

Geowissenschaftliches Kolloquium

The Himalayan Foreland Basin from collision onset to the present: A sedimentary-petrology perspective

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The classical approach to explain foreland-basin subsidence suffers from two oversimplifications: the inadequacy of static forces such as loads to model a dynamic system, and the failure to acknowledge the essential difference between foreland basins associated with Himalayan-type orogens, retroarc basins associated with Andean-type orogens, and foredeeps associated with Apenninic-type orogens. These problems are discussed based on the available stratigraphic, petrographic, and mineralogical evidence from sediments deposited in the Himalayan foreland basin since India-Asia collision onset at ~60 Ma.



Eduardo Garzanti studied in Milano, and presently teaches *Tectonics of Sedimentary Basins* at the University of Milano-Bicocca. Since his first expedition in 1981 as an undergraduate student he studied the evolution of the Himalayas throughout the Phanerozoic and with specific focus on syncollisional and postcollisional sediments. In collaboration with institutions worldwide he studies the petrographic, mineralogical and geochemical study of sediments in major Asian and African rivers. In 2018 he was appointed Honorary Member of the Geological Society of America.

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