

The Dead Sea Borehole

The Longest Archive of the Late Quaternary Levant Geological and Geophysical Environments

November 25th-28th, 2018

PROGRAM

Sunday, November 25th

- 8:30-9:00 Registration
- 9:00-9:05 Greetings: **Yitzhak Hen**, Director of the IIAS
- 9:05-10:30 **Opening: The Dead Sea ICDP project**
Chair: **Mordechai Stein**
Achim Brauer: The Dead Sea - target of 25 years of joint Israel - GFZ research
Gerald Haug: Dead Sea climate in a global context
Rivka Amit: Geo-hazards along the Dead Sea Transform- The GSI perspectives
- 10:30-11:00 *Coffee Break*
- 11:00-12:30 **Sedimentology**
Chair: **Yehouda Enzel**
Ina Neugebauer: Lithology and microfacies of the ICDP Dead Sea deep core
Revital Bookman: The role of dust in aragonite deposition at the Dead Sea and Lake Lisan
Yigal Erel: Cycles of dust mobilization in the late Quaternary Levant
- 12:30-13:30 *Lunch Break*
- 13:30-15:30 **World lakes - I**
Chair: **Zvi Ben Avraham**
Andy Cohen: The hominin sites and paleolakes drilling project: Investigating the environmental context of human evolution in East Africa and implications for out-of-Africa dispersal
Flavio Anselmetti: Sediment proxies of glacial/interglacial and stadial/interstadial changes: Examples from Lake Peten Itza and Lake Van.

Yehouda Enzel: Megalakes in the Sahara. Myths and facts.

Nicolas Waldmann: First insights into millennial-scale environmental and climate reconstruction of the last 250.000 years in equatorial East Africa

15:30-16:00 *Coffee Break*

16:00-18:15 **Present to Future research**

Chair: **Yigal Erel**

Yoav Bendor: The DSDDP core: From microfacies to hydroclimatology

Bar Oryan: The ICDP cores and the Dead Sea heat flow

Ido Sirota: Temperature seasonality control on modern halite layers in the Dead Sea: In situ observation

Elan Levy: Dissolution of the Sedom salt diapir as a source for solutes and driving force for dilution of the deep Lake Lisan

Nurit Weber: The paleohydrology of the hot saline springs at the Dead Sea shore

Moshe (Koko) Armon: Synoptic-scale control over heavy rainfall and flash floods in the drylands of the Levant.

Yael Ebert: Reducing environments and their impacts on magnetic properties of sediments

18:15-21:00 **Poster Session and Reception**

Monday, November 26th

9:00-10:30 **Paleobotany**

Chair: **Ahuva Almogi-Labin**

Thomas Litt: New insights into the paleoenvironment of the southern Levant during MIS5

Jing Wu: Vegetation and climate change in the Great Khingan Mountain Range, Northeast China during the Holocene

Andrea Miebach: The Vegetation and Fire History of the Last Glacial Dead Sea Region

10:30-11:00 *Coffee Break*

11:00-13:00 **Salt and Brines**

Chair: **Mira Bar-Matthews**

Boaz Lazar: Interstitial brine composition and halite thickness in the DSDDP core - tools for reconstructing the history of brine volume and lake level

Nadav Lensky: From evaporation to evaporites: Novel observations and concepts from the Dead Sea, the modern analog for deep evaporitic basins

Ittai Gavrieli: Enrichment of sulfate in the deep brine of Lake Lisan-sources and mechanism

Yossi Yechieli: Hydrogeological response to variations in the Dead Sea levels

13:00-14:00 *Lunch Break*

14:00-15:30 **Regional paleo-climates**

Chair: **Boaz Lazar**

Mira Bar-Matthews: Hydro-climate research of the late Quaternary Eastern Mediterranean-Levant region based on speleothem research - a review

Shikma Zaarur: Synoptic-climate conditions in East China during the past 80,000 years inferred from Sr and Nd isotopic compositions of maar lake Sediments

Hannah Hartung: Lake Kinneret: Holocene lake-level reconstruction based on diatoms

16:00-21:00 Jerusalem Tour and Dinner at Ima Restaurant (Invited guests)

Tuesday, November 27th

9:00-11:00 **Geophysics, paleoseismology and paleomagnetism**

Chair: **Michael Lazar**

Michael Lazar: Geophysical studies and ICDP boreholes in the Dead Sea - an integrated approach

Shmuel Marco: 220-ka paleoseismic record in the Dead Sea Basin

Ron Shaar: Refining the Dead Sea chronology using magnetism

Gidi Baer: Dead Sea sinkholes: mechanisms, prediction and challenges

11:00-11:30 *Coffee Break*

11:30-13:00 **Biogeochemistry**

Chair: **Gidi Baer**

Daniel Ariztegui: Integrating microbial community analysis of lacustrine sediments to paleoclimatic studies

Camille Thomas: Microbial life and its consequences in the Dead Sea subsurface

Jiaqi Liu: Study on the Bioclimatology

13:00-14:00 *Lunch Break*

14:00-15:30 **Chronologies**

Chair: **Amotz Agnon**

Steve Goldstein: Highlights of the revisited DSDDP core chronology

Hiroyuki Kitagawa: Updated radiocarbon chronology of the Dead Sea cores

David Fink: Meteoric ^{10}Be in paleomagnetism and climate change -tracing and dating global sediments from the Dead Sea to Antarctica

15:30-16:00 *Coffee Break*

16:00-18:00 **Climate and Hydrology**

Chair: **Steve Goldstein**

Yael Kiro: Changes in Monsoon intensification and North Hemisphere climate indicated by the DSDDP cores

Yochanan Kushnir: The climate of the last interglacial – what do climate models tell us

Adi Torfstein: Climate cycles in the Dead Sea watershed and their global climate engines

Efrat Morin: Mean, variance and trends of Levant precipitation over the past 4500 years from reconstructed Dead Sea lake levels and stochastic modeling

18:00 Visit to the Israel Museum (upon registration)

19:00 Public Talk (in Hebrew)

Chair: **Yigal Erel**

Mordechai Stein: The Dead Sea borehole: window into the climate history of the Levant

Wednesday, November 28th

7:00-19:00 Field trip to the Dead Sea

End of Conference

Thursday, November 29th

Optional - Field trip to the Sea of Galilee