

## 23 – 25 May 2018 A Coruña, Spain

## Organised by

Birmingham City University, UK Wessex Institute, UK Politecnico di Milano, Italy University of A Coruña, Spain

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WIT Transactions on the Built Environment International Journal of Safety and Security Engineering FRIAR 2018 is the sixth Conference of this successful series. The conference started at the Institution of Civil Engineers in London 2008 and was reconvened at the Lombardy Region Headquarters in Milano in 2010, Dubrovnik in 2012, Poznan in 2014 and Venice in 2016. Since 2012 a parallel seminar on the Design, Construction, Maintenance, Monitoring and Control of Urban Water has taken place which is now an integral part of the conference.

Flooding is a global phenomenon that claims numerous lives worldwide each year. When flooding occurs in urban areas, it can cause substantial damage to property as well as threatening human life. In addition, many more people must endure the homelessness, upset and disruption that are left in the wake of floods. The increased frequency of flooding in the last few years, coupled with climate change predictions and urban development, suggest that these impacts are set to worsen in the future. How we respond and importantly, adapt to these challenges is key to developing our long term resilience at the property, community and city scale.

Apart from the physical damage to buildings, contents and loss of life, which are the most obvious, impacts of floods upon households, other more indirect losses are often overlooked. These indirect and intangible impacts are generally associated with disruption to normal life as well as longer term health issues including community displacements and stress related illnesses. Flooding represents a major barrier to the alleviation of poverty in many parts of the developing world, where vulnerable communities are often exposed to sudden and life threatening events.

As our cities continue to expand, their urban infrastructures need to be re-evaluated and adapted to new requirements related to the increase in population and the growing areas under urbanization. This conference also considers these problems and deals with two main urban water topics: water supply systems and urban drainage.

Topics such as contamination and pollution discharges in urban water bodies, as well as the monitoring of water recycling systems are currently receiving a great deal of attention from researchers and professional engineers working in the water industry. Water distribution networks often suffer substantial losses which represent wastage of energy and treatment. Effective, efficient and energy saving management is necessary in order to optimize their performance. Sewer systems are under constant pressure due to growing urbanization and climate change, and the environmental impact caused by urban drainage overflows is related to both water quantity and water quality.

FRIAR seeks to develop an improved understanding of emerging flood risk management and urban water management challenges, drawing on the expertise of numerous disciplines and considering a range of responses. The conference provides a rich forum for the development of innovative solutions that can help bring about multiple benefits toward achieving integrated flood risk and urban water management strategies and policy.

The meeting is aimed to attract researchers, academics and practitioners actively involved in improving our understanding of urban water systems and flood events. It will bring together social scientists, surveyors, engineers, scientists, and other professionals from many countries involved in research and development activities in a wide range of technical and management topics related to urban water and flooding and its impacts on communities, property and people.

Papers presented at this conference, as all other meetings run by the Wessex Institute, are archived in the Institute eLibrary (www.witpress. com/elibrary) and permanently and freely available to the international community.

## **Benefits of Attending**

**Publication of Papers** Papers presented at FRIAR 2018 will be published by WIT Press in a Volume of WIT Transactions. Selected papers will appear in an Issue of the International Journal of Safety and Security Engineering instead.

**Reviews** To ensure the quality of our publications, abstracts and papers are peer reviewed by members of the International Scientific Advisory Committee and other experts, with manuscripts processed through CrossRef Similarity Check.

**Open Access** WIT Press is an advocate of Open Access which offers maximum dissemination of your work. All WIT Transactions and Journal papers can be downloaded free of charge from the WIT elibrary (www.witpress.com/elibrary).

Indexing and Archiving Papers presented at Wessex Institute conferences are referenced by CrossRef and have appeared in notable reviews and databases. Papers are submitted to various indexing services such as Web of Science, Google Scholar, Index Copernicus and Scopus. All conference books are listed in the British Library and American Library of Congress.

Conference Proceedings At registration delegates will be given copies of the papers presented at the Conference on a USB Flash drive. Following the Conference, delegates will receive an electronic copy of the final publication in which their paper has been published.

**Digital Archive** All conference papers are archived online in the WIT eLibrary (www.witpress.com/elibrary) where they are permanently and freely available to the international scientific community.

**Networking** Participants can present their research and interact with experts from around the world, as part of a unique community.

**Reduced Fee for PhD Students** The Wessex Institute believes in the importance of encouraging PhD students to present and publish innovative research at its conferences. As a result, the Institute offers PhD students a much reduced conference fee.



## **Conference Topics**

The following list covers the topics to be presented at the meeting. Papers on other subjects related to the objectives of the conference are also welcome.

**Floods** Flood risk management Flood warning and forecasting Flood response and recovery Flood risk adaptation Flood protection Flood modelling **Flood mitigation** Flood vulnerability **Urban flooding** Flood risk assessment Coastal flooding Climate change impact Flood damage assessment Socio and economic impact **Emergency planning** Blue-green infrastructure Resilient approaches Flood case studies Catchment based approaches Natural flood management

**Urban Water Systems** Water supply networks Leakage and losses **Modelling and experimentation** Safety and security of water systems **Water quality** Water savings and reuse Waste water treatment and reuse Urban drainage systems Flood control Storm water management Watershed management **Urban strategies** Structural works and infrastructure Maintenance and repairs Sustainable urban drainage systems (SuDs)

#### **Conference Chairmen**

C A Brebbia - Wessex Institute, UK

D Proverbs - Birmingham City University, UK

S Mambretti - Polytechnic of Milan, Italy

J Puertas - University of A Cotruna, Spain

**S Hernandez** - University of A Coruna, Spain & Wessex Institute, UK

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#### Location

Located in the verdant agricultural region of Galicia, A Coruña is home to Roman remains, castles, museums and sumptuous produce markets, and is perhaps most famous for it's excellent fish and seafood. A new promenade frames the waterfront, extending the length of the city and linking its many attractions, shopping areas and beaches. The nineteenth century centre is noted for its glazed balconies on the buildings which allow the city's residents to enjoy the Atlantic views year round.



#### **Conference Venue**

The conference will take place at the Meliá Maria Pita hotel in A Coruña. Situated in an exceptional waterfront position, close to two of the city's most popular beaches, the hotel is a short distance from the main sights and amenities in the city centre. The hotel offers a wide range of well-equipped rooms, each with air conditioning, WIFi and satellite television. WiFi is also available throughout the hotel.

#### **Submission Information**

#### Abstracts of no more than 300 words should be submitted as soon as possible.

Abstracts should clearly state the purpose, results and conclusions of the work to be described in the final paper. Final acceptance will be based on the full-length paper, which if accepted for publication must be presented at the conference.

The language of the conference will be English.

#### Online submission:

www.witconferences.com/friar2018

## **Conference Secretariat**

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For more information visit: www.witconferences.com/friar2018