

Renata Correia

Environmental Engineer

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I am a focused Environmental Engineer and Researcher with record backed by publications, technical reports and oral presentations. An active team player with leadership and organisational skills, able to balance multiple priorities and work independently. I am passionate about learning, and a skilled professional with training in mathematical modelling, sediment transport and environmental data analysis, especially those related to fluvial and coastal areas.

PROFESSIONAL EXPERIENCE

2014-2018 **Research Engineer**

Transportation and Infrastructure Institute of Technology (ITTI)/ Federal University of Parana (UFPR) (Curitiba, BRA)

Achievements/Tasks:

- Developed hydrodynamic models for hydraulic and hydrodynamic studies in fluvial and coastal areas in Brazil;
- Performed an Environment Impact Assessment for Paraguay River Waterway (Brazil) maintenance and operation;
- Coordinated an Environmental Impact Assessment for a fluvial port;
- Executed Basic and Executive Navigation Signs and Dredging Engineering Projects;
- Hydrological studies in fluvial systems (sediment surveys, ADCP measurements and stage series analysis);
- Developed a mathematical and econometric forecast method for cargo transportation (ANTAQ);
- Elaboration of technical and field reports, publications and oral presentations;
- Supervision of Undergraduate Internships, academic advisory and participation in the Evaluation Board of a BSc thesis (Dam breach);

(Please check [here](#) the technical reports of my activities – in Portuguese)

03/2013-10/2013 **Undergraduate intern**

LACTEC Research and Development Institute (Curitiba, BRA)

Achievements/Tasks

- Environmental data analysis in a GIS environment;
- Stage series analysis of Rio Grande watershed for a flooding forecast;
- SOBEK suite model setup for a flooding system alert in Rio Grande watershed (CEMIG);
- Technical reports revision, and state-of-art research within monitoring small power plant projects.

2012-2013 **Visiting Student and Researcher**

The University of Sheffield (Sheffield, UK)

Achievements/Tasks

Studies in turbulence processes involved in an incompressible flow over a backwards-facing step with quantitative analysis. Application of Matlab tools for data analysis.

2011-2012 **Undergraduate Intern**

Brazilian Council for Scientific and Technological Dev.t (CNPq) (Curitiba, BRA)

Achievements/Tasks

An undergraduate researcher studying sedimentation sludge processes in Sewage Treatment Plants (STP) for an adequate storage tank design. Performed field surveys, reports and publications.

FORMAL EDUCATION

2014-2016 **MSc in Water Resources and Environmental Engineering**

Federal University of Parana (UFPR), Curitiba, BRA

Thesis title: “Topo-bathymetric data for hydrodynamic modelling with GIS support- a case study of Paraguay River Waterway.”

Advisor: Dr Tobias Bleninger

2010-2013 **BSc in Environmental Engineering**

Federal University of Parana (UFPR), Curitiba, BRA

Thesis title: “Scale analysis of environmental data for mixing and transport processes in outfalls systems- a case study of Cartagena submarine outfall.” Advisor: Dr Tobias Bleninger

PROFESSIONAL TRAINING

Sediment Transport Modelling held by U.S. Army Corps of Engineers (USACE)/Brasília, BRA	2018 (40h)
Hydrodynamics of Environmental Systems (Delft 3D) held by Federal University of Parana (UFPR)/Curitiba, BRA	2017 (45h)
Fluvial Geomorphology held by U.S. Army Corps of Engineers (USACE)/Brasília, BRA	2017 (40h)
Hydrodynamic Modelling (1D/2D) held by U.S. Army Corps of Engineers (USACE)/Brasília, BRA	2016-2017 (80h)
Flow measurements with Acoustic Doppler Current Profiler (ADCP) held by Federal University of Parana (UFPR)/Curitiba, BRA	2016 (45h)
Python Introduction held by Brazilian Research Institute LACTEC/Curitiba, BRA	2015 (40h)
SOBEK Suite held by Deltares partnership with Brazilian Research Institute LACTEC/Curitiba, BRA	2014 (40h)

SKILLS AND ACHIEVEMENTS

Technical skills	CFD: HEC-RAS (1D-2D) and sediment transport; DELFT 3D; SOBEK Suite; CAD/GIS: ArcGIS; QGIS; HEC-GeoRAS, AutoCAD; Programming: Matlab; Python; LaTeX.
Fellowships/ Awards	(2014) Graduate Research Fellowship (CNPq); (2012) International Undergraduate Research Fellowship (CNPq)–The University of Sheffield (UK)
Voluntary work	(2010) Member of the Junior enterprise company of Environmental Engineering
Languages	Portuguese (Native) Spanish (Intermediate) English (Advanced) German (Basic)

PUBLICATIONS *(More information available on [ResearchGate](#))*

- Correia, R. Guarneri, H. Bleninger, T. **Improved bathymetry interpolation for hydraulic model development for the strongly meandering Paraguay River Waterway.** Submitted in the *Brazilian Journal of Water Resources*. (December 2018).
- Waydzik, F.A.; Guarneri, H.; Correia, R.; Ratton, P.; Tomas, G. P. **Definition of area of influence for cargo transportation and logistics corridors applied to the case study of the Paraguay-Parana Waterway.** 27th National Congress of Waterway Transportation, Naval and Offshore Construction (2018).
- Ratton, E.; Neto, D. N.; Waydzik, F.; Correia, R. **Methodology for environmental impact assessment of dredging services- case study of Paraguay River Waterway.** *Brazilian Journal of Management and Sustainability* (2018).
- Waydzik, F.; Zibetti, R. A.; Neto, D. N.; Correia, R. **Regulatory practices, competitive advantages and supply chain between the countries of Paraguay-Parana Waterway agreement of fluvial transport.** *Anuario Hidrovías del Mercosur* (2017).
- Guarneri, H.; Ratton, P.; Correia, R.; Bleninger, T. **Preliminary characterisation of the radius of curvature in channel navigation regarding inland waterways planning.** 26th National Congress of Waterway Transportation, Naval and Offshore Construction (2016).
- Ratton, P.; Tomas, G. P.; Correia, R.; Guarneri, H. **Determination of critical stretches for navigation in large rivers. Case study of Paraguay River Waterway.** 26th National Congress of Waterway Transportation, Naval and Offshore Construction (2016).
- Correia, R.; Ratton, P.; Guarneri, H.; Ratton, E.; Queiroz, E. **Evaluation of Paraguay-Parana Waterway fluvial infrastructure.** 26th National Congress of Waterway Transportation, Naval and Offshore Construction (2016).
- Muhlenhoff, A.; Correia, R.; Jimenez, P.S.J.; Guarneri, H.; Gomes, J.; Fernandes, C.V.S. **Evaluation of different objective functions during automatic calibration of Sacramento hydrologic model.** XXI Brazilian Symposium on Water Resources (SBRH) (2015).
- Frigo, A.; Guarneri, H.; Tomas, G.; Golyjeswski, O.; Waydzik, F.; Hoepker, R.; Bleninger, T.; Ratton, E.; Correia, R.; Ratton, P.; Barsotti, H.; Godoy, P. **Analysis of the navigability condition of Paraguay River Waterway.** XXI Brazilian Symposium on Water Resources (SBRH) (2015).
- Correia, R.; Guarneri, H.; Bleninger, T. Tomas, G. P.; Ratton, P.; Ratton, E. **Hydrodynamic modelling for navigability assessment in a Brazilian stretch of Paraguay River.** 9th SOBENA – Inland Navigation Development Seminar (2015).
- Guarneri, H.; Correia, R.; Ratton, P.; Nadal, C. A.; Mouro, R.C.; Bleninger, T.; Ratton, E. **Digital elevation model determination for large rivers. Case study: brazilian stretch of Paraguay-Parana Waterway.** 9th SOBENA – Inland Navigation Development Seminar (2015).
- Correia R, Bleninger T, Guarneri H, Tomas G.P., Moro R.C., Waydzik F.A., Ratton P., Barsotti H.G., Ratton E., Bittencourt M. L., Gobbi M. F. and Godoy P. **Determination of Paraguay River drought levels using hydrodynamic modelling integrated with a GIS.** XXI Brazilian Symposium of Hydraulic Resources. Brasília, 2015.

REFERENCES

Dr-Ing. Tobias Bleninger (Curitiba, BRA)

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Dr Eduardo Ratton (Curitiba, BRA)

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