

## U-Pb carbonate dating as a tool to unravel complex fault evolution: an example from the central Southern Alps (Italy)

Rocca M. <sup>\*1</sup>, Zanchetta S. <sup>1</sup>, Gasparri M. <sup>2</sup>, Mangelot X. <sup>3</sup>, Berra F. <sup>2</sup>, Deschamps P. <sup>4</sup>, Guihou A. <sup>4</sup> & Zanchi A. <sup>1</sup>

<sup>1</sup> Università degli Studi di Milano-Bicocca, Italy

<sup>2</sup> Università degli Studi di Milano, Italy

<sup>3</sup> H-Expertise Services, France

<sup>4</sup> Aix Marseille Univ, CNRS, IRD, INRAE, CEREGE, France

\* Corresponding email: m.rocca@campus.unimib.it

The timing of upper crustal fault zones has long been inferred based solely on indirect constraints, until the advent of *in situ* U-Pb dating of carbonates. The successful application of this method relies on careful microstructural and geochemical analyses. This approach has been applied to syn-kinematic carbonates along the Amora Fault, a growth fault of the Italian central Southern Alps that underwent a complex evolutionary history since the Early Jurassic.

