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Present Address:
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Calle Las Flores 410 Dpto. 302
Lima, Lima27, Perú

EDUCATION:

The University of Iowa

Pursuing a PhD. In Civil Engineering
Designation in Hydraulics, Hydrology and Water Resources
Expected graduation date: May 2017

Iowa City, IA

Stanford University

Master of Science in Civil Engineering
Designation in Environmental Fluid Mechanics and Hydrology

Stanford, CA
June, 2012

The University of Kansas

Bachelor of Science in Civil Engineering
Graduated with distinction (GPA 3.95)

Lawrence, KS
May, 2011

SUMMER SCHOOLS

Fluid Dynamics of Sustainability and the Environment

University of Cambridge
Department of Applied Mathematics and Theoretical Physics

Cambridge, England
September, 2014

WORK EXPERIENCE:

IIHR-Hydroscience and Engineering

Research Assistant, August 2012 – Ongoing

Iowa City, IA

- Development and validation of a 3D non-hydrostatic unsteady RANS (URANS) 2-phase flow model using the Volume-of-Fluid method for real flood simulation in STAR-CCM+
- Estimation of errors in 2D depth-averaged codes in predicting riverine flooding extent and flow profiles, and effect of flood protection structures on flood propagation and extent
- Estimation of potential for erosion during the passage of a floodwave including possible pressure scour effects during bridge deck submergence
- Simulation of extreme flood event caused by hypothetical structural failure of flood control structures (e.g. flood protection dams and/or levees) and development of a methodology to better calibrate 2D depth-averaged codes to capture more accurately dam/levee break flood extent and propagation.
- Development of a 3D non-hydrostatic 2-phase flow research code using the Level Set Method in structured general curvilinear coordinates in finite difference representation
- Large Eddy Simulations (LES) and Direct Numerical Simulations (DNS) of stratified mixing caused by oscillatory shear stress boundary condition
- Detached Eddy Simulations (DES) of the development of shallow mixing layer in a curved channel between two incoming parallel streams with a velocity ratio close to 2.2
- Aided in the mentoring of a visiting graduate student, which included bi-weekly meetings with the student to check on the progress, set up plan-of-action for research as well as corresponding timeline.

Insideo S.A.C.

Environmental Consultant-Hydrology, July – August 2012

Lima, Peru

- Duties included updating the meteorological data, calculate precipitations with different return periods (including the probable maximum precipitation), obtain and analyze results from field measurements and run simulations for watershed response to different events and conditions for the Constancia Mining Project (HudBay Minerals).
- Provided assistance in creating bids for new Environmental Impact assessments projects.

Entry Level Environmental Consultant, July – September 2011

- Duties included checking compliance of the Conga Mining Project with IFC guidelines and Equator Principles.
- In addition, assisted in the Cumulative Impact Assessment of the Conga Mining Project.

Constructores Ark S.A.

Lima, Peru

Field Engineer, May – July 2010

- Duties included supervising all the work done in the construction site and supervising and controlling personnel who worked in the construction site.
- Set up meetings with both clients and subcontractors to make sure objectives are being made in a timely fashion while making sure that it is what the client wants.
- In addition, supervising the use of necessary equipment for construction and controlling the quality and quantity of materials being used.

SEMINARS/WORKSHOPS:

- Using Rubrics to Grade Fairly and Efficiently April 27th, 2017
- Universal Design for Learning (UDL) Principles in the College Classroom March 30th, 2017
- Self-Care: Your Students' and Yours February 23rd, 2017
- Facilitating Effective Conversations February 7th, 2017
- Business etiquette and personal image June 2009 – July 2009
- Le Cordon Bleu Culinary School in Peru January 2007 - March 2007
- The great religions of the world January 2006 - March 2006
- Chinese culture and history January 2006 - March 2006

ACTIVITIES:

- SIIHR (Student of IIHR) January 2015 – January 2016
 - Position held: President
- Tau Beta Pi Honors Engineering Society member.
- Chi Epsilon Civil Engineering Honor Society
 - Position held: Secretary

AWARDS:

- Post-Comprehensive Research Award Spring 2017
- First place in KU math Competition Junior Level. Spring 2008
- First place in Kansas Math Competition Spring 2008
- Dean's Honor Roll Fall 2007 - Spring 2010

LANGUAGE SKILLS:

Spanish (Native language), English (Second language), and Basic German.

SOFTWARE SKILLS:

AutoCAD, Arc-GIS, HEC-HMS, Matlab, FORTRAN, HEC-SSP, HEC-RAS, EPANET, MODFLOW, MIKE 11, MIKE 21, STAR-CCM+, FLUENT, Tecplot, Pointwise.

REFERENCES:

Prof. George Constantinescu (george-constantinescu@uiowa.edu)

Prof. Witold Krajewski (witold-krajewski@uiowa.edu)

Roberto Parra (rparra@insideo.org)

Prof. Jacob Odgaard (jacob-odgaard@uiowa.edu)