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Iranian Quaternary Association

4th International Conference on Quaternary Science

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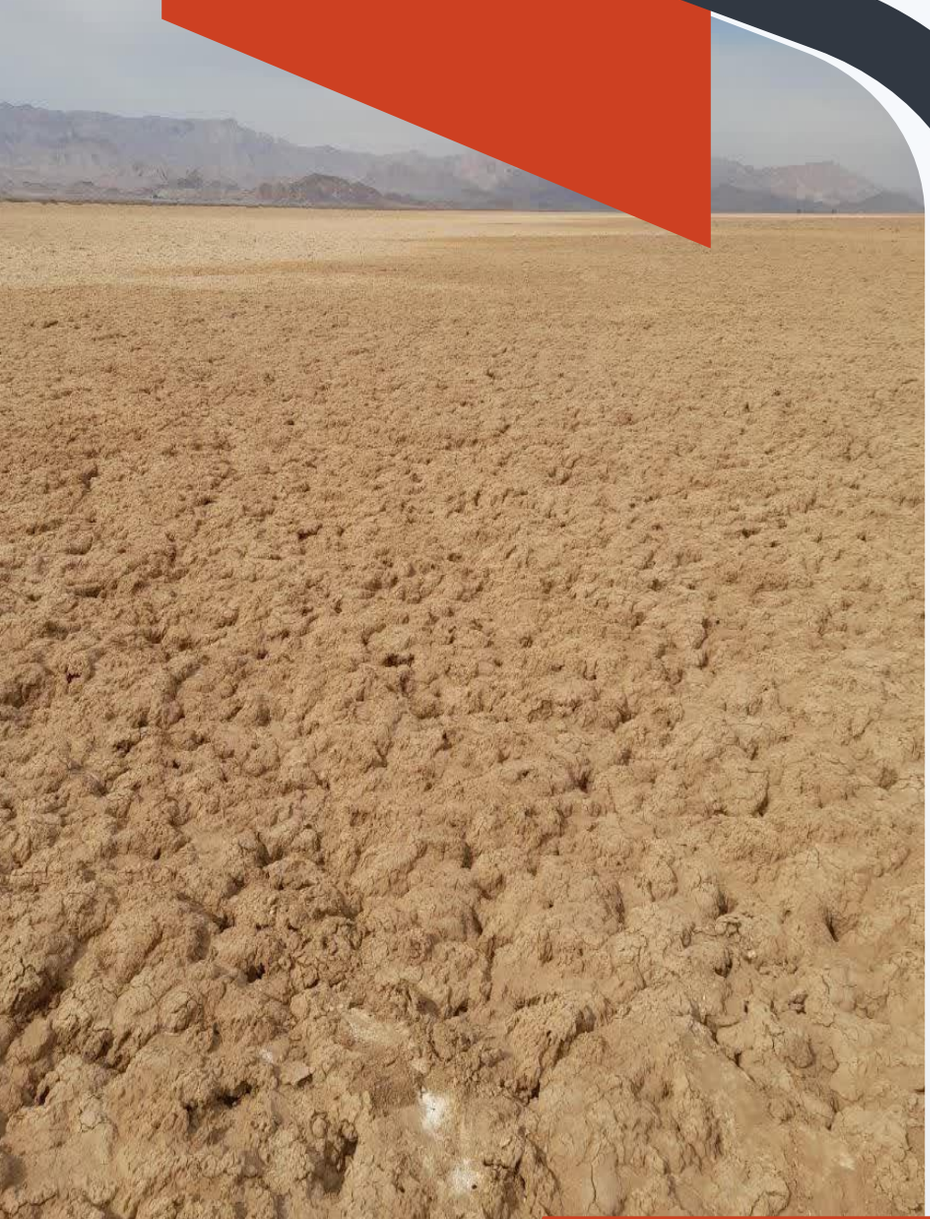

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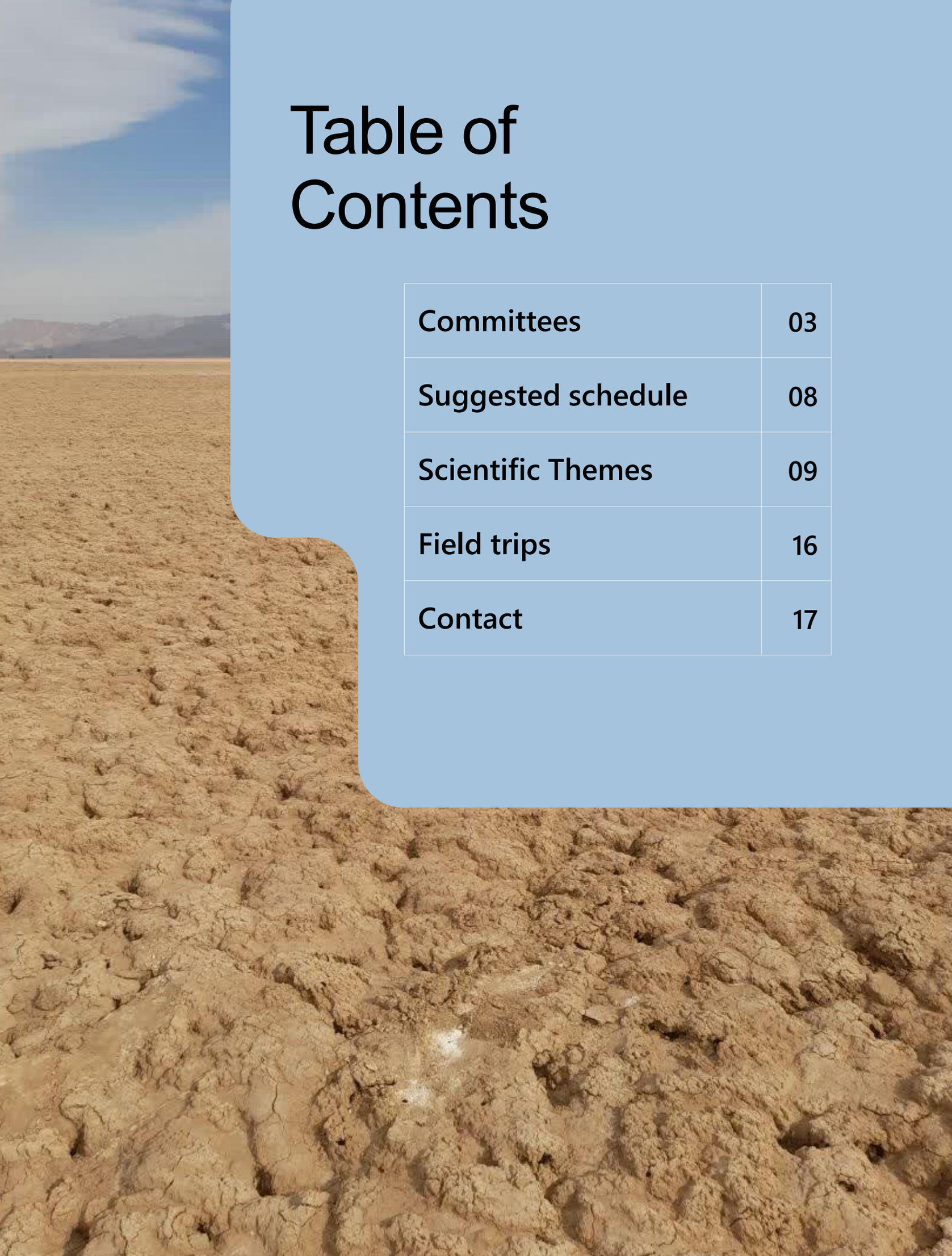

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December 2025

10 December 2025 — Conference Date: Wednesday

11 December 2025 — Field Workshop, Northeastern Iran, Sarakhs

11 August 2025 — Registration and Paper Submission Opens

20 November 2025 — Registration and Paper Submission Closes

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دانشگاه فردوسی مشهد

Theme:

Resilience and Adaptation: Lessons from Quaternary Science achievements

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Scientific Themes:

- Climate records and models
- Human evolution and ancient civilizations
- Challenges and prospects in Quaternary science
- Natural processes and geohazards
- Quaternary and geodiversity
- Water Security and sustainable management in the Anthropocene
- Landforms and soil system sciences
- Resilience of Quaternary Earth Systems
- Geochronology, stratigraphy and sedimentology
- Applications of AI/ML in Quaternary Science

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دانشگاه فردوسی مشهد

Climate records and models

All contributions related to paleoclimatic and paleogeographic changes in marine and terrestrial systems, abrupt and long-term climate change, historical and future climate, the use and development of (novel) climate proxies, simulations of past and future climate

Human evolution and ancient civilizations

All contributions related to anthropology, archeology, ancient civilizations, population dynamics and behavioral variability, cultural diversity, human-environment interaction, cultural-climatic evolution, vegetation, land-use and human impact

Landforms and soil system sciences

All contributions related to fluvial-aeolian, estuarine and coastal geomorphology, lake- and sea-level changes, soil biology, chemistry and physics, soil and environment interaction, soil formation, diagenesis, erosion and transport, loess and paleosols

Natural Processes and Geohazards

All contributions related to extreme weather and climate events, drought, fire and water scarcity, floods and landslides, earthquakes and neotectonics, volcanic hazards and aerosols, pollution, risk assessments and -reduction

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Geochronology, stratigraphy and sedimentology

All contributions related to application of, and advances in, geo- and thermochronology, paleomagnetism and magneto stratigraphy, radionuclides, radiocarbon and luminescence dating, trace and stable isotope geochemistry, correlations and mapping, statistical methods, scales and scaling, eolian dust and sedimentation, carbonate and Sili clastic sediments, modern and ancient sedimentary environment

Water Security and sustainable management in the Anthropocene

A broad range of topics in water resources management, Geopolitical and socio-economic effects and constraints, Natural and man-induced contamination of water resources, Surface and ground water interaction, managed aquifer recharge, and storage.

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Resilience of Quaternary Earth Systems

From environmental vulnerabilities to resilience, Late Quaternary environmental hazards, Processes and soil system science, Quaternary change consequences of Caspian Sea, Late Quaternary sea-level changes and archaeology, Urban geomorphology, climate change, and water security, Green energy, minerals and environment, Environmental resource and sustainable development

Applications of AI/ML in Quaternary Science

Big data and climate models, A historical-future perspective on climate adaptation, Numerical simulations: challenges and opportunities, Deep Learning Techniques for Quaternary Processes, Proxy records of Quaternary's climate geomorphology, Application of Artificial Intelligence in Quaternary Research

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Challenges and prospects in Quaternary science

Quaternary science faces the challenge of deciphering high-resolution climate and environmental records to understand the complex interplay of natural and anthropogenic forcings. Key prospects involve integrating sophisticated climate models with novel proxy data to better project future environmental trajectories in a warming world. This endeavor is crucial for informing policy on climate change mitigation and adaptation strategies.

Quaternary and geodiversity

Conserving Quaternary sites, developing new techniques and theories, Conserving of ecosystems biotic and abiotic components, Providing ecosystem services for economic, social and environmental benefits. understanding and mitigating natural hazards and informing the management of land and water; use of Quaternary information on climate and environmental change and forecasting, including rates of change, extreme events and impact on marine and terrestrial systems; evaluation of past human impacts.

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Field Workshop on Paleosedimentology and paleogeomorphology- Northeastern Iran, Sarakhs

- **Mazdavand Cave**
- **Bazangan Lake**
- **Loess Sediment**
- **Landslide site**

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