

## FOREWORD

Welcome to the Special Issue of Academic Journal of Civil Engineering related to the conference organized each year by AUGC (The University - Association of Civil Engineering). In 2025, the conference was organized at Marseille and Aix-en-Provence. The aim of the conference was to promote information dissemination and exchange, discussions and debates on research, learning and practice related to the construction field.

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 conference has been co-organized by **AUGC, INRAE, Aix-Marseille University, Polytech Marseille and ISBA-TP**. The theme was: *“Le génie civil et l’eau, opportunités et risques pour l’adaptation au changement climatique”*.

This year, the organizers benefited from the sponsorship of INRAE, LMA, IUSTI, IUT Aix-Marseille, CIMBETON, MDS, 3R, VICAT, AFPS, Ecole française du béton, and Sites. May they find here the recognition of our community for their contributions and supports.

The RUGC 2025 special issue includes a section of academic papers presented at the conference. It consists of 118 full texts of papers.

In addition, two keynotes related to some hot topics in the construction field were presented:

- Célia Sapart (CO2 Value Europe) : « *Quel est le potentiel du CO2 pour "défossiliser" notre économie ?* »
- Jean-François Brun (Société du Canal de Provence) : « *Patrimoine des ouvrages hydrauliques en Provence* »

The papers were presented in several sessions which covered a wide spectrum of the topics related to materials, structures, urbanism and climatic change.

An important part of the conference is the René Houpert Award. This traditional event has been organized through seven parallel sessions. Thirty-five (35) junior researchers have presented their PhD works. This high number of candidates shows the vitality of the civil engineering community of researchers. The winner of the 2025 competition is **Louis COLLIN** from ENS Paris Saclay. The awards list is the following:

- **1st prize: Louis COLLIN**, « *Des essais virtuels à la réalité - essais de compression diagonale sur des panneaux en maçonnerie* », ENS Paris Saclay, LMPS
- **2nd prize: Mariam JOUNDY**, « *Fiabilité des réseaux de gaz enterrés exposés aux affaissements de terrain : Elaboration d’un méta-modèle et analyse d’incertitudes* », Université de Lorraine, Laboratoire GeoRessources
- **3rd prize : Marina AL BACHA**, « *Etude expérimentale et modélisation de l’impact des charges routières sur le comportement mécanique des couches de surface* », Université Gustave Eiffel, LAMES
- **4th prize ex æquo: Janette AYOUB**, « *Étude comparative de la biodétérioration de matrices cimentaires en conditions simulées d’un réseau d’assainissement en présence d’H<sub>2</sub>S* », Université Gustave Eiffel, CPDM
- **4th prize ex æquo: Lily DEBORDE**, « *L’isolation thermique biosourcée : propriétés physiques et résistance fongique in situ* », Université de Rennes, LGCGM

- **4th prize ex aequo: Aghiless YAHMI**, « Développement de corrélations entre résultats d'essais ex-situ et autocontrôles en vue de simplifier les processus de justification des performances des produits à réemployer », Nantes Université et ICAM de Nantes, GeM

Special prizes were also attributed by FNTF to **Débora CARDOSO DA SILVA** (Université de Limoges, GC2D) for her work on « Étude de l'endommagement par fissuration en surface des chaussées routières : approche probabiliste intégrant les incertitudes liées à la localisation des charges » and by EFB to **Gaël CORVEC** (La Rochelle Université, LaSIE) for his work on « Étude multi-échelle de la carbonatation des granulats de béton recyclé en réacteur pour la valorisation du CO<sub>2</sub> d'un gaz de combustion ».

A poster competition was organized for the PhD students who are in the first year of their work. The winner is **Bouagui FOFANA** (Univ. Montpellier, LMGC) for his work on "Développement d'outils expérimentaux à l'échelle locale au service des modèles numériques de type CZM utilisés pour la durabilité des bétons".

A video competition was also organized and the winner is **Louis COLLIN** (ENS Paris-Saclay, LMPS) for his work on "*Des essais virtuels à la réalité - essais de compression diagonale sur des panneaux en maçonnerie*". The video is available on the AUGC Youtube channel: <https://www.youtube.com/watch?v=DV5zS0nPPCc&t=127s>.

A special prize is dedicated to the best communication on the environmental transition. For the 2025 session, two participants shared this award: **Quentin NESTELHUT** from IJL for his work "*Influence des paramètres de calcination des boues papetières à l'échelle laboratoire et comparaison avec la calcination à l'échelle pilote*" and **Julien CRAVERO** from UGE for his work "*Utilisation de données géonumériques pour la thermique du bâtiment et l'analyse de cycle de vie : prise en compte des masques solaires*".

On behalf of the scientific committee and the administration committee of AUGC, we would like to take this opportunity to express our sincere thanks to the local organizing committee, to all our contributors and participants for their carefully prepared and stimulating, to the members of the Scientific Committee for their time and effort of reviewing the papers and their valuable assistance.

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**Franck Taillandier** (Chair of the Local Committee)

**Tariq Ouabhi** (Chair of the Association)

**Jean Michel Torrenti** (Chair of the Scientific Committee)

**Emmanuel Roziere** (Chair of the René Houpert Award)

**Florence Collet** (Co-Chair of the Ecological Transition Award)

**Sandrine Braymand** (Co-Chair of the Ecological Transition Award)