



# COMPLEMENTARY APPROACHES FOR MODELING QUASI-BRITTLE MEDIA

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Time	<b>9.30–10.30</b>
Room	<b>2R, DICAM Mesiano</b>

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Fracture modeling in quasi-brittle media involves complex phenomena. To better understand the behavior of such media, some questions have been asked: (1) what type of continuum theory to use, classical, micropolar, micromorphic? (2) which is the best constitutive model, distributed cracking, elastic degradation or phase field? (3) what are the most appropriate numerical methods, finite elements, meshless methods, or a combination of them? (4) how to introduce heterogeneity, in a direct geometric way, using an indirect statistical approach, or would it be a machine learning problem? The talk aims to show some recent results on such issues, as well as present INSANE (INteratice Structural ANALysis Environment), an open source system for Computational Solid Mechanics that has been used to help answering the proposed questions.

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