The 2017 Amos de-Shalit Ulpana for Physics

Coordinators:  
Prof. Nirit Dudovich – Department of Physics of Complex Systems  
Dr. Ran Budnik – Department of Particle Physics and Astrophysics  
Dr. Karen Michaeli – Department of Condensed Matter Physics

Sunday, September 10, 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:30-10:15</td>
<td>Arrival and registration</td>
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<tr>
<td>10:15-10:30</td>
<td>Prof. Benny Shilo – Department of Molecular Genetics</td>
<td><a href="http://shilolabweb.weizmann.ac.il/">http://shilolabweb.weizmann.ac.il/</a></td>
</tr>
</tbody>
</table>
| 10:30-10:40 | Prof. Irit Sagi – Dean, Feinberg Graduate School and Member, Department of Biological Regulation | http://www.weizmann.ac.il/Biological_Regulation/IritSagi/  
http://www.weizmann.ac.il/feinberg/ |
| 10:40     | Prof. Haim Harari – Department of Particle Physics and Astrophysics      | http://www.weizmann.ac.il/particle/harari/                             |
| 11:50-12:45 | Room assignment and freshening up                                        | http://www.weizmann.ac.il/particle/harari/                             |
| 12:45-14:00 | Lunch at the Youth Village                                                |                                                                         |
| 14:00-14:35 | Prof. Nirit Dudovich – Department of Physics of Complex Systems          | http://www.weizmann.ac.il/complex/Dudovich/                             |
| 14:40-15:15 | Prof. Yosef Nir – Department of Particle Physics and Astrophysics        | http://www.weizmann.ac.il/particle/nir/                                 |

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1 Clicking on the location will lead to the campus map. Numbers refer to the printed map, which will be handed to you upon arrival.
16:00-16:35 **Prof. Eli Waxman** – *Head, Department of Particle Physics and Astrophysics*
Cosmic accelerators
http://www.weizmann.ac.il/physics/waxman/

16:40-17:15 **Prof. Adi Stern** – *Department of Condensed Matter Physics*
The quantum Hall effect and topological states of matter

17:30 **Tour** of Yad Weizmann and visit of the Weizmann House
Meeting point: Memorial Plaza

18:45² **Prof. David Mirelman** – *Department of Biomolecular Sciences*
The scientific legacy of the Institute founder, Dr. Chaim Weizmann;
From the academic research lab to the development of inventions
http://www.weizmann.ac.il/Biomolecular_Sciences/scientist/Mirelman/david_mirelman.html
Followed by dinner at the Weizmann House (No. 68)

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**Monday, September 11, 2017**

9:00-9:50 **Dr. Gilad Perez** – *Department of Particle Physics and Astrophysics*
The mystery of masses
http://www.weizmann.ac.il/particle/perez/

10:00-10:50 **Dr. Shahal Ilani** – *Department of Condensed Matter Physics*
Quantum design in carbon nanotubes
http://www.ilanigroup.com

11:00-12:00 **Dr. Ofer Firstenberg** – *Department of Physics of Complex Systems*
Quantum nonlinear optics: photon-photon interactions
http://www.weizmann.ac.il/complex/Firstenberg/

12:00-14:00 Lunch with mentors at the Club of the Martha, Bram, Michael and Phillipe Laub
International Science Youth Village (No. 60)

14:00 Individual work on projects

18:30 **Prof. Michal Irani** – *Department of Computer Science and Applied Mathematics*
“Blind” Visual inference
http://www.weizmann.ac.il/math/irani/
Octav Bundorf Botnar Auditorium, Arthur and Rochelle Belfer Building for Biomedical Research (No. 23)

19:30 Dinner at Charlie's Place Restaurant (No. 25)

² All evening lectures are jointly with the other Ulpanot.
Tuesday, September 12, 2017

9:00-9:50  **Dr. Boaz Katz** – *Department of Particle Physics and Astrophysics*
We don't know how supernovae explode

10:00-10:50  **Prof. Yuval Oreg** – *Department of Condensed Matter Physics*
Where can we find a particle that is its own anti-particle?
[http://www.weizmann.ac.il/condmat/oreg](http://www.weizmann.ac.il/condmat/oreg)

10:50  Group picture on the stairs of the K.B. Weissman Building

11:00-12:00  **Prof. Dan Oron** – *Department of Physics of Complex Systems*
Can we survive on renewable energy and how can advanced photovoltaics get us there?

12:00-14:00  Lunch with vouchers at the Institute restaurants
14:00  Individual work on projects

18:30  **Prof. Benny Shilo** – *Department of Molecular Genetics*
From egg to organism: Principles of embryonic development
[http://shilolabweb.weizmann.ac.il/](http://shilolabweb.weizmann.ac.il/)
*Octav Bundorf Botnar Auditorium, Arthur and Rochelle Belfer Building for Biomedical Research* (No. 23)

19:30  Dinner at **Café Mada, Levinson Visitors Center** (No. 2)

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Wednesday, September 13, 2017

9:00-9:50  **Dr. Efi Efrati** – *Department of Physics of Complex Systems*
Frustrated assemblies
[http://www.weizmann.ac.il/complex/efrati/](http://www.weizmann.ac.il/complex/efrati/)

10:00-10:50  **Dr. Shikma Bressler** – *Department of Particle Physics and Astrophysics*
Research in (particle) physics
[http://www.weizmann.ac.il/particle/Bressler/](http://www.weizmann.ac.il/particle/Bressler/)

11:00-12:00  **Prof. Eli Zeldov** – *Head, Department of Condensed Matter Physics*
Nanoscale thermal imaging of quantum systems
[https://www.weizmann.ac.il/condmat/superc/](https://www.weizmann.ac.il/condmat/superc/)

12:00-14:00  Lunch with vouchers at the Institute restaurants
14:00  Individual work on projects

18:30  **Prof. Oded Aharonson** – *Department of Earth and Planetary Science*
Exploring the moon
[https://sites.google.com/a/aharonson.com/aharonson/](https://sites.google.com/a/aharonson.com/aharonson/)
*Octav Bundorf Botnar Auditorium, Arthur and Rochelle Belfer Building for Biomedical Research* (No. 23)

19:30  Dinner on the front deck of the **Feinberg Graduate School** (No.45)
Thursday, September 14, 2017

Until 11:00 a.m. lectures will be held in the:
Octav Bundorf Botnar Auditorium, Arthur and Rochelle Belfer Building for Biomedical Research (No. 23)

09:00-10:00³ Prof. Avishay Gal-Yam – Head, Department of Particle Physics, and Astrophysics
Cosmic explosions and the origin of the elements
http://www.weizmann.ac.il/particle/galyam/

10:00-11:00³ Prof. Irit Sagi – Dean, Feinberg Graduate School and Member, Department of Biological Regulation
Meeting with the Dean of the Feinberg Graduate School³
http://www.weizmann.ac.il/Biological_Regulation/IritSagi/
http://www.weizmann.ac.il/feinberg/

11:00-11:30 Presentation of projects
12:30 Lunch at the Drory Auditorium
13:00 Presentation of projects
17:45 Dinner at Club of the Martha, Bram, Michael and Phillipe Laub
International Science Youth Village (No. 60)
18:30 Tour to Mitzpe Masua
Leaving from the Youth Village

Friday, September 15, 2017

Breakfast: Sandwiches will be provided at the Club of the Youth Village.

³ Jointly with the other Ulpanot.