

## FOREWORD

Established in 1981, the **AUGC** (The University - Association of Civil Engineering) aims developing and promoting the academic teaching (Undergraduate, Graduate, and PhD) and researches in the civil engineering field in the universities and high schools of the French Education.

The « **RUGC** » is the national forum in civil engineering organized annually by the AUGC for information dissemination and exchange, discussions and debates on research, learning and practice related to the construction field. The 35th meeting of universities in civil engineering has been organized by AUGC and GeM laboratory (Ecole Centrale de Nantes, University of Nantes), at Nantes on May 22-24, 2017.

The conference attracted 242 peoples from several French speaking countries representing a wide range of academics, scientists, researchers, students, designers, policy makers and other industrialists from a wide variety of backgrounds, including fields of engineering, materials, sustainable, architecture, and ecological technologies, biomaterials, materials sciences, environmental engineering and government agencies, en-users, etc.

**Academic Journal of Civil Engineering** presents in this special issue all the accepted contributions submitted which benefits of regular peer reviewing. The RUGC'17 proceedings titled "Civil Engineering face to Environmental Challenges" include the lectures and papers presented at the conference. It consists of 90 full texts of papers, including 2 keynotes related to some hot topics in the construction field :

- "*History of construction with reflections on some current directions in civil engineering research*" by Bernard ESPION (PU, ULB Belgique)
- "*Requalification of docks harbours within the framework of Renewable Marine Energies (RME): Example of the Harbour of Saint-Nazaire*" by LEON Philippe (Head of Department of Regional Planning and Development at the Grand Marina of Nantes Saint-Nazaire).

Two educational workshops were also organized. They deal with ICT-teaching and BIM, respectively.

A one-day pre-course on May, 21st 2017 was organized with a very good participation of more than 26 PhD students. The main objective of doctoral training was related to the theoretical basis for addressing the macroscopic mechanical consequences of material degradation. Three courses were done as following:

- Introduction to the Extended Finite Element Method (XFEM): Theory and Applications in Mechanics by Nicolas Chevaugon (Ecole Centrale de Nantes)
- Modelling by scaling of mechanical and transport properties in geo-materials by François Bignonnet (University of Nantes)
- Poro-mechanical modelling of (partially) saturated porous media by Giulio Sciarra (Ecole Centrale de Nantes)

The 119 papers including 33 posters were presented in three parallel sessions which covered a wide spectrum of the topics related to concrete based materials and structures, wood, steel, bio based materials, soil mechanics and geotechnics, coastal engineering, methods, transfers, life-cycle assessment of materials and others.

In parallel with the conference, the 35th edition of the René Houpert Award has been organized through five parallel sessions. 26 young junior researchers have been presented their PhD works and 6 candidates have been nominated for the final presentation. The 2017 René Houpert Award has been won by EL IDRISSE Anas Cherki for its original contribution: «*Matériaux alcali-actives: caractérisations physico-chimiques et mécaniques*». Also an award was given for the best poster to Damien Rangeard for his presentation: «*Stratégies d'optimisation des résistances mécaniques d'un matériau à base de terre crue*».

On behalf of the scientific committee of AUGC, we would like to take this opportunity to express our sincere thanks to the local organizing committee and in particular to Pr Ouali Amiri, Pr Abdelhafid Khelidj (University of Nantes), Pr. Ahmed Loukili, Dr Frédéric Grondin (GeM, Ecole Centrale de Nantes), Pr. and Dr. Mahfoud Tahlaiti (ICAM Nantes); to all our contributors and participants for their carefully prepared, stimulating and thought provoking manuscripts; to the co-organizers of the one-day pre-course for their dedicated task; to the members of the Technical and Scientific Committee for their time and effort of reviewing the papers and their valuable assistance, without which the conference and this special issue could not be formed.

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