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**RESEARCH
EXPERIENCE**

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

Postdoctoral Research Associate, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, Illinois, USA. May 2008-August 2009.

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

**ACADEMIC
TRAINING**

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

M.S., University of Illinois at Urbana-Champaign, Urbana, Illinois, Dec. 2002, Dept. of Civil and Environmental Engineering

PhD, University of Illinois at Urbana-Champaign, Urbana, Illinois, May 2008, Dept. of Civil and Environmental Engineering

**TEACHING
EXPERIENCE**

Lecturer, “**Modeling of River Migration at Multiple Scales**”, pre-course in RCEM Conference, 2011, In collaboration with Eddy Langendoen (ARS-USDA), Davide Motta, Roberto Fernandez and Marcelo H. Garcia (University of Illinois at Urbana-Champaign). Tsinghua University, China, Sept 3-5, 2011

Lecturer, “**Assessment and Modeling of River Migration: Introducing a GIS-based toolbox for river restoration**”, pre-course in 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). Palm Springs, California, May 22, 2011

Lecturer, “**Modelamiento Hidráulico, evolución de ríos**”, pre-course in 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, Lima, PERU. In Spanish. April 5-6th, 2010

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, Cusco, PERU. In Spanish. April 9-10th, 2010.

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), 09/15/2009-09/17/2009.

Visitant 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.

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.

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

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

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

Lecturer, “**Hidráulica de Canales y Ríos: Teoría y Modelamiento Matemático**”. Department of Civil Engineering, National University of Engineering, PERU, Jan, 2004. (In Spanish)

**RESEARCH AND
TEACHING
INTERESTS**

Mechanics of Sediment Transport, River Mechanics and Morphodynamics, River Restoration, Open Channel Flow, Computational Fluid Dynamics, Hydraulics Laboratory, Environmental Hydrodynamics, Transport and Mixing Processes in Water, Ecohydraulics, In-stream processes, Tidal meandering channels, Near-shore processes, Submarine meandering channels.

**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, pp. 439-459.
3. Rhoads, B. L., **Abad, J. D.** and Engel, F. L. (accepted). "Geomorphologically based design for naturalization straight channels", edited by Simons, A., AGU

**JOURNAL
PUBLICATIONS**

1. Catano, Y., **Abad, J. D.**, Garcia, M. H. (2011). "Three-dimensional flow around two partially buried objects on a deformed bed. Part 2: Numerical simulations". In review, *Journal of Hydraulic Engineering*, ASCE
2. Motta, D., **Abad, J. D.**, Langendoen, E. J. and Garcia, M. H. (2011). "A simplified 2D model for long-term meander migration with physically-based bank evolution". In Press, *Geomorphology*.
3. **Abad, J. D.**, Buscaglia, G. and Garcia, M. H. (2011). "Three-dimensional Hydrodynamic structure of a High-amplitude Kinoshita-generated Meandering Channel". In review, *Journal of Geophysical Research*, AGU.
4. **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, theory and field". *Journal of Sedimentary Research*, November 2011 Issue.
5. 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
6. 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.
7. 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.
8. **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, doi:10.1029/2008WR007016.
9. **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, doi:10.1029/2008WR007017.
10. **Abad, J. D.**, Rhoads, B. L., Gunalp, 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.
11. **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.
12. 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.
13. **Abad J. D.** and García, M. H. (2006). "RVR Meander: A toolbox for re-meandering of channelized streams". *Computers & Geosciences*, 32: 92-101.
14. **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.
15. 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.

**CONFERENCE
PROCEEDINGS**

1. 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". IOWA
2. Frias, C., Abad, J. D. (2012). "Numerical flow field characterization of the ripple-dune amalgamation process". *River Flow 2012*,
3. 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*.
4. Frias, C., Abad, J. D. (2012). "Caracterización numérica del campo de flujo en el proceso de amalgamamiento rizo-duna". XXIV Congreso Latinoamericano de Hidráulica, Costa Rica.

5. 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".
6. Arjmanda, 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". CMWR
7. Frias, C., **Abad, J. D.** (2012). "Numerical flow field characterization of the ripple-dune amalgamation process". CMWR.
8. Simon, C. A., Langendoen, E., **Abad, J. D.** (2012). "Coupling 1D and 2D hydrodynamic equations for stream and floodplain interaction". CMWR.
9. **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, New Mexico
10. Motta, D., Abad, J. D., Langendoen, E. J., Garcia, M. H. (2011). "Floodplain heterogeneity and meander migration". Proceedings of River and Coastal Estuarine Morphodynamics, RCEM 2011, Beijing, China
11. **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 Spring, California, USA.
12. **Frias, C.**, Abad, J. D. (2011). "Large Eddy Simulation for superimposed bedforms in fluvial channels". ASCE EWRI conference, Palm Spring, California, USA.
13. **Gutierrez, R.**, Abad, J. D. (2011). "Application of 1D-wavelets to the study of bed morphology in large river systems". ASCE EWRI conference, Palm Spring, California, USA.
14. 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.
15. 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, Braunschweig, Germany. September 8-10th.
16. Gutierrez, R. R., **Abad, J. D.**, Parsons, D., Best, J., Orfeo, O. (2010). "Aplicacion de Wavelets en el estudio de formas en el Rio Parana". Proceedings of the XXIV Latin-American Congress in Hydraulics, Punta del Este, Uruguay, November.
17. 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.
18. 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.
19. 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 Internacional de Hidrologia de Llanuras, Azul, Buenos Aires, Argentina, Sept. 21-24.
20. 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, USA.
21. 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, USA.
22. 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.
23. 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.
24. 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.
25. 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, Oral Presentation.
26. 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)
27. 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 and opportunities. UCOWR/NIWR Annual Conference, July 7-9, Chicago, Illinois.
28. 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*". XXXIII International Association of Hydraulic Engineering and Research (IAHR) Congress. August 9-14. Vancouver, Canada.
 29. **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, Colorado, USA.
 30. **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 (BC).
 31. **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.
 32. Cataño-Lopera, Y., **Abad, J. D.** and Garcia, M. H. (2008). "*Análisis estadístico de formas de fondo generadas por olas y corrientes: 2 casos estudiados*". Congreso Latinoamericano de Hidráulica, Colombia (In Spanish).
 33. **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.
 34. **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, NJ. September 10-12.
 35. **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.
 36. **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, Missouri, USA.
 37. **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, (In Spanish)
 38. **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, Illinois, USA, October 4-7.
 39. **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.
 40. **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, Utah, USA.
 41. **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, Utah, USA.
 42. **Abad, J. D.** and García, M. H. (2004). "Modeling of Submerged Vanes for Bank Erosion Control". Illinois Water conference, USA.
 43. **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, USA.
 44. **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)
 45. **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)

**ABSTRACTS
/TALKS/
POSTERS**

46. Avila, R. and **Abad, J. D.** (1999). "Asistente para el diseño de canales". XII Congreso Nacional de Ingeniería Civil, Huanuco, PERU, (In Spanish)
1. **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.
2. **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.
3. Motta, D., Abad, J. D., Langendoen, E., Garcia, M. H. (2011). "Meander migration in horizontally and vertically heterogeneous floodplains". AGU Fall Meeting, San Francisco.
4. Gutierrez, 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.
5. **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.
6. Frias, C., **Abad, J. D.** (2011). "Turbulence characterization on the ripple-dune amalgamation stage: importance of bed morphodynamic patterns", AGU Fall Meeting, San Francisco.
7. 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.
8. 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". Stream restoration conference, Washington,
9. Gianvito, J., **Abad, J. D.** (2011). "Minimizing land disturbance through efficient sewage pump station design". Sustainability Conference, Pittsburgh
10. **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.
11. **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.
12. **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, Colorado, Oct 31-Nov 3.
13. 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.
14. **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, USA.
15. **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
16. 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.
17. **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.
18. 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.
19. Gutierrez, R. R., **Abad, J. D.** (2010). "*Aplicación de Wavelets en el estudio de ríos meandricos*". 2nd Congreso Nacional del Agua, National University of Engineering, Lima, PERU, April 7-9. In Spanish.
20. 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, USA.
21. **Abad, J.D.** (2009). "*Planform dynamics of meandering channels based on Wavelet analysis*". AGU Fall Meeting, San Francisco, USA.
22. 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).

23. **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.
24. **Abad, J. D.**, and Garcia, M. H. (2008) "Bedforms in high-amplitude meandering channels". European Geophysical Union (EGU).
25. **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.
26. **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.
27. **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.
28. **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, Utah, USA.

INVITED TALKS

- 09/30/2011 XVIII CONIC, Colegio de Ingenieros del Perú, **Cajamarca, PERU**
- 08/10/2011 VII COINEIC, XIX CONEIC, **Universidad San Antonio de Abad, Cusco, PERU**
- 02/24/2011 Dept. of Civil and Environmental Engineering, **Texas A&M University, USA**
- 02/22/2011 Dept. of Geography and the Environment, **University of Texas at Austin, USA**
- 08/12/2010 Mesa de Concertación para la lucha contra la pobreza, **Huancayo, PERU**
- 06/21/2010 Seminar at Anniversary of DHN, **Peruvian Navy, PERU**
- 06/04/2010 Dept. of Civil Engineering, **Universidad Científica del PERU, Iquitos, PERU**
- 06/04/2010 **Instituto de Investigaciones de la Amazonia Peruana, Iquitos, PERU**
- 10/29/2009 Dept. of Geology and Planetary Sciences, **University of Pittsburgh, USA**
- 03/20/2009 Directorate of Hydrography and Navigation, **Peruvian Navy, Lima, PERU**
- 03/02/2009 Dept. of Civil and Environmental Engineering, **University of Pittsburgh, USA**
- 02/18/2009 Dept. of Civil and Environmental Engineering, **Auburn University, USA**
- 02/09/2009 Dept. of Civil and Environmental Engineering, **Texas A&M University, USA**
- 11/18/2008 School of Earth and Environment, **University of Leeds, UK**
- 11/10/2008 Dept. of Civil Engineering, **Universidad Nacional Federico Villarreal, Lima, PERU**
- 11/07/2008 Dept. of Agricultural Engineering, **Universidad Nacional Agraria La Molina, Lima, PERU.**
- 11/04/2008 Dept. of Civil Engineering, **National University of Engineering, Lima, PERU**
- 05/28/2008 National Sedimentation Laboratory, **United States Department of Agriculture, USA**
- 02/28/2008 Dept. of Civil and Environmental Engineering, **University of California at Berkeley, USA**
- 02/25/2008 Dept. of Civil and Environmental Engineering, **Virginia Tech., USA**
- 04/04/2007 Dept. of Civil and Environmental Engineering, **Pennsylvania State University, USA**
- Feb/2005 Dept. of Civil and Environmental Engineering, **Univ. of Illinois at Urbana-Champaign, USA**

TECHNICAL REPORTS

1. 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, ISSN: 0442-1744.
2. **Abad, J. D.**, Waratuke, A. R. and García, M. H. "Numerical simulation of the Telegraph Drop-shaft – Baumgartner Tunnel System", St. Louis, MO. 2006.
3. **Abad, J. D.**, Bombardelli, F. A., Waratuke, A. R. and García, M. H. "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. March 2004.
4. García, M. H., Niño, Y., **Abad, J. D.**, Cantero, M., León, A., Mangini, S., Sequeiros, O. "Sedimentation management in combined sewer overflow storage reservoirs using water jets". Progress report to Metropolitan Water Reclamation District of Greater Chicago, June 2003.

STUDENTS/ GRADUATE/ UNDERGRADUATE

1. Gutierrez, Ronald (PhD student) – Expected to graduate: Spring 2014
2. Frias, Christian (PhD student) – Expected to graduate: Spring 2014
3. Cesar Simon (PhD student) – Expected to graduate: Spring 2015.

4. Joe Gianvito (PhD student) – Expected to graduate: Spring 2015
5. Arjmand, Sina (PhD student) - Expected to graduate: Spring 2014, Co-advising with Dr. Liang (CEE-Pitt).
6. Volkwein, Ross (MS student)

**FORMER
STUDENTS**

Hedegus, Max (Junior undergrad)
 Volkwein, Ross (Senior undergrad) – going into the MSc. Program, University of Pittsburgh
 Bradley J. Harken (Senior undergrad) – going to pursue PhD at University of California, Berkeley

**MSC/PHD
committee**

1. Shugong Wang (PhD candidate), “Assessment of multiscale precipitation fusion and soil moisture data assimilation and their roles in hydrological forecast”. Dept. of Civil and Environmental Engineering, Univ. of Pittsburgh (2010). Advisor: Dr. Liang
2. Davide Motta (PhD candidate). Dept. of Civil and Environmental Engineering, Univ. of Illinois at Urbana-Champaign, Illinois. Advisor: Dr. Garcia

**PROFESSIONAL
SOCIETY
MEMBERSHIPS**

American Geophysical Union (AGU)
 American Society of Civil Engineers (ASCE)
 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)

**PROFESSIONAL
SERVICE:
JOURNAL
REVIEWER**

- | | |
|---|---|
| 1. Advances in Water Resources | <i>Elsevier</i> |
| 2. Canadian Journal of Civil Engineering | <i>NRC Research Press</i> |
| 3. Continental Shelf Research | <i>Elsevier</i> |
| 4. Environmental Science and Technology | <i>American Chemical Society</i> |
| 5. Earth Surface Processes and Landforms | <i>John Wiley & Sons, Inc</i> |
| 6. European Journal of Fluid Mechanics | |
| 7. Flow measurement and Instrumentation | <i>Elsevier</i> |
| 8. Geomorphology | <i>Elsevier</i> |
| 9. International Journal of Sediment Research | <i>International Research and Training Center on Erosion and Sedimentation (IRTCES) and World Association for Sedimentation and Erosion Research(WASER)</i> |
| 10. Journal of Hydraulic Engineering | <i>American Society of Civil Engineers (ASCE)</i> |
| 11. Journal of Hydrologic Engineering | <i>American Society of Civil Engineers (ASCE)</i> |
| 12. Journal of Energy Engineering | <i>American Society of Civil Engineers (ASCE)</i> |
| 13. Journal of Engineering Mechanics | <i>American Society of Civil Engineers (ASCE)</i> |
| 14. Journal of Fluid Mechanics | <i>Cambridge University Press</i> |
| 15. Journal of Geophysical Research – Earth Processes | <i>American Geophysical Union (AGU)</i> |
| 16. Journal of Hydraulic Research | <i>International Association of Hydraulic Engineering and Research (IAHR)</i> |
| 17. Journal of Hydrology | <i>Elsevier</i> |
| 18. Journal of Visualization | <i>Springer</i> |
| 19. Ocean Engineering | <i>Elsevier</i> |
| 20. Stochastic Environmental Research & Risk Assessment | |
| 21. Water Resources Research | <i>American Geophysical Union (AGU)</i> |

22. KSCE Journal of Civil Engineering *Springer*

23. United States Geological Services (USGS) *USGS*

**PROFESSIONAL
SERVICE:
PROPOSAL
REVIEWER**

1. Swiss National Science Foundation (SNSF) Div. Mathematics, Physical and Engineering Sciences
2. NWO Council for Earth and Life Sciences, The Netherlands
3. NSF, Geomorphology and Land Use Dynamics
4. NSF, Education and Human Resources, EAR

**PROFESSIONAL
SERVICE:
CONFERENCE
SESSION CHAIR**

1. Fluvial Morphodynamics, Channels Patterns, and Megafans. American Geophysical Union (AGU), fall meeting in San Francisco, Dec. 2011.
2. Challenges on Scaled Physical Modeling of Sediment Transport, American Geophysical Union (AGU), fall meeting in San Francisco, Dec. 2011.
3. Meandering rivers, advances in research. American Geophysical Union (AGU), fall meeting in San Francisco, Dec. 2009.
4. Turbulence in open channel flows. American Society of Civil Engineers (ASCE).

**PROFESSIONAL
SERVICE:
COMMITTEE
MEMBER**

1. Secretary, Computational Hydraulics, ASCE
2. Fluvial Hydraulics, IAHR
3. Secretary of the International Advisory Committee, RCEM 2011
4. Advisor, Student Chapter of IAHR

**UNIVERSITY
SERVICE:**

Advisor, Plus3 Chile (2011)

**ENG. COLLEGE
SERVICE:**

Advisor of undergraduate students, CEE
Advisor, Student Chapter of IAHR, EWRI
Organizer: CEE Graduate Seminar, Spring 2011

**DEPT.
SERVICE**

Organizer, Assistant Professors Meeting, Fall 2010, Fall 2011