CÁSSIO **RAMPINELLI**

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I currently working on my PhD. research related to uncertainty in hydrologic modeling under the supervision of Prof. Tyler Smith at Clarkson University. My past work experience embraces extensive experience for private engineering companies, government, and academic research related to hydrologic/hydraulic/hydrogeologic modeling and dam engineering. I have an academic and practical background in hydrologic and hydraulic modeling covering applications of numerical models for open channel flow, watershed models, and groundwater modeling.

PROFESSIONAL EXPERIENCE

2018 – PRESENT

RESEARCH/TEACHING ASSISTANT, CLARKSON UNIVERSITY, USA

Research related to Hydrologic Modeling and Uncertainty Analysis/ Teaching Assistant on Water Resources Engineering I – Undergraduate Course.

2009 – PRESENT

ENGINEERING CONSULTANT

Engineering studies for several types of problems related to hydrologic/hydraulic/hydrogeologic modeling and dam engineering.

2017 – 2018

ASSISTANT PROFESSOR, IESB COLLEGE, BRAZIL

Professor at the Department of Civil Engineering. Courses taught: Environmental Sanitation, Hydrology, Hydraulics, Buildings Hydraulic Systems, Applied Small Project Guidelines. Advisor of 3 undergraduate students.

2017 – 2018

ASSISTANT PROFESSOR, PLANALTO COLLEGE, BRAZIL

Professor at the Department of Civil Engineering. Courses taught: Environmental Sanitation, Fluid Mechanics, Structural Theory. Advisor of 3 undergraduate students.

2012 – 2018

INFRASTRUCTURE ANALYST, FEDERAL GOVERNMENT, BRAZIL

Analyzing recovering actions and engineering design projects for areas affected by natural disasters such as floods, landslides, hurricanes, coastal erosion/flooding, and droughts. Special interest in hydrogeology, wells, and aquifer tests for emergency countermeasures in areas from the semi-arid region of Brazil affected by severe droughts.

2008 – 2012

CIVIL ENGINEER, ENGEVIX ENGINEERING, BRAZIL

Design of Hydroelectric Power Plants, including all study phases such as hydroelectric river inventory, feasibility study, basic and detailed designs. Hydrologic and hydraulic modeling.

2007 – 2008

CIVIL ENGINEER-INTERNSHIP, ALTO DA BOA VISTA CONDOMINIUM, BRAZIL

Residential project analysis (structural, electrical, hydraulic plan design). Support on the condominium infrastructure analysis and the environmental licensing process, including hydrogeology assessment and aquifer tests.

EDUCATION

2018-PRESENT

PH.D. WATER RESOURCES ENGINEERING, CLARKSON UNIVERSITY, USA

Research Topic: Hydrologic Modeling and Uncertainty Analysis
Advisor: Prof. Tyler Smith

2018

SPECIALIZATION ON WATER RESOURCES, GEOSCIENCES INSTITUTE, UNIVERSITY OF BRASÍLIA, BRAZIL

A practical course focusing on analytical and numerical models for groundwater flow and contaminant transport.
Final Project: Dam Break Analysis of Santo Antônio Hydroelectric Power Plant Dam (in Portuguese)
Advisor: Prof. Luciano Soares da Cunha

2015-2016

M.SC. ENVIRONMENTAL TECHNOLOGY AND WATER RESOURCES, UNIVERSITY OF BRASÍLIA, BRAZIL

Thesis: A Bayesian approach in hydrologic modeling: MCMC algorithms and the likelihood function influence on the parameters estimation and on the uncertainty description (in Portuguese)
Advisor: Prof. Dirceu Silveira Reis Jr
Co-Advisor: Prof. Carlos Henrique Ribeiro Lima

2003-2008

B.SC. CIVIL ENGINEERING, UNIVERSITY OF BRASÍLIA, BRAZIL

Final Project: Study of Transient Flows in conduits – Computational Implementations (in Portuguese)
Advisor: Prof. Lineu José Pedroso

SKILLS

- Hydrologic and Hydraulic Modelling
- Groundwater modeling
- Sediment Transport Modeling
- Dam Engineering
- Bayesian Statistics Analysis
- Uncertainty Analysis
- Softwares: SWMM, HEC-RAS, HEC-HMS, RIVER-2D,EPANET,BENTLEY/MICROSTATION/INROADS, AUTO-CAD, ARC-GIS, VISUAL-MODFLOW, FE-FLOW, EXCEL
- R programming language
- MATLAB
- Java programming language(basic)
- C and C++ (basic)

SELECTED PUBLICATIONS

- RAMPINELLI, C. G.; SMITH, T.; LIMA, A.E.M.; AGUIAR, C.S.; DINIZ, C.; ARAÚJO, J.T. (2021) Assessment of groundwater lowering for urban infrastructure works, a case study in Sumbe Angola/Africa. In Water Resources Journal – APRH 42(2) 9-21. doi: 10.5894/rh42n2-cti1
- RAMPINELLI, C. G.; Knack, I.; Smith, T. (2020) Flood Mapping Uncertainty from a Restoration Perspective: A Practical Case Study. Water 2020, 12(7), 1948; doi: https://doi.org/10.3390/w12071948.
- COSTA M. G.; RAMPINELLI, C. G.; BORGES, E.C.; MAIA, B.E.S.; MOTA, M.V.F.; FALCÃO, P.R.F.; SHIMODA, Y.; ZNAMENSKY, D.V. (2020). Standard Countermeasures Studies for Debris Flow Disasters in Brazil. In: International Journal of Erosion Control Engineering, Vol.13, No.1,12-22. https://doi.org/10.13101/ijece.13.12.
- OSORIO, A. L. N. A. ; RAMPINELLI, C. G. ; REIS, D. S. (2018). A Bayesian Approach to Incorporate Imprecise Information on Hydraulic Knowledge in a River Reach and assess Prediction Uncertainties in Streamflow data. In: World Environmental and Water Resources Congress, Minneapolis, USA.