



The Batsheva de Rothschild SEMINAR ON

THE SCIENCE of NEUTRONS

SUNDAY MARCH 15TH, 2020

12:00-14:30 *Arrival and check in, light lunch*

14:30-14:45 **Welcome and Introduction**

Dganit Danino, Chair
Kirstine Vangkilde Berner, Danish Embassy,
ILL and ESS representatives

14:45-16:15 **The Science of Neutrons**

Neutron scattering at ILL: Grand picture, challenges and recent developments
Mark Johnson, ILL Associate Director - Head of the Science Division

The European Spallation Source: Status of the project and Future Science
Andreas Schreyer, ESS Science Director

16:15-16:45 *Coffee Break*

16:45-18:15 **The Science of Neutrons | Techniques**

Introduction to neutron scattering
Neutron sources, and neutron Instruments
Optics
Charles Dewhurst & Andrew Jackson

18:30 *Dinner*

20:00-20:30 Why Deuteration? Making Hydrogen visible
Zoë Fisher

20:30- *Meeting the experts, drinks and discussions*



MONDAY MARCH 16TH, 2020

MORNING TRIP TO MASADA

Breakfast on Site

11:00-13:30 **The Science of Neutrons | Techniques**

Crystallography and Diffraction
Mogens Christensen

Solution small-angle neutron scattering
TBA

Small angle neutron scattering from bulk materials
Kell Mortensen

13:30 *Lunch*

15:00-16:30 **The Science of Neutrons | Techniques**

Magnetic diffraction and polarized neutrons
Andrew Wildes

Neutron spectroscopy
Niels Bech Christensen

16:30-17:00 *Coffee Break*

17:00-18:30 Imaging, radiography, and tomography
Alessandro Tengattini

Residual stress diffraction and strain scanning
Premek Beran

18:30 *Dinner*

19:30-20:15 Behind the scenes of a mega-journal: An editor view
Henrik Rudolf, Editor-in-chief for Applied Surface Science

20:30- *Drinks and Poster Session*

TUESDAY MARCH 17TH, 2020

07:00-8:30 *Breakfast*

09:00-10:30 **The Science of Neutrons | Applications**

Neutrons reflectometry for soft matter and biology
Giovanna Fragneto

Neutron imaging for energy materials
Luise Theil Kuhn

Spectroscopy in solid state physics & chemistry
Monica Jimenez

10:30-11:00 *Coffee break*

11:00-13:00 **The Science of Neutrons | Techniques**

Neutrons for quantum and advanced materials
Pascale Deen

Neutron Instrumentation and techniques for applied materials science
Premek Beran

Matter under high pressure: What neutrons can do for you
Stefan Klotz

13:15- *Lunch*

14:30-16:00 **The Science of Neutrons | Complementary Techniques**

Super-resolution microscopy, SAXS and contrast variation SANS of field-directed self-assembly
Peter Schurtenberger

Monitoring nucleation and growth in-situ using synchrotron GIXD
Yuval Golan

16:00-16:30 *Coffee break*

16:30-18:30 **An Israeli View on Neutrons**

SARAF: A unique source of neutrons for science in Israel
Tsviki Hirsh

First neutron-based material research experiments at SARAF-I
Inbal Gavish

Time-of-flight measurements using fast neutrons at SARAF
Asher Shor

19:30- *Departure to dinner at Kfar Hanokdim*

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WEDNESDAY MARCH 18TH, 2020

07:00-8:30 *Breakfast*

09:00-10:30 **Neutrons in Biology**

Structure, Interactions, Dynamics in Macromolecules and Large Cellular
Machines and Complexes
Giuseppe Zaccai, Uri Raviv, Trevor Forsyth

10:30-11:00 *Coffee break*

11:00-13:00 **SANS in the NanoWorld**

Soft Matter, Colloids, Interfaces, Bio-inspired Materials
Thomas Zemb, Dganit Danino, Anna Stradner, Daniel Harries,

13:00- *Lunch*

14:30-16:10 **Material Science with Neutrons**
Guy Makov, Eran Sterer, Nini Pryds

16:10-16:40 *Coffee break*

16:40-18:00 **Novel Materials and Methods**
Michael Paul, Oleg Rivin, Daniel Potashnikov, Asaf Pesach,

18:00 **Closing Remarks**

Departure

