



## The Fifth International Conference on Damage Mechanics (ICDM5)

Date: 16th - 18th July 2025

Venue: National University of Singapore

<b>Mini Symposium Title</b>	Nonlocal damage mechanics: modeling and computational aspects
<b>Short description on the focus of the Mini Symposium</b>	<p>When subjected to various loading paths, materials may experience significant strain localization, leading to different forms of damage. This damage strongly affects the material's behavior and the various physical phenomena involved. This mini-symposium focuses on the formulation and numerical implementation of advanced constitutive equations that describe the strong and comprehensive coupling between damage and other associated physical phenomena, such as inelastic flow, hardening, initial and induced anisotropies, textures, heat fluxes, diffusion, corrosion, and healing, under both small and finite strains. As is well known, this strong coupling with damage introduces significant sensitivity to spatial and temporal discretization. Therefore, this session will also explore formulations that address these numerical challenges, including approaches such as generalized continua, higher-order gradient theories, nonlocal continua, and phase-field theories.</p>
<b>Organizers</b>	<p><b>Houssem Badreddine</b>, A . Prof., ICD/Lasmis, University of Technology of Troyes, 12 rue Marie Curie CS 42060 10004 Troyes-cedex France, <a href="mailto:houssem.badreddine@utt.fr">houssem.badreddine@utt.fr</a>.  <b>Michael Brünig</b>, Prof., Institut für Mechanik und Statik Fakultät für Bauingenieurwesen und Umweltwissenschaften Universität der Bundeswehr München, Werner-Heisenberg-Weg 39 D-85577 Neubiberg Germany, <a href="mailto:michael.brueinig@unibw.de">michael.brueinig@unibw.de</a>  <b>Carl Labergere</b>, Prof., ICD/Lasmis , University of Technology of Troyes, 12 rue Marie Curie CS 42060 10004 Troyes-cedex France, <a href="mailto:carl.labergere@utt.fr">carl.labergere@utt.fr</a>  <b>Zhenming Yue</b>, Prof., Shandong University, School of Mechanical and Electrical Engineering, 180, Wenhua West Road, 264209, Weihai, Shandong, China, <a href="mailto:yuezhenming@sdu.edu.cn">yuezhenming@sdu.edu.cn</a>.</p>