

MARTIJN C. BREGMAN, M.S.
Research Associate, The Water Institute of the Gulf

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Education

M.S., Civil Engineering (Hydraulic Engineering track), 2018
Delft University of Technology, Delft, Netherlands

B.S., Civil Engineering, 2014
Delft University of Technology, Delft, Netherlands

Research Interests:

Coastal and riverine hydro- and morphodynamics, numerical modelling, sediment dynamics, flood resilience

Professional Experience

The Water Institute of the Gulf Baton Rouge, Louisiana	2018 – Present
<ul style="list-style-type: none">• <i>Research Associate</i>	
Deltares Netherlands	2017 – 2018
<ul style="list-style-type: none">• <i>Graduate Intern</i>	
Rijkswaterstaat Netherlands	2017
<ul style="list-style-type: none">• <i>Intern</i>	

Applicable Skills

- Modeling: Delft3D 4, Delft3D FM, PCSWMM, SWANone, SOBEK-RE, MorphAn
- Software & Programming Languages: ArcGIS, MATLAB

Professional Society Membership

Board Member of the Central Student Council (Delft University of Technology)

RECENT PROJECTS

A new modelling method for representing the effect of spiral flow on the bed shear stress

Graduate Intern, Deltares – Department of River Dynamics and Inland Shipping

Exploratory research into a new parameterization method for spiral flow in river bends, carried out using the Delft3D modelling suite. The research consisted of an investigation into the shortcomings of three-dimensional and depth-averaged models in representing spiral flow, and furthermore comprises the development of a new method for calculating the bed shear stress direction in river bends.

Morphological data transformation and analyses of coastal maintenance projects in the North Sea Region

Intern, Rijkswaterstaat (Executive Agency of the Dutch Ministry of Infrastructure and Water Management)

Intern at a transnational collaboration program of countries along the North Sea focused on exchanging knowledge and experiences within the field of coastal maintenance. I investigated coastal measurement and maintenance practices throughout the member countries and developed a tool enabling countries to standardize methods and software used for data analysis, enabling the cross-border data-based research on coastal developments.

Flood Safety Durban

Student project, eThekweni Metropolitan Municipality, South Africa (Durban area)

Conducted a research at the municipality's Engineering Unit focused on assessing flood safety of the low-lying central business district of Durban which regularly faces flash floods. My main responsibility was modelling the area with SWMM software (PCSWMM), which provided the municipality with valuable insight into the current state and future perspectives of their storm drain network.