

Seismology and Earthquake Science: links to marine geophysical investigations and fluid-induced seismicity

9.09.2026

Safdie Auditorium, University of Haifa

9:00-9:30 Gathering and breakfast		
9:30 Opening and greetings		
Session 1: Seismo-Acoustic and Atmosphere–Solid Earth Coupling, Geological fault zone properties and source parameters, Seismic hazard in the Eastern Mediterranean: Dead Sea Transform and Sea of Galilee		
9:50	<i>Keynote talk:</i> Asaf Inbal (Tel Aviv University), Leah Langer	Regional seismo-acoustic phase generated by thermospheric returns from large chemical explosions
10:20	Nadav Wetzler (Geological Survey of Israel), Eshly Aizenshtat Soffer, Uri Schattner, Amir Sagy	Kinematics of active strike-slip and strain partitioning in the northern Levant Basin: Evidence from instrumental seismicity
10:40	Ittai Kurzon (Geological Survey of Israel), Linoy Grinberg, Itzhak Lior	Rupture directivity - Insights from theoretical studies applied to observations
11:00	Ronnie Kamai (Ben Gurion University of the Negev), Amany Abu-Assa, Nevo Shachrur, Michael Tsesarsky	3D Physics-based earthquake simulations of unique geological features in Northern Israel and their effect on the seismic hazard
11:20-11:50 Coffee		
Session 2: Fault mechanics and rupture dynamics, Fluid Pressure and Fault Failure, Induced anthropogenic seismicity		
11:50	Einat Aharonov (Hebrew University of Jerusalem), Pritom Sarma, Renaud Toussaint, Stanislav Perez	How effective normal stress oscillations advance failure in fault gouge: frequency dependence, non-failure window, and the role of dilation
12:10	Xiongjie Zhou (University of Haifa), Regina Katsman	From aseismic creep to dynamic rupture: a fully coupled hydro-mechanical model of Reservoir-Induced Seismicity

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12:30	Leah Langer (Tel Aviv University)	How does material structure affect onshore and offshore displacement during subduction zone earthquakes?
12:50	Sauparna Ghosh (Ben Gurion University of the Negev), Gopala Krishna Rodda, Yuval Tal	The effect of fault-zone damage geometry on earthquake rupture regimes: experimental observations
13:10	Yuval Boneh (Ben-Gurion University of the Negev), Tsafrir Levi, Perach Nuriel, Rami Weinberger	Microstructural evidence for seismic event/s in calcite-rich fault; New insights from the North Anatolian Fault
13:30-14:30	Lunch+Posters	
Session 3: Advanced early warning systems, Fiber-optic Distributed Acoustic Sensing (DAS)		
14:30	<u>Keynote talk:</u> Itzhak Lior, Ittai Kurzon Itzhak Lior (Hebrew University of Jerusalem), Ariel Lellouch, Nadav Lensky, Omri Volk, Yevhenii Fedorchenko, Shahar Ben Zeev, Yovel Netanyahu, Nadav Kashtan, Gali Shraiber, Eyal Shimony, Aleksei Nelaev, Gil Noy, Tomer Harrary, Ittai Kurzon (Geological Survey of Israel)	Monitoring the lowest place on earth with lake bottom fiber optics above the Dead Sea Fault
15:00	Ariel Lellouch (Tel Aviv University), Shaked Stein	Seismic and thermal sensing using a deployable DAS fiber in the Sea of Galilee

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15:20	Adam Klinger (Seismic AI), Andreas Eisermann, Alon Ziv	Single array performance in the 2025-04 Marmara sequence
15:40	Ran Novitsky Nof (Geological Survey of Israel), Yuancong Gou, Richard M Allen, Brian Pardini, Ivan Henson, Angela Lux, Weiqiang Zhu, Taka'aki Taira, Julien Marty	Closing the offshore gap: integrating distributed acoustic sensing into operational EEW Networks
16:00	Omry Volk (Hebrew University of Jerusalem), Itzhak Lior, Ran Nof	A zero calibration, globally applicable, das based magnitude estimation algorithm for earthquake early warning tested in pseudo real time in California, Chile and Israel
16:20	Matty Sharon (Hebrew University of Jerusalem), Shmuel Marco, Amotz Agnon, Robb Moss, Amos Salamon, Itzhak Lior	Two millennia of earthquake records on the Dead Sea transform and implications for fault displacement hazard analysis
16:40-17:00	Coffee	



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Posters

1	Anna Pomyalov, Eran Bouchbinder	Breakdown of the Classical Rupture Theory and Earthquake Propagation in the "Forbidden" Super-Rayleigh Range
2	Aleksei Nelaev, Eyal Shimony, Ariel Lellouch	Conjugate Fault Segmentation and Swarm Mechanics Along the Shallow Western Margin of the Kinneret basin, Sea of Galilee
3	Ori Stauber, Asaf Inbal	Analysis of 2018 Lake Kinneret Earthquake Sequence
4	Amany Abou Assa, Ronnie Kamai, Michael Tsesarsky	Ground Motions Variability as a Function of Seismic Source Characterization- a Numerical Study
5	Gopala Krishna Rodda, Ronnie Kamai	Site Characterization of the Israeli Seismic Network Stations
6	Lewis Schardong, Andrey Polozov, Hila Navon, Marina Gorstein, Nadav Wetzler, Ran Novitsky Nof, Ittai Kurzon	Upgrading the Real-Time Seismic Processing: Obtaining an Improved Automatic Earthquake Catalogue
7	Mahidip Deb, Yosef Ashkenazy	Adaptive Window-Based Declustering and Temporal Correlation Analysis in Earthquake Catalogues
8	Yana Novomodsky, Omer Darel, Shay Rotics, Ariel Lellouch	Seismic Monitoring of Blind Mole Rats
9	Aaron Kahn, Alexandra Chudnovsky, Lev Eppelbaum	Machine Learning Integration with Geological-Geophysical Data for Blind Fault Characterization in Israel
10	Tzofia Bem, Ariel Lellouch	Void Detection Using Refracted-Wave Diffractions Recorded by Distributed Acoustic Sensing (DAS)
11	Beverly Goodman Tchernov	Identifying Inland and Offshore Tsunami Signatures