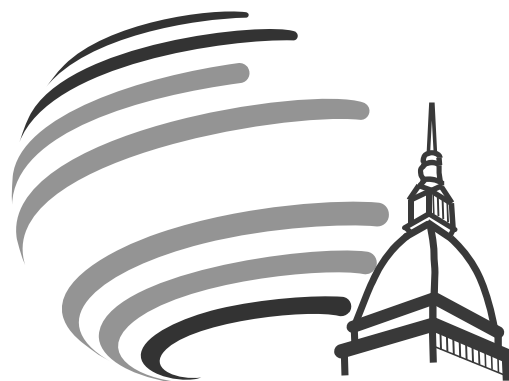




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# ABSTRACT BOOK

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*COVER IMAGE:*

Aerial cityscape image of Turin during sunset.

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## **The Tachrift Project: combining field mapping and detailed stratigraphic measurements to reconstruct the sedimentary architecture of channel-levée systems (late Tortonian, Tachrift Turbidite System, NE Morocco)**

Invernizzi D.\*<sup>1</sup>, Felletti F.<sup>1</sup>, Marini M.<sup>1</sup>, El Kati I.<sup>2</sup>, Pantopoulos G.<sup>1</sup>, Reguzzi S.<sup>1</sup> & Zuffetti C.<sup>1</sup>

<sup>1</sup> Dipartimento di Scienze della Terra “A. Desio”, Università di Milano. <sup>2</sup> Natural Resources and Environment laboratory, Sidi Mohamed Ben Abdellah University, Taza (Morocco).

*Corresponding author e-mail:* [daniele.invernizzi@unimi.it](mailto:daniele.invernizzi@unimi.it)

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The Taza-Guercif Basin is one of the several basins of North-Eastern Morocco that represent remnants of an ancient seaway, the Rifian Corridor (Late Miocene), connecting the Atlantic Ocean to the paleo-Mediterranean Sea. The Rifian Corridor is a key area for the understanding of the Upper Miocene stratigraphy of the Mediterranean domain, because of its closure is directly related with the onset of the Messinian salinity crisis.

The Tachrift Project focuses on the sedimentary architecture of the Tachrift Turbidite System belonging to the late Tortonian Melloulou Fm. (Bernini et al., 2000). This turbidite system spectacularly crops out in the South-Eastern Taza-Guercif Basin, showing several levéed turbidite channel complexes, which are up to few tens of metres-thick and intercalated with hemipelagic marlstones, totalling a stratigraphic thickness of ca. 800 m.

This sedimentary succession was initially studied during 1960s by Benzaquen (1965), who provided the first geological map of the area (1:100.000 scale). Later, Bernini et al. (2000) published a more detailed geological map (1:50.000 scale) highlighting the Tachrift Turbidite System outcropping to the East of the Zobzit river. Felletti et al. (2020) recently published a high-resolution geological map (1:5.000 scale) of the Tachrift Turbidite System, dividing it into nine superimposed channel-levée complexes, identifying the main architectural elements.

Looking at the different maps in literature, it is clear how a detailed field mapping can improve the knowledge about the stratigraphy of a sedimentary basin. The existing geological map provides the basis to deepen sedimentological investigations upon the channel-levée complexes of the Tachrift Turbidite System.

This contribute demonstrates how an extremely detailed geological map is crucial to: i) accurately locate the measured logs and to plan next field activities, ii) build and interpret 2D and 3D cross-sectional profiles, iii) identify, hierarchize and characterize channelized elements, and iv) reconstruct the channels latero-vertical evolution over space and time.

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