

Special Issue on **Uncertainty in Computational Method for Application in Civil Engineering**

CALL FOR PAPERS

Civil engineering is a complex field of industry with a massive influence on people's lives. Understanding the principles of civil engineering can ease the construction and design of buildings and reduce possible risks. Various civil engineering issues are encountered in the world: differential settlement, faulty connections between building elements, cracks within columns and slabs, failure of building support, and other types of building failures.

Most of these civil engineering issues are attributed to the improper selection of parameters and methodologies during structural and geotechnical analyses. In addition, many of the environmental factors are not considered in the actual engineering design. As a result, some buildings collapsed during heavy rainfall, massive wind loading, and impact from snowstorms. Majority of geotechnical structure failures occur due to the limitation of the soil properties, which lead to the inaccuracies of the foundation and retaining wall design. Plenty of building damages are commonly related to the inappropriate application of theory and methodology in the design of columns, beam, and slabs.

The aim of this Special Issue is to tackle the uncertainty quantification with application for civil engineering problems. It is expected that researchers can present original and review articles detailing innovative and advanced methods and technologies for solving issues related to the variability in geotechnical, structural, and environmental factors.

Potential topics include but are not limited to the following:

- ▶ Finite element analyses
- ▶ Geographical information systems
- ▶ Civil engineering design
- ▶ Programming applications in civil engineering
- ▶ Field instrumentation
- ▶ Experimental work in laboratories
- ▶ Characterization of the uncertainty in the civil engineering design
- ▶ Advancement of analytical calculations for handling uncertainty in soil parameters, building materials, and climatic conditions
- ▶ Numerical methods for simulating the possible failures of building elements under different uncertainties
- ▶ In-situ testing and field instrumentation as adaptation measures of the building against the unexpected uncertainty during and upon completion of the project

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.hindawi.com/submit?journal=mpe>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Guest Editor

Alfredo Satyanaga, Nazarbayev University, Nur-Sultan, Kazakhstan
alfredo.satyanaga@nu.edu.kz

Guest Editors

Nurly Gofar, Bina Darma University, Palembang, Indonesia
nurlygofar@yahoo.com

Qian Zhai, Southeast University, Singapore
101012332@seu.edu.cn

Submission Deadline

Friday, 28 January 2022

Publication Date

June 2022