgh (2013). Advisor: Dr. Rizzo
7. Sina Arjmand (PhD student), Dept. of Civil and Environmental Engineering, Univ. of Pittsburgh (2013). Advisor: Dr. Abad
8. Daniel Salas (PhD student), Dept. of Civil and Environmental Engineering, Univ. of Pittsburgh (2012). Advisor: Dr. Liang
9. Krissy Hopkins (PhD student), Dept. of Geology and Planetary Sciences, University of Pittsburgh. Advisor: Dr. Bain
10. Michaela Kubacki (PhD candidate), Dept. of Mathematics, Univ. of Pittsburgh (2012). Advisor: Dr. Leyton
11. Tyler Davis (PhD candidate, PhD defense), Dept. of Civil and Environmental Engineering, Univ. of Pittsburgh (2012). Advisor: Dr. Liang
12. Cesar Simon (PhD student), Dept. of Civil and Environmental Engineering, Univ. of Pittsburgh (2012). Advisor: Dr. Abad
13. Christian Frias (PhD candidate), Dept. of Civil and Environmental Engineering, Univ. of Pittsburgh (2012). Advisor: Dr. Abad
14. Ronald Gutierrez (PhD candidate), Dept. of Civil and Environmental Engineering, Univ. of Pittsburgh (2012). Advisor: Dr. Abad
15. Yi Xu (PhD candidate), Dept. of Civil and Environmental Engineering, Univ. of Pittsburgh (2012). Advisor: Dr. Liang
16. Xiangyu Luo (PhD candidate), Dept. of Civil and Environmental Engineering, Univ. of Pittsburgh (2012). Advisor: Dr. Liang
17. Shugong Wang (PhD, defended 2011). Dept. of Civil and Environmental Engineering, Univ. of Pittsburgh (2010). Advisor: Dr. Liang
18. Davide Motta (PhD candidate). Dept. of Civil and Environmental Engineering, Univ. of Illinois at Urbana-Champaign, Illinois. Advisor: Dr. Garcia

PROFESSIONAL SOCIETY MEMBERSHIPS

Society of Advancing Hispanics, Chicanos & Native Americans in Science (SACNAS)
American Geophysical Union (AGU)
American Physics Society (APS)
American Society of Civil Engineers (ASCE), EWRI member.
International Water Resources Association (IWRA).
International Association for Hydraulic Engineering and Research (IAHR).

International Association of Sedimentologists (IAS)
SEPM Society for Sedimentary Geology
Geological Society of America (GSA)
Association of Environmental Engineering and Science Professors (AEESP)