

# INTRODUCTION



In recent years, construction technology and engineering have undergone remarkable transformations, particularly through the adoption of digital innovations that foster green and sustainable development. These advancements bring both opportunities and challenges, requiring robust investigation and innovative solutions. To address these, the faculties of Civil Engineering, Architecture, and Environment at The University of Danang - University of Science and Technology, proudly present the 4th Conference on Advanced Technology in Civil Engineering Towards Sustainable Development (ATCESD 2024).

This international conference, endorsed by the Ministry of Education and Training of Vietnam (Decision No. 3153/BGDT-HTQT, June 26, 2024), aligns with the celebration of The University of Danang's 30th anniversary (1994–2024). Over the years, ATCESD has established itself as a significant platform for advancing research and fostering collaboration in sustainable construction.

ATCESD 2024 featured four keynote presentations by leading experts and nearly 60 research presentations organized into eight parallel sessions, covering critical aspects of civil engineering and sustainability. With over 150 delegates from Vietnam and abroad, the conference provided an enriching environment for academic exchange, knowledge dissemination, and industry collaboration.

The proceedings of ATCESD 2024 are published in The University of Danang - Journal of Science and Technology, Vol. 22, No. 11B & 11C, 2024, comprising 44 rigorously peer-reviewed papers. These contributions address five core themes:

- Civil and Geotechnical Engineering;
- Innovative Materials and Structures;
- Construction Planning and Management;
- Architecture;
- Hydraulics, Hydrology, and Environmental Engineering.

We express our gratitude to the 47 reviewers and session editors for their critical insights, which ensured the high quality of these proceedings. We also thank the organizing committee, sponsors, and all contributors for their support and dedication to making this event a success.

This special issue captures cutting-edge research and serves as a resource for scholars, practitioners, and industry leaders. We hope it inspires further innovation and collaboration, advancing sustainable development in construction and engineering.

Sincerely,

Phan H. Nam (Lead Editor)

Nguyen V. Chinh, Nguyen M. Hai, Ngo N. Tri, Nguyen A. Tuan, Le P. Cuong (Session Editors)

