

NUMERICAL SIMULATION AND EXPERIMENT OF CATASTROPHIC FAILURE MECHANICS

100 - Fracture, Damage and Failure Mechanics

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ABSTRACT

Aim and Scope: The mini-symposium aims to bring together the researchers who are interested in the computational aspects of mechanics related to the catastrophic failure of large engineering structures, such as high dams, geotechnical structures, bridges and high buildings. Many disastrous factors, including earthquake, storm, flood, tsunami, explosion etc., can cause sudden destruction or serious damage to the large engineering structures, which may result in tremendous loss of properties and human lives. Research on the mechanism of sudden failure of these structures under such extreme conditions is a very important subject. The mini-symposium will cover the following topics

- Research progress of catastrophic failure mechanics.
- Spatial and temporal distribution of various disaster factors
- Numerical simulation and experimental methods of the effects of catastrophic factors on structures
- Failure mechanism and process of infrastructure engineering structure under the action of catastrophic factors
- Analysis theory and method of engineering material failure and structure damage
- Failure risk and failure mode of engineering structure
- Precursors and criteria for failure of engineering structures
- Safety control standards for engineering structures