



Thursday 11th March 2021

4 pm (Rome time)

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Calcschists, Tsaté Nappe

Mimicking Alpine thrusts by passive deformation of synsedimentary normal faults: a record of the Jurassic extension of the European margin
(Mont Fort nappe, Pennine Alps)

Jean-Luc Epard

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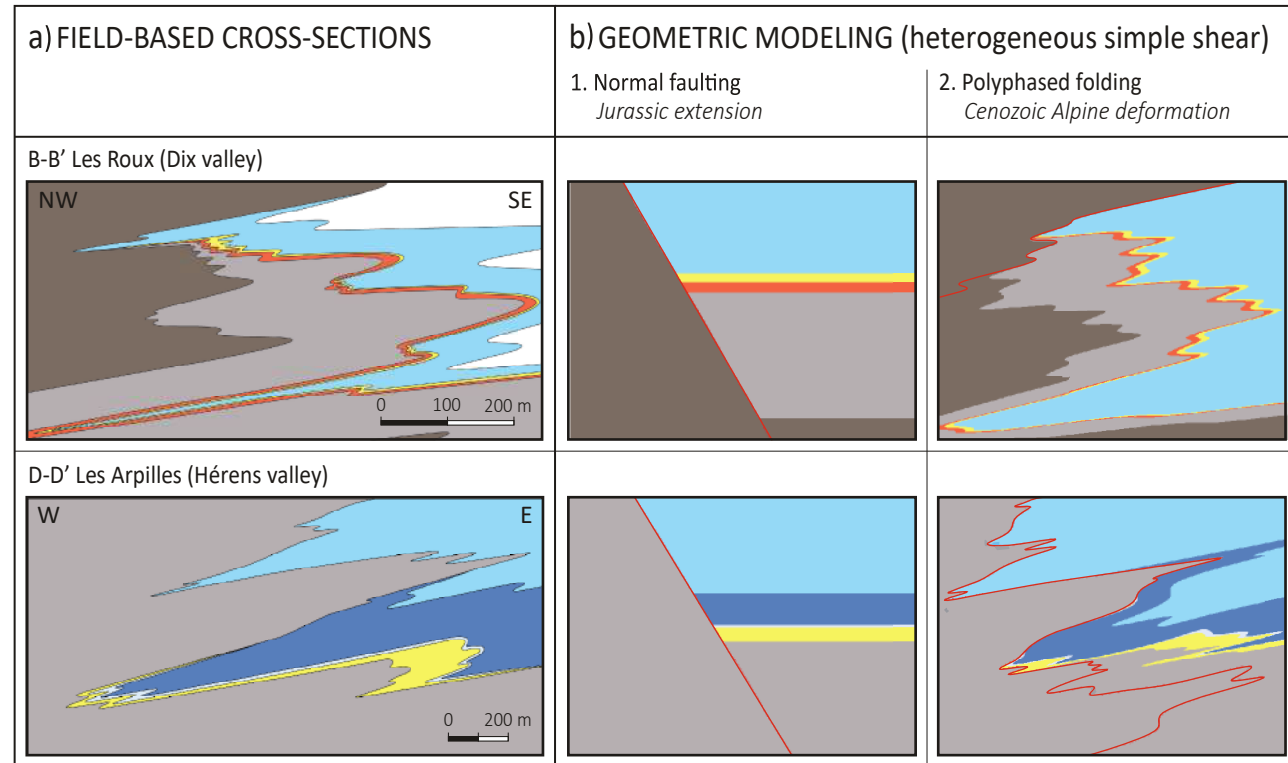
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Abstract

In the Alps of western Switzerland, the European rifted margin is traditionally represented as being affected by normal faults that delimit basins separated by horsts. These define the different paleogeographic domains. During the alpine orogeny, the basins are reversed to form nappes, but the behavior of the former normal faults remains controversial.

Examples of synsedimentary normal faults preserved under conditions of increasing metamorphism show that at least part of these ancient faults are not reactivated and deform passively during alpine orogeny. A recent study in the Middle Penninic nappes (the Mont-Fort nappe) showed that a contact considered as thrust separating two distinct tectonic units was in fact a synsedimentary fault passively folded by subsequent ductile deformations.



Speaker



Jean-Luc Epard is Associate Professor of Structural and Alpine geology at the Institute of Earth Sciences (ISTE), University of Lausanne, Switzerland. He is interested in processes of formation of collisional mountain belts. He uses mainly field based methods (mapping, structural geology, stratigraphy, metamorphic and igneous petrology). His main field areas are presently the Himalayas (Ladakh, India) and the Swiss Alps, including the Jura Mountains. His current projects are related to (a) the ophiolite (Indus suture zone, Nidar) and UHP metamorphic and associated units (Tso Morari) in the Himalayas and (b) the geometry, kinematics, sedimentation in units related to a possible (hyper) extended margin in the Alps (Mont-Fort and Cimes-Blanches nappes).