

## NL-USA TRANSATLANTIC COOPERATION

### CALL FOR PARTICIPATION IN THE HOBOKEN EXPEDITION: DESIGN TO REBUILD

***Project Hoboken is looking for motivated students to study in the inspiring environment in New York!***

Up to 6 fellowships will be issued to UT students to spend several months abroad working in dynamic teams on multi-disciplinary projects. The 3 involved faculties of the University of Twente are: Behavioral, Management and Social Sciences (BMS), Engineering Technology (CTW) and Geo-Information Science and Earth Observation (ITC). This transatlantic program primarily focuses on BSc students in their final year but MSc and PhD students can also apply. In the launching stage of 2015-2016 up to 6 fellowships will be financed, with 1-3 per faculty.

*Are you a motivated, entrepreneurial, energetic, above average performing student who is also a reliable and devoted team-player?*

*Are you interested to get a highlight in your resume through the experience of studying and working on a project in the USA before you finish your degree?*

*Does this opportunity fit your professional plans?*

If so, read the details below and apply by sending your email to [water@utwente.nl](mailto:water@utwente.nl) before **November 15 2015**. Please send (1) your resume, (2) a recommendation letter from a UT staff member, and (3) a 1 page essay discussing your ideas along the lines of one of the 5 themes (see below). Please also mention in the essay what potential role in a multidisciplinary team you would like to take on. All documents need to be written in English.

#### **Background:**

Worldwide governments wish to design and stimulate the development of resilient and attractive cities that offer high quality of life to their inhabitants. Since a large part of the world population resides in the coastal and delta areas, people need to learn to live with water now and in the light of climate change. Netherlands has been accumulating this experience for centuries. In the USA it became one of the top topics on the government's agenda after the disastrous aftermath of the hurricane Sandy in New York. A series of joined initiatives has been launched between the two countries, including an inspiring [Rebuild By Design](#) contest led by [Mr H. Ovink](#). The current cooperation between the University of Twente and the Stevens Institute of Technology falls under this larger cooperation umbrella.

In 2015-2016 the University of Twente and the Stevens Institute of Technology are launching a collaborative teaching project as a founding stone of the strategic upcoming transatlantic cooperation.

A group of six (BSc) students and involved staff members from UT and SIT will:

1. act as capacity building and learning community within the UT-Stevens cooperation.

2. perform project-based learning and work on thematic issues in the field of urban planning, urban resilience and urban excellence in the context of climate change adaptation.
3. contribute to the organization of a sandwich program Summer-school.

The program will start early 2016 in the third quartile with an elective course at the UT, taught by UT and Stevens' staff. In particular, in January 2016 [Prof Alex Washburn](#) will offer several lectures at UT. The fourth quartile students will spend at Stevens working in groups and individually within one of the key topics. The field research in Hoboken should enable students to write their thesis.

Stevens is situated adjacent to the River Hudson, and overlooking Manhattan. Students will work at Stevens supervised by UT staff members and Stevens staff members jointly. From January 2016 onwards we will have modern facilities and direct communication between Living lab facilities at UT and Stevens.

### Specification of potential students project topics:

**1. Concepts, Cases and Approaches to Risks, Resilience and Adaptive policymaking:** this could be a policy-making relevant technical project. Nothing can be built in the city unless one aligns it with policies and financial feasibility. The project may develop around land-use planning procedure: understanding stakeholders' vision and decision process in one of the most complicated cities in terms of urban planning. Potentially one may think of designing a simulation model (e.g. agent-based or other relevant) to capture this multi-stakeholder decision process. Modeling results can be compared to the actual land use decisions that were made in the last few years.

**2. Sensing, Geo Information Systems and Local Planning and Decision-making.** This project will focus on GIS and local planning and decision-making in the context of the 'Smart city' concept. The Department of City Planning has to operate according to the City Environmental Quality Review (CEQR) to identify any potential adverse environmental effects of proposed land use actions. The student project may be designed around the topic of social ergonomics: increasing the quality of public space. This may include regulations for private owners, spatial criteria for private space that is in open use. The use of sensors may enrich such a project. Eventually, high-resolution information from local sensors can be integrated with a large scale GIS that traces the flows of people and traffic.

**3. Construction, Maintenance and Strategic Asset Management** will develop around the question on how to design and construct flood resistant buildings. Option (1): Students project can be aligned with a new initiative at SIT design a methodology for sewer repair. It is difficult to predict when a sewer system might fail: it may serve a century or may require an emergency repair after an accidental breakage. The goal is to come up with a protocol for predicted maintenance. Option (2): a project may also focus on buildings. The project assumes a use of a specific engineering design software.

**4. Inclusive Cities: Water engineering and the Quality of Urban Life:** This project may focus on a comparison of two contrasting urban areas: favela in Rio de Janeiro (Brazil) and Hoboken open space (USA) and bring in the Dutch design experience in Room for the River and current Water in the City/ Urban water projects. It is interesting to explore the question on how to engineer the hydrology to improve the quality of life.

**5. Assessing Water Governance, Self-governing Capacity, and Deep Democracy, i.e Modern (social analytics and network based) Participatory Politics:** the project can be linked to the land-use topic in Theme 1. In particular, how to bring in a community into the participatory process? This would require, first of all, a clear definition of community. One may think of carrying out a survey on describing and defining a community, potentially with the use of social media. A participatory process without a clear definition of 'community' may be complicated since it is difficult to tell whose interests are voiced on behalf of a community. The project may use RebuildByDesign participatory process, which aims to strengthen urban resilience after Sandy, as an example. This project may also explore the use of expert systems – such as Design Analysis Tool – in the participatory workshops with the community.