



אוניברסיטת בן-גוריון בנגב  
Ben-Gurion University of the Negev  
جامعة بن غوريون في النقب

## Negev Global Issues 2015

### Impact on Energy, Environment, Health and Water

May 27 – Jun 1, 2015 | Ben Gurion University | Beer Sheva, Israel



## TENTATIVE PROGRAM

### Negev Global Issues 2015 Impact on Energy, Environment, Health and Water

Beer Sheva, Israel

#### Conference Chairperson

**Robert S. Marks**, Ben Gurion University, Beer-Sheva, Israel  
[rsmarks@bgu.ac.il](mailto:rsmarks@bgu.ac.il)

#### International Steering Committee

**Serge Cosnier**, Universite Joseph Fourier, Grenoble, France  
**Chris Geddes**, BMBC, Baltimore, USA

#### Local Organizers

**Robert S. Marks**, Ben Gurion University, Beer-Sheva, Israel  
**Ariel Kushmaro**, Ben Gurion University, Beer-Sheva, Israel  
**Ibrahim Abdulhalim**, Ben Gurion University, Beer-Sheva, Israel  
**Alice Luber**, Ben Gurion University, Israel

#### Congress Secretariat

**Alice Luber**, Ben Gurion University, Israel  
[alice@bgu.ac.il](mailto:alice@bgu.ac.il)

#### Program

**Adarina Low**, Nanyang Technological University, Singapore

#### Web master

**Luka Fajs**, Nanyang Technological University, Singapore

# TENTATIVE PROGRAM

## Event-at-a-Glance

	<b>Wed, 27 May</b>	<b>Thu, 28 May</b>	<b>Fri, 29 May</b>	<b>Sat, 30 May</b>	<b>Sun, 31 May</b>	<b>Mon, 1 Jun</b>
Morning		Registration Greetings Plenary lecture	Bus to Jerusalem Garden at Mt Scopus Lunch at Mahane Yehuda Market	Ein Gedi Wadi Hike Masada Dead Sea Swim	Departure to BGU  <b>Session 8:</b> Biotechnology	Morning Coffee Greetings and Opening  <b>Session 10:</b> Nanomaterials for Energy Management
LUNCH						
Early Afternoon	Registration Camel Hike	<b>Session 2:</b> Biosensor	Old City of Jerusalem	<b>Session 5:</b> Aquaponics (Sqe Boqer)  <b>Session 6:</b> Desert Biotechnology	<b>Session 9:</b> DFG Plasmonics and Signal Amplification	<b>Session 11:</b> Nanomaterials for Water Management  <b>Session 12:</b> Commericalization, Industry
REFRESHMENT BREAK						
Late Afternoon	Conference Registration  <b>Session 1:</b> Opening Lecture	<b>Session 3:</b> PICS Discovery of Bioactive Products	Old City of Jerusalem	<b>Session 7:</b> Mariculture in golf of Eilat	Poster Session	Gilat Algae Production
DINNER						
Evening	Bedouin Dinner Spa Cocktail	<b>Session 4:</b> Poster Session with Buffet Dinner	Dinner at Abu Gosh Village Bus to Leonardo Jerusalem Hotel	Red Sea Cruise Dinner 3 Monkeys + Ursa Bioscience Networking	Dinner at Que Pasa Bowling Tournament	Dinner at Jaffa Closing Ceremony

# TENTATIVE PROGRAM

## Program

**Wednesday, 27 May 2015**

**Neve Midbar**

- 14:00 Registration Leonardo Hotel
- 15:00 Bus leaves Leonardo for Neve Midbar
- 15:30 Camel Wandering
- 17:00 Conference registration at Neve Midbar Spa

### **Session 1 International committee planning committee**

- 18:00 Negev Global Issues 2016  
International committee discusses next year's conference, jointed BGU bi-institutional collaborations, international CNRS laboratory, etc  
Panel: Chris Geddes, Serge Cosnier  
Moderator: Robert Marks  
Special guest: Razi Vago
- 19:00 Bedouin Conference Dinner
- 20:00 Spa Cocktail
- 22:00 Adjourn and bus to Leonardo Hotel

**Thursday, 28 May 2015**

**Alon Auditorium – Building 37, Room 202**

- 09:00 Registration
- 11:15 Refreshments
- 11:35 Greetings

**Joseph Kost**, Dean of Faculty of Engineering, BGU  
**Razi Vago**, Head of Department of Biotechnology, BGU  
**Robert Marks**, Ben Gurion University  
**Serge Cosnier**, Universite Joseph Fourier, France

- 11:45  Plenary Lecture: Plasmonic Generation of Electricity  
**Chris Geddes**, University of Maryland, Baltimore County, USA

- 12:20 Photography Session
- 12:30 Lunch Break Buffet

## TENTATIVE PROGRAM

<b>Session 2</b>		<b>Biosensor</b>
Chair:		<b>Person</b>
14:00	Keynote Lecture:	<b>Title</b>
14:20	Biosensors based on carbon nanostructures	<b>Michael Holzinger</b> , Universite Joseph Fourier, Grenoble, France, CR CNRS
14:40	DNA repair detection by electrochemical impedance spectroscopy based on a poly(pyrrole-nitrilotriacetic acid) film	<b>Jean-François Constant</b> , Universite Joseph Fourier, Grenoble, France, CR CNRS
15:00	Chiral fields for microwave biosensing	<b>Eugene Kamenetskii</b> , Ben Gurion University
15:20	Boosting the sensitivity of paper-based biosensors using isotachopheresis	<b>Moran Bercovici</b> , Technion – Israel Institute of Technology
15:40	Graphene Biosensors for IL-6 Detection	<b>Alfred Tok</b> , Nanyang Technological University, Singapore
16:00	Utilization of specific DNA-probes for the rapid detection of <i>Campylobacter</i> spp. in meat by using an OLED-based reader	<b>Marisa Manzano</b> , University of Udine, Italy
16:20	Electrolateral Flow Immunosensor to Microbial Pathogens	<b>Robert S. Marks</b> , Ben Gurion University
16:40	Refreshments Break	
<b>Session 3</b>		<b>PICS Discovery of Bioactive Products</b>
Chair:		<b>Ariel Kushmaro</b> , Ben Gurion University
17:00		<b>Plenary Keynote</b>
17:20	Disrupting cross-species communication: an arms race strategy?	<b>Karina Golberg</b> , Ben Gurion University
17:40	Nupharidine inhibits NF- $\kappa$ B activity, has synergistic cytotoxic activity with cisplatin and etoposide and induces apoptosis	<b>Jacob Gopas</b> , Ben Gurion University
<b>Session 4</b>		<b>Poster Session with Refreshment</b>
18:00	Poster Hang-up	
20:15	Best Poster Award (Pan Stanford books) Poster Award committee: Serge Cosnier, Chris Geddes, Ibrahim Abdulhalim, Shoshana Arad	



## TENTATIVE PROGRAM

20:35	Bus to Restaurant (By invitation only)
22:00	Adjourn

### Friday, 29 May 2015

08:00	Bus to Jerusalem
10:00	Botanical garden at Mount Scopus
12:30	Lunch Break at Mahane Yehuda Market
14:00	Excursion visit Old city of Jerusalem
20:00	Dinner at Abu Gosh Village
21:30	Bus to Leonardo Jerusalem Hotel

### Saturday, 30 May 2015

07:00	Breakfast
07:30	Bus leaves Jerusalem
09:00	Ein Gedi Wadi stroll, short bathe in spring
10:30	Masada
12:00	Dead Sea dip and Lunch
13:30	Bus departs for Sde Boqer campus

#### Session 5 Aquaponics (Sde Boqer)

Chair:	<b>Edo</b>
14:30	Aquaponics in the Negev <b>Schnmuel Applebaum</b> , Ben Gurion University
15:00	Israel Founders' grave and park

#### Session 6 Desert Biotechnology

Chair:	Person
16:00	Desert Winery

## TENTATIVE PROGRAM

17:30 Mirzpe Ramon Crater

### Session 7 Mariculture in golf of Eilat

Chair: **Ariel Kushmaro**, Ben Gurion University

19:30 Technical tour and lecture on aquaculture biotechnology  
**Hanna Rosenfeld**, National Center for Mariculture

20:30 Bus departs for Eilat port

20:45 Red Sea Cruise Dinner

22:45 Ursa BioScience night cap at Three Monkeys



Overnight stay at Magic Palace Hotel in Eilat

### Sunday, 31 May 2015

#### Ilse Katz Institute for Nanoscale Science and Technology - Building 51, Room 015

07:00 Morning Coffee

07:30 Bus departure for Beer Sheva, BGU

10:00 Refreshments Break

### Session 8 Biotechnology

Chairs: **Razi Vago**, Ben Gurion University  
**Shoshana Arad**, Ben Gurion University

10:30 **Plenary Keynote**

10:50 Theoretical simulations of chemical and biochemical processes: Use of metadynamics  
**Anne Milet**, Universite Joseph Fourier, Grenoble, France

11:10 Development of IgG Antibodies with Stage-Dependent Glycans on the Fc of ALS Tg mice  
**Rachel G. Lichtenstein**, Ben Gurion University

11:30 Novel high affinity protein inhibitors for selective targeting of human trypsins and matrix metalloproteinases in cancer therapy  
**Niv Papo**, Ben Gurion University

## TENTATIVE PROGRAM

11:50 Non-Invasive Extraction of Clinically Relevant Analytes Using Ultrasound and Chemical Enhancers  
**Yossi Kost**, Ben Gurion University

12:15 Lunch Break

### Session 9

### DFG Plasmonics and Signal Amplification



Chair: **Ibrahim Abdulhalim**, Ben Gurion University

13:30 Nano-Sculptured Thin Films (Plenary Keynote)  
**Rauschenbach, Bernd**, Leibniz Institute of Surface Modification

13:50 Spectroscopic approach of the interaction study of Ceftriaxone and human serum albumin  
**Mousa Abu Teir**, Al Quds University, Palestinian Authority

14:10 Surface morphology and liquid crystal alignment on mechanically or optically treated substrates  
**Satyendra Kumar**, Kent State University, USA

14:30 Controlling absorption of light by molecules with integrated optics based systems  
**Alina Karabchevsky**, ORC-Southampton University, UK

14:50 Metal-Enhanced Fluorescence from Zinc Substrates can lead to Spectral Distortion and a Wavelength Dependence  
**Hilla Ben Hamo**, Ben Gurion university

15:10 Ultrahigh enhancement of the electromagnetic fields by exciting LSPR using SPP waves  
**Li Shuzhou**, Nanyang Technological University

15:30 Refreshments Break

16:00 Poster Session

17:00 Bus/Taxi departure for Leonardo Hotel

Time at your disposal

18:45 Bus departs for Que Pasa restaurant

19:00 Dinner at Que Pasa (By invitation only)

20:30 Bowling Tournament

22:00 Adjourn and bus departs for Leonardo Hotel

**Monday, 1 June 2015**

**NRF-CREATE - NTU-HUJ-BGU SYMPOSIUM**

**Ilse Katz Institute for Nanoscale Science and Technology - Building 51, Room 015**



## TENTATIVE PROGRAM

- 08:30 Morning Coffee
- 09:00 Greetings and Opening
- Rivka Carmi**, President of Ben Gurion University  
**Dan Blumberg**, Vice President of Research and Development, BGU  
**Lee Pooi See**, Materials Science and Engineering, NTU  
**Razi Vago**, Chair, Biotechnology Engineering, BGU
- 09:15 Photography Session

### Session 10 Nanomaterials for Energy Management



- Chair: **Shlomo Magdassi**, Hebrew University of Jerusalem  
**Lee Pooi See**, Nanyang Technological University
- 09:30 Nanomaterials for Functional and 3D printing  
**Shlomo Magdassi**, Hebrew University of Jerusalem
- 09:50 Hybrid nanomaterials for electrochemical devices in energy management  
**Lee Pooi See**, Nanyang Technological University
- 10:10 Recent advances in Enzymatic fuel cells  
**Serge Cosnier**, CNRS-University of Grenoble Alpes
- 10:30 Microbial Fuel Cell: A sustainable technology for power generation towards waste water  
**Zhang Qichun**, Nanyang Technological University
- 10:50
- 11:10
- 11:30 Lunch Break

### Session 11 Nanomaterials for Water Management



- Chairmen: **Robert S. Marks**, Ben Gurion University  
**Zhang Qichun**, Nanyang Technological University
- 12:30 Biofouling, microbes, anti-biofilm nanosurfaces  
**Ariel Kushmaro**, Ben Gurion University
- 12:45 Detecting large bio entities in water with nanoscale localized electromagnetic fields  
**Ibrahim Abdulhalim**, Ben Gurion University

## TENTATIVE PROGRAM

- 13:00 Toxicity effect of nanoparticles on lux-reporter E-coli  
**Evgeni Eltzov**, Ben Gurion University
- 13:15 Photophysical study of stilbene derivatives for small molecule detection assay  
**Wu Yuan Yuan**, Nanyang Technological University

13:20 Refreshments Break

### Session 12 From Ideas to Commercialization

Chairs: **Shosh Arad**, Ben Gurion University

13:30 **Title**  
Plenary Keynote (??)

14:00 **Title**  
**Shosh Arad**, Ben Gurion University

14:30 **Title**  
**Razi Vago**, Ben Gurion University

15:00 Leave for Gilat

16:00 Arrival at Gilat Algae production facilities (Leave BGU at 15:00)

17:00 Leave for Jaffa

19:00 Dinner at Jaffa

20:00 Night cap

21:30 Adjourn

**Apologia:** We reserve the right to make any necessary changes to the program

## TENTATIVE PROGRAM

### List of Participants

1. **Abdulhalim, Ibrahim**, Ben Gurion University, Israel [abdulhim@bgu.ac.il](mailto:abdulhim@bgu.ac.il)
2. **Arad, Shosh**, Ben Gurion University, Israel [arad@post.bgu.ac.il](mailto:arad@post.bgu.ac.il)
3. **Axelrod, Tim**, Ben Gurion University, Israel [timaxel@post.bgu.ac.il](mailto:timaxel@post.bgu.ac.il)
4. **Bercovici, Moran**, Technion Israel Institute of Technology, Israel [mberco@technion.ac.il](mailto:mberco@technion.ac.il)
5. **Bernd Rauschenbach**, Leibniz Institute of Surface Modification, Germany [bernd.rauschenbach@iom-leipzig.de](mailto:bernd.rauschenbach@iom-leipzig.de)
6. **Blumberg, Dan**, Ben Gurion University **Email**
7. **Chavant, Pierre Yves**, Université Joseph Fourier, Grenoble, France [Pierre-Yves.Chavant@ujf-grenoble.fr](mailto:Pierre-Yves.Chavant@ujf-grenoble.fr)
8. **Constant, Jean-François**, Université Joseph Fourier, Grenoble, France [Jean-François.Constant@ujf-grenoble.fr](mailto:Jean-François.Constant@ujf-grenoble.fr)
9. **Cosnier, Serge**, Université Joseph Fourier, Grenoble, France [serge.cosnier@ujf-grenoble.fr](mailto:serge.cosnier@ujf-grenoble.fr)
10. **Eltzov, Evgeni**, Ben Gurion University, Israel [eltzov@bgu.ac.il](mailto:eltzov@bgu.ac.il)
11. **Geddes, Chris**, University of Maryland, Baltimore County, USA [chrisgeddes72@gmail.com](mailto:chrisgeddes72@gmail.com)
12. **Golberg, Karina**, Ben Gurion University, Israel [karingo@post.bgu.ac.il](mailto:karingo@post.bgu.ac.il)
13. **Gopas, Jacob**, Ben Gurion University, Israel [Jacob@bgu.ac.il](mailto:Jacob@bgu.ac.il)
14. **Hamo, Hilla Ben**, Ben Gurion University, Israel [hillabenhama@gmail.com](mailto:hillabenhama@gmail.com)
15. **Holzinger, Michael**, Université Joseph Fourier, Grenoble, France [Michael.Holzinger@ujf-grenoble.fr](mailto:Michael.Holzinger@ujf-grenoble.fr)
16. **Kost, Joseph**, Ben Gurion University, Israel **Email**
17. **Kost, Yossi**, Ben Gurion University, Israel **Email**
18. **Kamenetskii, Eugene**, Ben Gurion University [kmntsk@ee.bgu.ac.il](mailto:kmntsk@ee.bgu.ac.il)
19. **Karabchevsky, Alina**, ORC-Southampton University, UK [ak1c12@orc.soton.ac.uk](mailto:ak1c12@orc.soton.ac.uk)
20. **Kushmaro, Ariel**, Ben Gurion University, Israel [arielkus@bgu.ac.il](mailto:arielkus@bgu.ac.il)
21. **Kumar, Satyendra**, Kent State University, USA **Email**
22. **Lee, Pooi See**, Nanyang Technological University, Singapore [PSLee@ntu.edu.sg](mailto:PSLee@ntu.edu.sg)
23. **Lev, Ovadia**, Hebrew University of Jerusalem, Israel [Ovadia@vms.huji.ac.il](mailto:Ovadia@vms.huji.ac.il)
24. **Li, Shuzhou**, Nanyang Technological University, Singapore [LISZ@ntu.edu.sg](mailto:LISZ@ntu.edu.sg)
25. **Lichtenstein, Rachel G.**, Ben Gurion University, Israel [ruha@bgu.ac.il](mailto:ruha@bgu.ac.il)
26. **Manzano, Marisa**, Università degli Studi di Udine, Italy [marisa.manzano@uniud.it](mailto:marisa.manzano@uniud.it)
27. **Marks, Robert S.**, Ben Gurion University, Israel [rsmarks@bgu.ac.il](mailto:rsmarks@bgu.ac.il)
28. **Magdassi, Shlomo**, Hebrew University of Jerusalem, Israel [magdassi@mail.huji.ac.il](mailto:magdassi@mail.huji.ac.il)
29. **Milet, Anne**, Université Joseph Fourier, Grenoble, France [Anne.Milet@ujf-grenoble.fr](mailto:Anne.Milet@ujf-grenoble.fr)
30. **Palomar, Quentin**, Université Joseph Fourier, Grenoble, France [quentin.palomar@ujf-grenoble.fr](mailto:quentin.palomar@ujf-grenoble.fr)

## TENTATIVE PROGRAM

31. **Papo, Niv**, Ben Gurion University [papo@bgu.ac.il](mailto:papo@bgu.ac.il)
32. **Rosenfeld, Hanna**, National Center for Mariculture [hanna@ocean.org.il](mailto:hanna@ocean.org.il)  
<http://www.ocean.org.il/Eng/ResearchInstitutesAndInfrastructure/NationalCenterToSeaAgriculture.asp>
33. **Sobuta Sarah**, Ben Gurion University, Israel [sarahgurevich@gmail.com](mailto:sarahgurevich@gmail.com)
34. **Teir, Mousa Abu**, Al Quds university, Palestinian Authority [abuteir@science.alquds.edu](mailto:abuteir@science.alquds.edu)
35. **Tok, Alfred**, Nanyang Technological University, Singapore [MIYTok@ntu.edu.sg](mailto:MIYTok@ntu.edu.sg)
36. **Vago, Razi**, Ben Gurion University [rvago@bgu.ac.il](mailto:rvago@bgu.ac.il)
37. **Wu, Yuan Yuan**, Nanyang Technological University, Singapore [WuYY@ntu.edu.sg](mailto:WuYY@ntu.edu.sg)
38. **Yaniv, Karin**, Ben Gurion University, Israel [kariny@post.bgu.ac.il](mailto:kariny@post.bgu.ac.il)
39. **Ye, Kehan**, Nanyang Technological University [YEKE0002@e.ntu.edu.sg](mailto:YEKE0002@e.ntu.edu.sg)
40. **Zhang, Qichun**, Nanyang Technological University, Singapore [QCZHANG@ntu.edu.sg](mailto:QCZHANG@ntu.edu.sg)