Dear students, you are invited to visit the various labs and/or to meet various research groups at the Technion, outside of your department, and be exposed to the excellent researchers and to the interesting research conducted in varied areas.

This is your opportunity to meet faculty members and graduate students, to ask, find out, be exposed to new opportunities, or just to widen your horizons.

Instructions:
Please choose visits located outside of the department of your current studies
There is no limit to the number of visits you may register to.
Duration of each visit is 40 minutes, unless otherwise indicated

For registration click here
Undergraduate Tours
Graduate Tours
### Tour List - רשימה מסיירות

<table>
<thead>
<tr>
<th>Tour 1: The Laboratory for Quantum Materials Structure Research</th>
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<tr>
<td>Host</td>
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<tr>
<td>Additional Hosts</td>
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<tr>
<td>Location</td>
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<td>Description</td>
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### Tour 2: Plasma Physics and Pulsed Power

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<tr>
<td>1.6.2022</td>
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<td>8.6.2022</td>
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<td>Graduates</td>
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<tr>
<td>Host</td>
<td>Prof. Yakov Krasik</td>
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<tr>
<td>Location</td>
<td>Rooms 308/309</td>
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<tr>
<td>Description</td>
<td>Visitors will be introduced with our research of Warm Dense plasma and strong shock waves and High Power microwaves interaction with plasma. *Tour in Hebrew and English</td>
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### Tour 3: Bridging Cognition and Neuroscience in Children!

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<tr>
<td>Host</td>
<td>Assoc. Prof. Tzipi Horowitz-Kraus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional Hosts</td>
<td>Raya Meri</td>
<td>Niko Taran</td>
<td>Nir Habouba</td>
</tr>
<tr>
<td>Location</td>
<td>Sherman, ground floor</td>
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</tbody>
</table>
**Description**

The Educational Neuro-Imaging Group (ENIG) is focused on determining the neuronal, cognitive, genetic, and environmental components that underlie both typical and atypical development of two of the most important components of communication in children: language and reading. We use computational tools and models to characterized brain activation and connectivity generated from MRI and EEG related to these abilities along development.

*Tour in Hebrew and English*

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<td>8.6.2022</td>
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</table>

Host
Assoc. Prof. Aaron Sprecher

Location
MTRL Robotic Lab - Amado Building, Ground floor

Description
The tour will take place at the MTRL lab, one of the most advanced large-scale robotic labs at the Technion. We will present state-of-the-art research projects in the fields of fabrication (large-scale robotic additive manufacturing, rotational casting, material research), simulation (AI and ML design chatbots, NLP for design), and visualization (territorial 3D scanning and large dataset treatment). The tour will include a short lecture by Prof. Sprecher and live performance.

*Tour in Hebrew and English

The tour will showcase research projects that are unique. Please no picture or recording during the visit. MTRL is a lab that includes large-scale robotic equipment. For security reasons, please no food.

Tour 8: Computational materials

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<th>Graduates</th>
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</table>

Host
Associate Prof. Maytal Caspary-Toroker

Location
De jour Materials Engineering room 400

Description
Our group is theoretical so we will see models and simulations characterizing material behavior.

*Tour in Hebrew and English
Tour 10: Electrochemical materials and devices for green hydrogen production

18.5.2022  12:30 Undergraduates  13:10 Graduates
1.6.2022   12:30 Undergraduates  13:10 Graduates
8.6.2022   12:30 Undergraduates  13:10 Graduates

Host       Prof. Avner Rothschild
Location   Grinbaum 212
Description The Electrochemical Materials and Devices (EMD) group develops new materials, processes and devices for green hydrogen production from water and renewable energies. Former invention of our group is developed by H2Pro aiming to fuel the world with green hydrogen.
*Tour in Hebrew and English

Tour 11: Biomechanics of cells and tissues

18.5.2022  12:30 Undergraduates  13:50 Graduates
1.6.2022   12:30 Undergraduates  13:50 Graduates
8.6.2022   12:30 Undergraduates  13:50 Graduates

Host       Prof. Kinneret Keren
Additional Hosts  Liora Garion
Location   Physics room 412
Description We seek to understand the role of mechanical processes and feedback in the formation of the body plan in animal development, using Hydra as a model system. Our research focuses on cellular dynamics and cytoskeletal organization in regenerating Hydra, and their relation to the global changes in tissue morphology.
The research involves biophysical measurements and perturbations, advanced 3D imaging, and quantitative image and data analysis.

*Tour in Hebrew and English

**Tour 12: A Look into Turbomachinery and Heat Transfer Laboratory**

18.5.2022 12:30 | 13:10 | 13:50 Undergraduates + Graduates

Host Assoc. Prof. Beni Cukurel

Additional Hosts Boris Leizeronok (Lab Engineer)

Location Jet Engine Building - 3rd floor

Description The Technion Turbo & Jet Engine Laboratory aims to conduct cutting-edge research and advanced development in the field of micro gas turbines for propulsion and power generation applications. The scientific contributions are primarily applicable towards small scale engines, which are commonly used in distributed power generation in smart grid, business jets, unmanned air vehicles, auxiliary power units, marine applications etc.

*Tour in Hebrew and English

**Tour 13: Electroceramics and impedance spectroscopy advanced analysis**

1.6.2022 12:30 | 13:10 | 13:50 Undergraduates + Graduates

8.6.2022 12:30 | 13:10 | 13:50 Undergraduates + Graduates

Host Prof. Yoed Tsur

Location Chemical Engineering 213

Description A brief survey of what do we do and why. Special emphasis will be put on the program that we have developed for analysing impedance spectroscopy results using genetic programming approach.

*Tour in Hebrew and English
Tour 14: Flow Physics Lab

18.5.2022 12:30 | 13:10 | 13:50 Undergraduates + Graduates
1.6.2022 12:30 | 13:10 | 13:50 Undergraduates + Graduates
8.6.2022 12:30 | 13:10 | 13:50 Undergraduates + Graduates

Host
Assistant Prof. Michael Karp

Location
Wind Tunnel Complex, room 411

Description
The Flow Physics Lab focuses on theoretical and computational investigations of flow physics, with specific emphasis on instability and transition to turbulence. The common thread guiding our research is using a minimal number of elements to describe physical phenomena. Therefore, canonical settings, where effects of various parameters can be isolated, are often analyzed. Investigations of flow physics provide us with guidelines for controlling the flow and avoiding undesirable phenomena (e.g. stall, noise and vibrations), leading to safer, quieter and more efficient aerial vehicles with lower drag and fuel consumption.

*Tour in Hebrew and English

Tour 15: Tour of the Quantum Materials and Neuromorphic Computation Lab

18.5.2022 12:30 Undergraduates
1.6.2022 12:30 Undergraduates
8.6.2022 12:30 Undergraduates

Host
Assistant Prof. Yoav Kalcheim

Location
De Jur 407

Description
Quantum materials are promising candidates for realizing artificial neurons and synapses in the quest to create an artificial brain. In this tour you will get a taste of how we explore the basic physics of quantum materials, create neuromorphic devices and develop novel functionalities based on unique properties of these fascinating materials.

*Tour in Hebrew and English

Tour 16: Epigenetic crosstalk between the human parasite Entamoeba histolytica and the gut microbiota

18.5.2022 12:30 Undergraduates 13:10 Graduates

Host
Assoc. Prof. Ankri Serge

Location
4th floor hall - Rappaport building
Description
Short introduction regarding Entamoeba histolytica and of our ongoing research, presentation of the techniques used in our laboratory, open forum with PhD students working in the lab.
*Tour in Hebrew and English

Tour 17: How to store digital data in DNA?

18.5.2022
12:30 | 13:10 | 13:50
Undergraduates + Graduates

Host
Assoc. Prof. Eitan Yaakobi

Additional Hosts
Omer Sabary | Avital Boruchovsky | Daniella Bar-Lev

Location
Taub 644

Description
How to store digital data in DNA?
We will explain the main ideas of how digital data is stored in DNA strands and discuss the main challenges, both from the biological and algorithmical perspectives.
*Tour in Hebrew and English

Tour 19: Using Biomedical Data Science to Advance Precision Medicine and Digital Health

1.6.2022
12:30 Undergraduates
13:10 Graduates

8.6.2022
12:30 Undergraduates
13:10 Graduates

Host
Assistant Prof. Dvir Aran

Location
Emerson 8-18
The Aran Lab integrates multidimensional biomedical data — including genomics and clinical data — to advance precision medicine and improve therapeutic strategies. We develop computational methods to understand cellular heterogeneity in complex tissues and incorporate cutting-edge technologies to study cellular dynamics in the tumor-microenvironment affecting response to immunotherapies. We also investigate real-world evidence and developing machine-learning models to improve clinical decision-making.

*Tour in Hebrew and English

Tour 20: The Laboratory for Bioderived Electronics, Biopolymers, and Fast Spectroscopy

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Host
Prof. Amdursky Nadav

Location
Chemistry 203

Description
In our lab we explore both formation of new biopolymers as well as studying various charge transfer circuits involving bio-related materials. To do so, we are combining knowledge of materials engineering of biological building blocks with possible chemical functionalizations of them. For studying charge transfer, we design and use electronic devices, or utilizing fast spectroscopy experiments.

*Tour in Hebrew and English

סיור 21: ריפוי סכירת презGetType

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מארח
מרצה בכיר נדב שרון

מיקום
ביולוגיה 334

תיאור
תאי גזע עובריים מופקים מעוברים בשלב מוקדם שבו גורל התא טרם נקבע, ולפיכך אפשר להכווין את התמינותם לכל אחד מסוגי התאים בגוף הבוגר. במעבדתנו חוקרים כיצד נוצרים תאים מיצרי אינסולין בעובר, וממשיכים עד התוכנית כדי להגביר את התמינות של תאי הנדודי העובריים - על מנת להשתלם לדיabetes.

*סיור בספרדית עברית ואנגלית
### Tour 22: Fluids in action - from lab on a chip to space telescopes (fluidic technologies laboratory)

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**Host**  
Assoc. Prof. Moran Bercovici

**Location**  
Energy 408

**Description**  
The fluidic technologies laboratory focuses on fundamental understanding of the behavior of fluids, and on leveraging that understanding for the creation of new tools and capabilities across a wide range of disciplines - from chips for bioanalysis, through novel 3D printing methods, to space telescopes.

*Tour in Hebrew and English*

### Tour 23: Information processing in neuronal networks

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**Host**  
Senior Lecturer Sagi Levi

**Additional Hosts**  
Lab manager: Dr. Menachem Katz

**Location**  
Emerson 7-22

**Description**  
How do animals sense environmental cues? How do neuronal networks regulate behavioral decisions? How do neuronal networks store, retrieve and forget information? We combine quantitative experiments and computational analysis to study how information is processed in neuronal networks. In this visit, we will present our research objectives and the interdisciplinary approaches.

*Tour in English*
Tour 26: The Center for Graphics and Geometric Computing

18.5.2022
12:30 Undergraduates 13:50 Graduates

Host
Associate Prof. Mirela Ben-Chen

Additional Hosts
โปรופ' גerusון אלבר, פרופ' גיל ברקת, מהנדס מעבדה בועז שטרנפלד

Location
Taub 401

Description
We will introduce the students to the research done in the lab and give them a quick tour of our 3D printing facilities.
*Tour in Hebrew and English
Tour 27: Use of data science methods for studying atmospheric phenomena: air pollution, aerosols, and climate changes

1.6.2022 12:30 Undergraduates 13:10 Graduates
8.6.2022 12:30 Undergraduates 13:10 Graduates

Host Assoc. Prof. David Broday

Location Rabin Buld., 6th floor, MAMAK

Description Overview of current research efforts in this direction.
*Tour in Hebrew and English

Tour 28: Visit in the neuroethology lab for the study of birds’ brain

18.5.2022 13:10 Undergraduates
1.6.2022 13:10 Undergraduates
8.6.2022 13:10 Undergraduates

Host Assoc. Prof. Yoram Gutfreund

Location Rappaport Bldg. Floor 8

Description Our lab studies the sense of direction in birds. We will show advanced experimental setups that we developed in the lab to understand how birds find and memorize their way.
*Tour in Hebrew and English

Tour 29: From field to gut - Study of invasive species in the gut

8.6.2022 12:30 Undergraduates 13:10 Graduates

Host Prof. Sima Yaron

Location Stein Building, Faculty of Biotechnology and Food, Room 1, Room 123

Description During the tour, we will present the main topics of the lab - the interactions between the gut microbiome and the host, evolution of the microbe and resistance in the field, in food and in the gut, mechanisms of resistance to foodborne pathogens, the development of new antimicrobials, and methods to prevent biofilm from microbial in the body.
*Tour in Hebrew only
### Tour 31: The Fair Transport Lab: A completely different look at transport (research)

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<td>8.6.2022</td>
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**Host**
Full Prof. Karel Martens

**Additional Hosts**
Post-doc David Weinreich | PhD student Wambui Kariuki | master student Rasha Bowirrat

**Location**
Segue building - Room 500 (to be reserved)

**Description**
We will acquaint the visitor with a novel perspective on transport, transport research, and transport policy. We will illustrate the perspective based on ongoing research, which rely on a range of methods including novel applications of big data sources. Visitors will leave the meeting with look at Israel’s and world’s transport challenges with new eyes.

*Tour in Hebrew and English*

### Tour 32: Oxide Electronics

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**Host**
Prof. Lior Kornblum

**Location**
מרצה פיזיקה آل dateString:(215)
**Description**

Exotic oxide materials meet condensed matter physics, crafted together to new types of electronic devices. We combine material science with electrical engineering and physics to study cool materials and harness them towards new devices.

*Tour in Hebrew and English

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**Tour 33: New types of perfluorinated polymers - new materials challenges from hydrophilic to superhydrophobic compounds**

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<tr>
<td>8.6.2022</td>
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<td>Undergraduates</td>
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**Host**
Prof. Moris Eisen

**Additional Hosts**
Dr. Inbal Ozeri

**Location**
Polymer Lab Chemistry 529 or Seminar Room

**Description**
The visit will start with a presentation of the lab and then we will show a short presentation on the new materials with the challenges for the audience to participate in possible ideas.

*Tour in Hebrew and English

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**Tour 34: The laboratory for nanomaterial-based devices**

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**Host**
Prof. Hossam Haick

**Additional Hosts**
Dr Yoav Broza | Dina Hashoul (PhD student) | Rawan Omar (PhD Student)

**Location**
At the main entrance of Chemical Eng. building

**Description**
The visit will be led by researchers and students from LNBD. We will start with a general introduction to the lab and its research and technology studies. Then after we will visit in two of the LNBD labs to learn about specific studies such as cell-cell communication and novel wearable sensors.

*Tour in Hebrew and English
Tour 35: Visit the Process Intensification Lab

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<th>Host</th>
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</thead>
<tbody>
<tr>
<td>1.6.2022</td>
<td>12:30</td>
<td>Undergraduates + Graduates</td>
<td>Asst. Prof. Michael Shoham</td>
<td>Chemical Engineering Lab 311</td>
<td>Visit our brand-new Process Intensification and Reaction Engineering lab, where you can get a glimpse of our research focus and methods. *Tour in Hebrew and English</td>
</tr>
<tr>
<td>8.6.2022</td>
<td>12:30</td>
<td>Undergraduates + Graduates</td>
<td>Asst. Prof. Michael Shoham</td>
<td>Chemical Engineering Lab 311</td>
<td>Visit our brand-new Process Intensification and Reaction Engineering lab, where you can get a glimpse of our research focus and methods. *Tour in Hebrew and English</td>
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Tour 36: Ubiquitin, cell identity and cancer form mechanisms to drugs

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<tr>
<td>18.5.2022</td>
<td>12:30</td>
<td>Undergraduates</td>
<td>Assoc. Prof. Amir Orian</td>
<td>11th Floor Faculty of Medicine</td>
<td>We will present our lab that focuses on cell identity in Drosophila and cancer including translational efforts for the development of diagnostic tools and novel treatments. *Tour in Hebrew and English</td>
</tr>
<tr>
<td>1.6.2022</td>
<td>12:30</td>
<td>Undergraduates</td>
<td>Assoc. Prof. Amir Orian</td>
<td>11th Floor Faculty of Medicine</td>
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<td>Undergraduates</td>
<td>Assoc. Prof. Amir Orian</td>
<td>11th Floor Faculty of Medicine</td>
<td>We will present our lab that focuses on cell identity in Drosophila and cancer including translational efforts for the development of diagnostic tools and novel treatments. *Tour in Hebrew and English</td>
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Tour 37: Nanostructured materials for biosensors and therapy

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<tr>
<td>1.6.2022</td>
<td>12:30</td>
<td>Undergraduates</td>
<td>Prof. Ester Segal</td>
<td>Biotechnology and Food Engineering, room 422</td>
<td>The research in our group lies at the broad interface between nanomaterials science and biotechnology. This rapidly advancing research area is commonly termed as nano-biotechnology. We are interested in nanostructured materials such as porous Silicon and their interface with soft matter e.g. hydrogels, biomolecules, and living cells. Understanding these interfaces allows us to rationally design biosensors for detection of biological and chemical targets and new drug delivery platforms. *Tour in Hebrew and English</td>
</tr>
<tr>
<td>8.6.2022</td>
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<td>Undergraduates</td>
<td>Prof. Ester Segal</td>
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</tr>
</tbody>
</table>
Tour 38: The many applications of synthetic biology

18.5.2022 13:50 Graduates
Host Assoc. Prof. Roee Amit
Additional Hosts Naor Granik - Ph.D candidate | Or Willinger - Ph.D candidate | Sarah Goldberg - lab manager
Location Biotechnology 326
Description We will expose the student to the many applications of synthetic biology which range from novel insights into the inner workings of the cell, to novel materials of sci-fi level characteristics that have uses in the pharmaceutical and food sectors, to molecular computing and DNA-based storage. All of these applications have one thing in common - they can be programmed into the sequence of DNA.
*Tour in Hebrew and English

Neuro-engineering Lab: 39

Tour 39: Neuro-engineering Lab

1.6.2022 12:30 Undergraduates + Graduates
2.6.2022 12:30 Undergraduates + Graduates
3.6.2022 12:30 Undergraduates + Graduates
Host Prof. Limor Prifeld
Location Building Silver, Room 329
Description In the lab we will show students the use of advanced microscopy technologies for the analysis of brain structures and functions in a mouse model. The tools and methods used in the lab will be explained by the lab manager. *Tour in Hebrew and English

Tour 40: There are places I remember - the research of the brain's representation of place, and how this is related to memory

18.5.2022 12:30 Undergraduates + Graduates
1.6.2022 12:30 Undergraduates + Graduates
8.6.2022 12:30 Undergraduates + Graduates
Host Assoc. Prof. Dori Derdikman
Location Rappaport Faculty of Medicine, Bat-Galim, 2nd floor
Description Brain areas such as the hippocampus contain nerve cells which form a neural network for spatial memory and navigation. In the lab we record simultaneously hundreds of nerve cells, while mice are performing navigation behaviors in order to understand the underlying brain network creating a biological GPS-like mechanism.
*Tour in Hebrew and English
### Tour 41: Mechanics of smart materials at small length and time scales

**18.5.2022**

12:30 | 13:10 | 13:50

Undergraduates + Graduates

**Host**

Prof. Doron Shilo

**Additional Hosts**

Dr. Eilon Faran and the PhD students Asaf Dana and Emil Bronstein

**Location**

Laboratory for Nano and Micro Mechanics of Materials, Dan Kahn 236

**Description**

We study multi-disciplinary problems in which the mechanical behavior of the material is coupled with electric, magnetic, thermal, or chemical effects. Our group has expertise in developing innovative experimental instruments and methods that provide unique information on the mechanics of materials at the nano and micro scales. We combine experimental characterization with theoretical modeling and simulations to provide fundamental scientific insights and engineering knowledge.

*Tour in Hebrew and English

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### Tour 42: Photocatalytic Solar to Fuel Conversion

**18.5.2022**

12:30 | 13:10 | 13:50

Undergraduates + Graduates

**1.6.2022**

12:30 | 13:10 | 13:50

Undergraduates + Graduates

**8.6.2022**

12:30 | 13:10 | 13:50

Undergraduates + Graduates

**Host**

Assoc. Prof. Lilac Amirav

**Location**

Chemistry 310

**Description**

I will present photocatalysis on the nanoscale and the ability to harness nanotechnology for renewable solar to fuel conversion, with focus on scalable and affordable green hydrogen production.

*Tour in Hebrew and English

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### Tour 43: The GALI gamma ray burst detector for the international space station

**18.5.2022**

13:10 Undergraduates

**1.6.2022**

13:10 Graduates

**8.6.2022**

13:10 Graduates

**Host**

Prof. Shlomit Tarem

**Additional Hosts**

Julia Salh - graduate student | Aleksander Vdovin - engineer
**Location**  
Physics 103

**Description**  
We are building a $\gamma$-ray detector GALI with improved directional capabilities based on a large number of scintillators. During the visit we will show a prototype, explain construction parameters and demonstrate how the detector finds the direction from which the gamma ray burst arrives.  
*Tour in Hebrew and English*
Tour 46: The Cognitive Complexity Lab Tour

1.6.2022
12:30 | 13:10 | 13:50
Undergraduates + Graduates

8.6.2022
12:30 | 13:10 | 13:50
Undergraduates + Graduates

Host
Prof. Yoed Kenett

Location
Enterance to the Lady Davis Building

Description
The Cognitive Complexity Lab Studies the complexity of high-level cognition, such as knowledge, creativity, associative thought, and memory search - via behavioral, computational and neural methods. The tour will provide a broad overview of this research.

*Tour in Hebrew and English

Surgical Data Science: Tour 47

18.5.2022
12:30
13:10

Host
Prof. Shlomi Liper

Location
scalpel

Description
The Surgical Data Science Research Group works on surgical data, including image segmentation, computer vision, and natural language processing. The tour will provide an introduction to this field.

*Tour in Hebrew and English
Tour 48: Eco-friendly and sustainable cementitious materials

18.5.2022 13:10 Undergraduates 13:50 Graduates
1.6.2022 13:10 Undergraduates 13:50 Graduates
8.6.2022 13:10 Undergraduates 13:50 Graduates

Host  Asst. Prof. Semion Zhutovsky
Additional Hosts  Dr. Smadar Kedem (Lab manager) | Ph.D. candidates
Location  Laboratory of Alternative Binders, National Building Research Institute
Description  Introduction by head of the laboratory, Lab tour by laboratory manager, review of equipment and advanced experimental methods in the lab, Ph.D. candidates will present their research topic and experience of working on the research.
*Tour in Hebrew and English

Tour 49: Electrochemical Energy based on Membranes laboratory (TEEM lab), Prof. Dario Dekel

1.6.2022 12:30 Undergraduates 13:50 Graduates
8.6.2022 12:30 Undergraduates 13:50 Graduates

Host  Laboratory Manager Luba Shmuel
Additional Hosts  Researcher | MSc student | PhD student
Location  Chemical Engineering 304
Description  Our research is focused on electrochemical technologies, mainly fuel cells, based on ionomeric membranes. We develop electrochemical systems using more environmentally friendly fuels such as hydrogen, urea, and ammonia.
*Tour in English

סיור 50: מעבדת תahoma מננטית

18.5.2022 12:30 תארים ראשוניים 13:10 תארים מתקדמים
1.6.2022 12:30 תארים ראשוניים 13:10 תארים מתקדמים
8.6.2022 12:30 תארים ראשוניים 13:10 תארים מתקדמים

מארח  פרופ' אהרן בלנק
מיקום  בניין כימיה חדר 230
תיאור  ביקור במעבדה העוסקת בפיתוח יישום שביתות חומרים מננטית עם שימו של חומרים פיסיקו- טכניים
*סיור בשפות עברית ואנגלית
הseo ממקדמוד מתארים מתכדמים
12:30 1.6.2022
13:50 1.6.2022

ד"ר אור אלקסטנדוביץ'
מארד
ממקם
תנאי
普查

הseo יער בשפה העברית

הseo יערectomy פעילות מעבדת נושא עמותת במקים אקדמי (BDAR). הממקים במעבדה לכל מון רהב של
נושאים שונים נושא עמותת במקים אקדמי יעדכוןuggy במדיהגל פותח של אסףא חדישים לממקים סוף
הseo במקים במעבדה עמותת במקים יעדכוןuggy במדיהגל פותח של אסףא חדישים לממקים סוף
לארחום מעבדה בשפה העברית צויפ יער בשפה העברית
*seo יער בשפה העברית

seo יער בשפה העברית
seo יער בשפה העברית
seo יער בשפה העברית