מכון ויצמן למדע
WEIZMANN INSTITUTE OF SCIENCE
מדרשת פיינברג
Feinberg Graduate School
קרן עמוס דה-שליט
The Amos de-Shalit Foundation

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The 2018 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. David Mross- *Department of Particle Physics and Astrophysics*

Sunday, September 02, 2018

Location: Gerhard M.J. Schmidt Lecture Hall

09:45-10:25[2] Arrival and registration

10:25-10:30[2] Prof. Irit Sagi – *Dean, Feinberg Graduate School and Member, Department of Biological Regulation*
Welcoming remarks

10:30-10:45[2] **Prof. Benny Shilo** – *Department of Molecular Genetics*
General comments

10:45-10:55[2] **Prof. (Emeritus) Uzy Smilansky** - *Department of Physics of Complex Systems*
Welcoming remarks

10:55-11:40[2] **Prof. Michal Neeman** – *Department of Biological Regulation*
Introducing the Weizmann Institute

11:40-12:30[2] Lunch, at the San Martin Faculty Club House

11:50-14:00[2] Room assignment and freshening up

Location: Martha, Bram, Michael and Phillipe Laub International Science Youth Village

Location of lectures: unless otherwise specified, lectures will be held at the K.B. Weissman Building – Drori Auditorium

14:00-14:50 **Prof. Yosef Nir** – Department of Particle Physics and Astrophysics
"The mystery of the missing antimatter"

14:50-15:40 **Prof. Dan Oron** – *Department of Physics of Complex Systems*

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[1] This activity will be held at the Octav Bundorf Botnar Auditorium, Arthur and Rochelle Belfer Building for Biomedical Research

[2] Jointly with the other Ulpanot.

"Faster, Stronger, Colder – AMO at Weizmann"

15:40-16:30 **Prof. Eli Waxman** – *Department of Particle Physics and Astrophysics*

"Astrophysics at WIS"

16:30-17:20 **Prof. Ady Stern** – *Department of Condensed Matter Physics*

"From topological states of matter to topological quantum computation"

17:30 Tour of Yad Weizmann and visit of the Weizmann House

Meeting point: Memorial Plaza (כיכר הזיכרון)

18:45-19:30[2] **Dr. Ofer Firstenberg**– *Department of Physics of Complex Systems*

"Crystalized Light"

Followed by dinner at the Weizmann House

Monday, September 03, 2018

9:00-9:50 **Prof. Elisha Moses** –*Department of Physics of Complex Systems*

"Complex vs. complicated"

10:00-10:50 **Dr. Oren Raz-** *Department of Physics of Complex Systems*

"Why does hot cup of water freeze faster than a cold one?"

10:50-11:00 Group photo

11:00-11:50 **Dr. Doron Kushnir** - *Department of Particle Physics and Astrophysics*

"The energy sources of the universe"

12:00-12:50 **Dr. Ofer Feinerman-** *Department of Physics of Complex Systems*

"Collective phenomena in ants"

13:00-14:00 Lunch with vouchers at the Institute restaurants

14:00-18:30 Individual work on projects

18:30-19:15[1] **Prof. Irit Sagi** – *Dean, Feinberg Graduate School and Member, Department of Biological Regulation*

"Thinking outside the cell"

19:30[2] Dinner at Charlie's Place Restaurant

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Tuesday, September 04, 2018

9:00-09:50 **Prof. Eilam Gross**, Department of Particle Physics and Astrophysics

"How do you discover a particle? It's not what you think!"

10:00-10:50 **Dr. Binghai Yan**, *Department of Physics of Complex Systems*

"Topological electrons in realistic"

11:00-11:50 **Dr. Nurit Avraham**- *Department of Condensed Matter Physics*

"The surface and the essence: scanning tunneling microscopy of topological materials"

12:00-13:00 Lunch with vouchers at the Institute restaurants

13:00-18:30 Individual work on projects

18:30-19:15[1] **Prof. Samuel Safran**, *Dept. of Materials and Interfaces*

"Physical dynamics of biological cells"

19:30[2] Dinner at Café Mada, Levinson Visitors Center

Wednesday, September 05, 2018

9:00-10:00 **Prof. Victor Malka**, *Department of Physics of Complex Systems*

"Manipulating relativistic electrons with intense lasers"

10:00-11:00 **Prof. Micha Berkooz**, Department of Particle Physics and Astrophysics

"**Black holes and quantum information"**

11:00-12:00[1] **Prof. Irit Sagi** – *Dean, Feinberg Graduate School and Member, Department of Biological Regulation*

Meeting with the Dean of the Feinberg Graduate School

12:00-13:00 Lunch with vouchers at the Institute restaurants

13:00-18:30 Individual work on projects

18:30-19:15[1] **Prof. Amos Tanay**, *Department of Computer Science and Applied Mathematics*

"Too little or too much information? Data science in medicine and biology"

19:30[2] Dinner on the front deck of the Feinberg Graduate School

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Thursday, September 06, 2018

09:00-10:00 **Prof. Roee Ozeri**- *Department of Physics of Complex Systems*

'Build your own quantum computer"

10:30-12:00 Preparation for projects presentation

12:00-13:00 Lunch with vouchers at the Institute restaurants

13:00- 17:00 Presentation of projects

Optional activities:

17:00-22:00 European Researchers' Night

19:00 WIS Student Day

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