

DeSIRE tenure track position #5: Flood resilience

University:	Delft University of Technology
Faculty:	Faculty of Civil Engineering and Geosciences
Department:	Department of hydraulic engineering
Responsible Professor:	Prof. Bas Jonkman (S.N.Jonkman@tudelft.nl)
Expected to open:	This position is expected to open around September 2018

Description:

The new staff member will focus on methods to quantify flood resilience and to incorporate resilience in designs for flood risk reduction in cities and urban regions. This will require knowledge from risk & reliability, water infrastructure and physical aspects such as hydraulics and geotechnics. Also, nature-based ("green") interventions will be included. Approaches will be developed to assess the contribution of interventions to resilience and risk reduction and the optimization of strategies and their implementation.

Envisaged cases include Houston after Harvey and Rotterdam and existing networks in these areas will be utilized. Past cases such as flooding of New Orleans, Thailand and Japan will be analysed to identify the critical factors for lack of resilience. Activities will focus on "research by design" and include educational activities such as multidisciplinary graduation studios (e.g. delta resilience lab) and connected master thesis projects throughout the 4TU network.

Within TU Delft the new staff member – who will be positioned in the hydraulic engineering department - will closely worked with the delta urbanism group at architecture, the new urban water infrastructure chair and experts in governance and critical infrastructure and disaster management at TPM and other experts in the 4TU network.

Position in framework of the programme (please delete what is not applicable):

- Approaches/discipline: Analysis of risk and reliability, engineering and design for resilience
- Scale/application area:
Water infrastructure, Cities & regions of interconnected mid-size towns

Synergy with other tenure track position(s):

- Adaptation and governance for urban infrastructure resilience (DUT, Architecture)
- Modeling and governance for the response to large-scale disruptions (DUT, Technology Policy Management)
- Governing Resilience of the RURBAN Metropolis (UT, Behavioural Management and Social Sciences)
- Resilient supply chains (TU/e, Industrial Engineering & Innovation Sciences)
- Designing resilient urban climates (WUR, Environmental Sciences)