

Tvrtko Korbar, PhD



Geologist, scientific advisor in permanent position

Department of Geology

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Scientific interests

- Regional geology of the External Dinarides and the Adriatic foreland
- Stratigraphy and evolution of the carbonate platform
- Carbonate sedimentology
- Cretaceous and Paleogene biostratigraphy
- Geological mapping

- Regional tectonics
- Neotectonics and geomorphogenesis

Biography

- 2003: Doctoral dissertation "Stratigraphy, taxonomy and paleoecology of the Upper Cretaceous radiolitids of the Adriatic Carbonate Platform" at the Faculty of Science, University of Zagreb
- 1999: Master's thesis "Dynamics of depositional environments and development of rudist communities in the Cenomanian of the island of Cres" at the Faculty of Science, University of Zagreb
- 1997 – present: Geologist, Croatian Geological Survey (ex. Institute of Geology)
- 1995. : Croatian Army
- 1995. : B.Sc., "Geological Relations in the Slani Dol-Smerovišće-Gvozd Area", Faculty of Mining, Geology and Petroleum, University of Zagreb
- 1989-1995: Joint study of geology at the Faculty of Mining, Geology and Petroleum and the Faculty of Natural Sciences and Mathematics, University of Zagreb
- 1985-1987: Center for Education of Petroleum, Geological, Mining and Metal Personnel in Varaždin (geology highschool)

Skills

- Professional exam in geology
- Driving license
- Boat captain

Projects and collaborations

- 2024 – present: Scientific project of the Croatian Science Foundation "SALTECTA: "Salt diapirs and active tectonics of the Central Adriatic" – Leader.
- 2024 – present: Institutional project of the Croatian Geological Survey "GORIK": Associate

- 2020 – 2024: Scientific project of the Croatian Science Foundation "SeisRICHerCRO" (PMF, Snježana Markušić): Associate.
- 2017 – 2021: Scientific project of the Croatian Science Foundation "GEOSEKVA": „Geological and seismological aspects of the geodynamics of Kvarner - revealing the Kvarner fault“ – Leader.
- 2007 – 2014: Scientific project of the Ministry of Science and Technology: „Stratigraphy of Cretaceous deposits within the framework of the geodynamics of the Adriatic region of Croatia“ (Ministry of Science and Technology No. 181-1191152-2697) – Leader.
- 1997–2021: Scientific project of the Ministry of Science and Technology: „Basic geological map of the Republic of Croatia, scale 1:50,000“ – associate, leader from 2012-2021.

Awards

2016 Annual Award of the Croatian Academy of Sciences and Arts (HAZU) in the field of natural sciences and mathematics

Boards and commissions

- 2023: Member of the Organizing Committee, 36th International Meeting of Sedimentology (IAS), Dubrovnik, Croatia
- 2017 - present: Member of the National Commission for UNESCO Global Geoparks
- 2010: Member of the Organizing Committee, 4th Croatian Geological Congress, Šibenik, Croatia
- 2002: Member of the Organizing Committee, 6th International Congress on Rudists, Rovinj, Croatia

Memberships

- Associate Member of the Croatian Academy of Sciences and Arts (HAZU) in the Department of Natural Sciences
- Croatian Geological Society (HGD)
- International Association of Sedimentologists (IAS)
- European Geoscience Union (EGU)

Bibliography

- [Tvrtno Korbar Crosbi](https://www.bib.irb.hr/pregled/znanstvenici/230461)
<https://www.bib.irb.hr/pregled/znanstvenici/230461>
- [Tvrtno Korbar Google Scholar](https://scholar.google.com/citations?user=mrCjEFoAAAAJ&hl=en)
<https://scholar.google.com/citations?user=mrCjEFoAAAAJ&hl=en>

Selected papers

Korbar, T., Hasan, O., Brunović, D., Markušić, S. & Alves, T. (2026): Direct evidence of active tectonics along the offshore sector of the Dinaric Fault System, *Scientific Reports* 16, 2442.

<https://www.nature.com/articles/s41598-025-32243-z>

Korbar, T. (2025): Conflicting tectonic interpretations of the central External Dinarides. *Geol. Croatica*, 78/3, 257-265.

<https://doi.org/10.4154/gc.2025.17>

Bernier, L., Soliva R., Roubinet, D., Dominguez, S., Mayolle, S., Bulliard, M., Wibberley, C., **Korbar, T.** (2025): Spatial distribution of permeability in carbonate fault damage zones. *Journal of Structural Geology*, 194, 105371.

Stanko, D., **Korbar, T.** Markušić, S. (2024). Evaluation of the Local Site Effects and Their Implication to the Seismic Risk of the UNESCO World Heritage Site Old City of Dubrovnik (Croatia). *Journal of Earthquake Engineering*.

Kamenski A., **Korbar T.** (2023). Platform-to-Basin Evolution of a Tectonically Indistinct Part of a Multiple Foreland—Analysis of a 3D Seismic Block in the Northern Adriatic Sea (Croatian Offshore). *Geosciences*, 13(11):323

Markušić, S., Stanko, D., Penava, D., Ivančić, I., Bjelotomić Oršulić, O., **Korbar, T.**, Sarhosis, V. (2021): Destructive M6.2 Petrinja Earthquake (Croatia) in 2020—Preliminary Multidisciplinary Research. *Remote Sens.*, 13, 1095

Korbar, T., Markušić, S., Hasan, O., Fuček, L., Brunović, D., Belić, N., Palenik, D. & Kastelic, V. (2020): Active tectonics in the Kvarner region (External Dinarides, Croatia) – an alternative approach based on new focused geological mapping, 3D seismological and shallow seismic imaging data. *Frontiers In Earth Science*

Markušić, S., Stanko, D., **Korbar, T.**, Belić, N., Penava, D., Kordić, B. (2020): The Zagreb (Croatia) M5.5 Earthquake on 22 March 2020. **Geosciences**, 10, 252

Biolchi, S., Furlani, S., Devoto, S., Scicchitano, G., **Korbar, T.**, Vilibić, I. & Šepić, J. (2019): The origin and dynamics of coastal boulders in a semi-enclosed shallow basin: A northern Adriatic case study. **Marine Geology**, 411, 62-77

Korbar, T., McDonald, I., Premec Fuček, V., Fuček, L., Posilović, H. 2017 Post-impact event bed (tsunamite) at the Cretaceous–Palaeogene boundary deposited on a distal carbonate platform interior. **Terra Nova**, 29, 135–143.

Korbar, T., Montanari, A., Premec Fuček, V., Fuček, L., Coccioni, R., McDonald, I., Claeys, P., Schulz, T., Koeberl, C. 2015 Potential Cretaceous–Paleogene boundary tsunami deposit in the intra-Tethyan Adriatic Carbonate Platform section of Hvar (Dalmatia, Croatia). **Geological Society of America Bulletin**, 127/11-12, 1666-1680.

Surić, M., **Korbar, T.** Juračić, M. 2014. Tectonic constraints on the late Pleistocene–Holocene relative sea-level change along the north-eastern Adriatic coast (Croatia). **Geomorphology**, 220, 93-103.

Huck, S., Rameil, N., **Korbar, T.**, Heimhofer, U., Wieczorek, T.D., Immenhauser, A. 2010 Latitudinally different responses of Tethyan shoal-water carbonate systems to the Early Aptian oceanic anoxic event (OAE 1a). **Sedimentology**, 57/7, 1585-1614.

Brek, M., **Korbar, T.**, Cvetko Tešović, B., Glumac, B., Fuček, L. 2013 Stratigraphic framework, discontinuity surfaces and regional significance of Campanian slope to ramp carbonates from central Dalmatia, Croatia. **Facies**, 59/4, 779-801.

Korbar, T., Glumac, B., Cvetko Tešović, B., Cadieux, S.B. 2012 Response of a carbonate platform to the Cenomanian–Turonian drowning and OAE 2: a case study from the Adriatic platform (Dalmatia, Croatia). **Journal of Sedimentary Research**, 82, 163-176.

Korbar, T. 2009 Orogenic evolution of the External Dinarides in the NE Adriatic region: a model constrained by tectonostratigraphy of Upper Cretaceous to Paleogene carbonates. **Earth Science Reviews**, 96/4, 296-312

Steuber, T., **Korbar, T.**, Jelaska, V., Gušić, I. 2005 Strontium-isotope stratigraphy of Upper Cretaceous platform carbonates of the island of Brač (Adriatic Sea, Croatia): Implications for global correlation of platform evolution and biostratigraphy. **Cretaceous Research**, 26/5, 741-756.