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## Rigidity and flexibility in differential inclusions: the Tartar square

*Thursday, 10 July 2025 15:30 (1 hour)*

In recent years, the study of highly non-convex differential inclusions increased a lot, also motivated by applications to materials science. Due to the lack of convexity, according to the prescribed regularity, there may be either many (flexibility) or one (rigidity) class of solutions.

After introducing and motivating the problem, we try to find information about the threshold regularity between rigidity and flexibility by studying a simplified toy-model, the so-called Tartar square, by relaxing the problem studying scaling laws of the related singularly-perturbed elastic energy. If time permits, we will also see its geometrically-linearized analogous. The results presented in this talk are in collaboration with Angkana Rüland.

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