

NEURAL INTERFACES MEETING

	Monday March 5 th	Tuesday March 6 th	Wednesday March 7 th
09:00 - 09:30	Opening & Greetings	Yossi Mandel	Orit Shefi
09:30 - 10:00	Micha Spira	Hamutal Slovin	Shulamit Levenberg
10:00 - 10:30	Bianxiao Cui	Daniel Palanker	Tal Dvir
10:30 - 11:00	Coffee Break	Coffee Break	Coffee Break
11:00 - 11:30	Keynote Speaker Charles Lieber	Martin Oheim	Andrew Jackson
11:30 - 12:00		Eduardo Macagno	Andreas Schaefer
12:00 - 12:30	Insung Choi	Keynote Speaker Muming Poo	Mathieson Keith
12:30 - 13:00	Laura Ballerini		Mark Shein
13:00 - 14:00	Lunch & Poster Session	Lunch & Tour at the Nano Center	Lunch & Poster Session
14:00 - 14:30	Luca Berdendini	Mark Kotter	Netta Cohen
14:30 - 15:00	Prinz Christelle	Eran Perlson	Ido Kanter
15:00 - 15:30	Avraham Yaron	Gad Vatine	Uri Nevo
15:30 - 15:45	Coffee Break	Coffee Break	Coffee Break
15:45 - 16:15	Noam Ziv	Urs Frey	Eran Meshorer
16:15 - 16:45	Lior Appelbaum	Guenther Zeck	Ben Maoz
16:45 - 17:15	Gilad Lerman	A short tour & dinner For invited speakers	Dror Fixler
17:15 - 20:30			Poster Award Ceremony

Organizing committee: Orit Shefi, Yossi Mandel, Micha Spira

Academic committee: Laura Ballerini, Insung Choi, Bianxiao Cui

NEURAL INTERFACES MEETING

Monday – March 5th

Organizing committee

09:00 - 09:30	Shulamit Michaeli Vice President for Research, BIU	Opening and Greetings
	Andrey Broisman Ministry of Science, Technology and Space	The mission of the Ministry of Science and Technology

Chair: Orit Shefi

09:30 - 10:00	Micha Spira HUJI, Israel	Overcoming incompatible boundaries between living cells and manmade electronics: multisite, long-term intracellular recordings by extracellular electrodes
10:00 - 10:30	Bianxiao Cui Stanford, USA	Probing the interface between cells and nanoscale electrode
10:30 - 11:00	Coffee Break	Main Lobby

Chair: Micha Spira

11:00 - 12:00	Keynote Speaker: Charles Lieber Harvard, USA	Mesh electronics: A paradigm for tissue/neuron like brain probes
12:00 - 12:30	Insung Choi KAIST, South Korea	Neurons on nanotopographies
12:30 - 13:00	Laura Ballerini SISSA, Italy	Carbon based nanomaterials for active neuronal interfacing: impact on signaling and regrowth
13:00 - 14:00	Lunch & Poster Session	Nano building 5th floor

Chair: Insung Choi

14:00 - 14:30	Luca Berdendini IIT, Italy	Planar and implantable CMOS multielectrode arrays for high-resolution electrophysiology in neuronal networks and brain circuits
14:30 - 15:00	Prinz Christelle Lund, Sweden	Nanowires: a promising material for designing neural implants
15:00 - 15:30	Avraham Yaron WIS, Israel	Intrinsic and extrinsic control of axonal pruning
15:30 - 15:45	Coffee Break	Main Lobby

Chair: Laura Ballerini

15:45-16:15	Noam Ziv Technion, Israel	Using multielectrode arrays and automated microscopy to study relationships between synaptic remodeling and network activity
16:15 - 16:45	Lior Appelbaum BIU, Israel	Sleep regulates chromosome dynamics and nuclear maintenance in single wake-active neurons
16:45 - 17:15	Gilad Lerman NYU, USA	A rapid and deep all-optical interrogation of behaviorally relevant activity patterns

NEURAL INTERFACES MEETING

Tuesday – March 6th

Chair: Guenther Zeck

09:00 - 09:30	Yossi Mandel BIU, Israel	Hybrid retinal implant for restoration of sight to the blind
09:30 - 10:00	Hamutal Slovin BIU, Israel	Spatio-temporal patterns of cortical responses underlying visual processing, perception and microstimulation in behaving monkeys
10:00 - 10:30	Daniel Palanker Stanford, USA	Photovoltaic restoration of sight in retinal degeneration
10:30 - 11:00	Coffee Break	Main Lobby

Chair: Orit Shefi

11:00 - 11:30	Martin Oheim CNRS, France	Imaging single-synaptic vesicle release
11:30 - 12:00	Eduardo Macagno UCSD, USA	Gap junctional proteins and the formation of coupled neural circuits
12:00 - 13:00	Keynote Speaker: Muming Poo Chinese Academy of Science	Chinese Brain Project and Non-human Primate Research in China
13:00 - 14:00	Lunch & Tour at the Nano Center	Nano building 5th floor

Chair: Bianxiao Cui

14:00 - 14:30	Mark Kotter Cambridge, UK	Inducible and deterministic forward programming of human pluripotent stem cells into somatic cell types. The stem cell promise fulfilled?
14:30 - 15:00	Eran Perlson TAU, Israel	ALS as a spatiotemporal mis-localization disease
15:00 - 15:30	Gad Vatine BGU, Israel	Microphysiological iPSC-based Blood Brain Barrier platform for personalized medicine
15:30 - 15:45	Coffee break	Main Lobby

Chair: Yossi Mandel

15:45 - 16:15	Urs Frey Maxwell Biosystems	CMOS-MEAs for characterizing neuronal dynamics in vitro at high spatiotemporal resolution
16:15 - 16:45	Guenther Zeck NMI	Electrical imaging and stimulation of retinal cells and circuits using CMOS-based electrode arrays
16:45 - 20:30	Invited speakers	A short tour in Jaffa & Dinner

NEURAL INTERFACES MEETING

Wednesday – March 7th

Chair: Eran Perlson

09:00 - 09:30	Orit Shefi BIU, Israel	From 2D to 3D platforms for directing neurons and neural growth
09:30 - 10:00	Shulamit Levenberg Technion, Israel	Spinal cord regeneration using stem cells and 3D scaffolds
10:00 - 10:30	Tal Dvir TAU, Israel	Engineering personalized tissue implants
10:30 - 11:00	Coffee break	Main Lobby

Chair: Yossi Mandel

11:00 - 11:30	Andreas Schaefer Francis Crick, UK	Scalable CMOS technology for volumetric deep brain recording
11:30 - 12:00	Mathieson Keith Strathclyde, UK	In-vivo optogenetic neural interfaces
12:00 - 12:30	Mark Shein TAU, Israel	Large scale functional connectivity mapping in cortical circuits
12:30 - 14:00	Lunch & Poster Session	Nano building 5th floor

Chair: Uri Nevo

14:00 - 14:30	Netta Cohen Leeds, UK	Neural computation in <i>C. elegans</i>
14:30 - 15:00	Ido Kanter BIU, Israel	New types of experiments reveal that a neuron functions as multiple independent threshold units
15:00 - 15:30	Uri Nevo TAU, Israel	Neurons as active gels: the mechanics of action potentials
15:30 - 15:45	Coffee break	Main Lobby

Chair: Tal Dvir

15:45 - 16:15	Eran Meshorer HUJI, Israel	Modeling PolyQ diseases using pluripotent stem cells
16:15 - 16:45	Ben Maoz Harvard, USA	Revealing new physiology with brain in vitro models
16:45 - 17:00	Dror Fixler BINA Director	12 years of Nanotechnology in Israel
17:00 - 17:15	Poster Award Ceremony and conclusion notes	Supported by <i>Nano Letters</i>