

Conference Program

MONDAY, MARCH 04, 2019

PLENARY: WELCOME REMARKS

09:00 - 09:15

- 09:00 Invited Speaker: **Rafi Gidron**
IBT Founder and Chairman (Israel)
- 09:05 Invited Speaker: **Miri Polachek**
Funding Executive Director, Israel Brain Technologies (ex-officio) CEO, Joy Ventures (Israel)
- 09:10 Invited Speaker: **Karin Mayer Rubinstein**
IATI CEO, Israel (Israel)

KEYNOTE LECTURE

09:15 - 09:45

- 09:15 Invited Speaker: **Corey McCann**
President and CEO of Pear Therapeutics (USA)

FIRESIDE CHAT

09:45 - 10:30

- 09:45 Invited Speaker: **Moran Cerf**
Professor of Neuroscience, Kellogg School of Management; Professor at Northwestern University, (USA)
- Invited Speaker: **Alim Louis Benabid**
Professor, Chairman of the Board, Clinelec; Member of the Academy of Sciences; Professor Emeritus of Biophysics at Joseph Fourier University; Scientific Advisor at the Atomic Energy Commission; Clinelec, Edmond J Safra Research Center, LETI-Minatec (France)

NETWORKING BREAK

10:30 - 11:00

BRINGING THE LATEST DEVELOPMENTS IN BRAIN STIMULATION AND NEUROMODULATION TO THE CLINICS

11:00 - 12:30

Chair: **Hagai Bergman**, Professor of Physiology, The Hebrew University of Jerusalem; President, Israel Society for Neuroscience (ISFN) (Israel)

11:00 **CLOSING THE LOOP ON PARKINSON'S DISEASE – FROM PHYSIOLOGY TO TREATMENT AND BACK**

Invited Speaker: **Hagai Bergman**

Professor of Physiology, The Hebrew University of Jerusalem; President, Israel Society for Neuroscience (ISFN) (Israel)

11:15 **NEURAL CO-PROCESSING: SHIFTING OUR MINDSET FROM MODULATING TO RESTORING DISEASED BRAIN CIRCUITS**

Invited Speaker: **Timothy Denison**

Royal Academy of Engineering Chair in Emerging Technologies, Department of Engineering Science, Nuffield Department of Clinical Neuroscience, MRC Brain Network Dynamics Unit, Oxford University (UK)

11:30 **PANEL DISCUSSION**

Panelist: **Hagai Bergman**

Professor of Physiology, The Hebrew University of Jerusalem; President, Israel Society for Neuroscience (ISFN) (Israel)

Panelist: **Timothy Denison**

Royal Academy of Engineering Chair in Emerging Technologies, Department of Engineering Science, Nuffield Department of Clinical Neuroscience, MRC Brain Network Dynamics Unit, Oxford University (UK)

Panelist: **Imad Younis**

President, Alpha Omega (Israel)

Panelist: **Ziv Peremen**

VP Medical Solutions, EIMindA (Israel)

Panelist: **Zvi Israel**

Director, Center for Functional and Restorative Surgery, Dept. of Neurosurgery, Hadassah Medical Center, Jerusalem (Israel)

START-UP FINALISTS PRESENTATIONS

12:30 - 13:15

BREAK: NETWORKING LUNCH

EXHIBITION, POSTER SESSIONS, B2B MEETINGS, TECH-DEMONSTRATIONS

13:15 - 14:15

THE FUTURE OF DIGITAL BRAINTECH

14:15 - 16:00

Chair: **Anya Eldan**, VP of the Israel Innovation Authority & Head of Startup Division (Israel)

14:15 **KEYNOTE LECTURE**

Invited Speaker: TBC

14:45 **PANEL DISCUSSION WITH AUDIENCE INTERACTION**

Panelist: **Anya Eldan**

VP of the Israel Innovation Authority & Head of Startup Division (Israel)

Panelist: **Dan Schwarzman**

CEO, MindUp (Israel)

Panelist: **Ittai Harel**

Managing General Partner, Pitango Venture Capital (Israel)

Panelist: TBC

15:30 **STARTUP SPOTLIGHT**

NETWORKING BREAK

16:00 - 16:30

FROM FUNDAMENTAL NEUROSCIENCE TO NEXT-GENERATION NEUROTECHNOLOGY

16:30 - 18:00

Recent theoretical work provides new insights into the computational principles that govern the dynamics of neural systems and the processing of information. This session will discuss how computational ideas can be translated into reliable neurotechnologies.

Chair: **Oren Shriki**, Principal Investigator, Head of Computational Psychiatry Lab, Cognitive and Brain Sciences, Ben-Gurion University (Israel)

16:30 **LIVING ON THE EDGE: ON CRITICAL BRAIN DYNAMICS AND ITS APPLICATIONS TO DIAGNOSING NEUROLOGICAL DISORDERS**

Invited Speaker: **Oren Shriki**

Principal Investigator, Head of Computational Psychiatry Lab, Cognitive and Brain Sciences, Ben-Gurion University (Israel)

16:50 Invited Speaker: **Tim Mullen**

PhD, Founder & CEO, Research Director, Intheon (USA)

17:10 **MEASURING PHYSIOLOGY AND BEHAVIOR IN YOUNG CHILDREN WITH AUTISM**

Invited Speaker: **Ilan Dinstein**

Negev Autism Center, Ben-Gurion University (Israel)

17:30 **TRANSLATIONAL NEUROREHABILITATION: DEFINITIONS, CHALLENGES AND OPPORTUNITIES. INTRODUCTION OF THE BGU-ALEH NEGEV INITIATIVE**

Invited Speaker: **Simona Bar-Haim**

Founder, Step of Mind. Head, The laboratory for Motor Control and Rehabilitation of Walking, Ben Gurion University (Israel)

Invited Speaker: **Lior Shmuelof**

Head, Brain & Action Lab, Ben Gurion University (Israel)

17:50 **Q&A**

MATHEMATICAL NEUROSCIENCE PRIZE AWARD, IBT

18:00 - 18:15

NETWORKING HAPPY HOUR

18:15

TUESDAY, MARCH 05, 2019

NEUROWELLNESS: EXPLORING SCIENCE, TECHNOLOGY AND THE CONSUMER

09:00 - 13:00

Neurowellness is an emerging field focused on emotional wellbeing and resilience. There has been an exponential growth in scientific research and technological developments dedicated to understanding and enhancing the human experience. This session will explore the science behind emotional wellbeing, showcase the latest technologies in the field and discuss how these technologies will reach the individual consumer to enhance our lives.

Chair: **Yael Fuchs-Shlomai**, Director Start-up Programs, Israel Brain Technologies (IBT) (Israel)

**BREAK: NETWORKING LUNCH
EXHIBITION, POSTER SESSIONS, B2B MEETINGS, TECH-DEMONSTRATIONS**

13:00 - 14:00

BRAIN AND ARTIFICIAL INTELLIGENCE - MUTUAL INSPIRATION AND APPLICATIONS

14:00 - 15:30

The field of *Artificial Intelligence* takes inspiration from human intelligence and from the human brain. At the same time, Artificial Intelligence is utilized to better understand and serve the human brain, and ultimately improve people's lives. This session will give an overview of activities at the forefront of the work being done in applying brain inspired technologies in industry and will also outline how these advancements are being applied to better understand the human brain.

Moderator: **Amir Konigsberg**, Co-founder and Board Director of Twiggle Inc. (Israel)

14:00 Invited Speaker: **TBC**

ATTENTION: FROM COGNITIVE NEUROSCIENCE TO COMPUTER VISION

Invited Speaker: **Nilli Lavie**

Professor of Psychology and Brain Sciences and Director of the Attention and Cognitive Control laboratory at the University College London Institute of Cognitive Neuroscience (UK)

FROM NEURAL NETWORKS TO DEEP LEARNING

Invited Speaker: **Gal Chechik**

Director of AI at NVIDIA, Associate Professor at the Gonda Brain Research Institute, Bar Ilan University (Israel)

15:00 **OPENING THE BLACK-BOX OF DEEP NEURAL NETWORKS: THE INFORMATION BOTTLENECK THEORY OF DEEP LEARNING**

Invited Speaker: **Naftali Tishby**

Professor, Compute Science, The Hebrew University; Member of the Edmond and Lilly Safra Center for Brain Sciences (ELSC), Hebrew University (Israel)

15:20 Q&A

NETWORKING BREAK

15:30 - 16:00

FROM BRAINSTORM TO BENCH - OBSTACLES AND TRIUMPHS ON THE WAY TO INCORPORATING BRAINTeCH IN EVERYDAY CLINICAL PRACTICE

16:00 - 17:00

Chair: **Dana Gefen Doron**, Physician, Brain Rehab specialist at Tel Hashomer Hospital (Israel)

16:00 Invited Speaker: **Sagi Harnof**

Head of Neurosurgery Department at Beilinson Hospital, Rabin Medical Center (Petah-Tikva); Deputy Chair of the Department of Neurosurgery at Sheba, Tel Hashomer Hospital, (Israel)

16:15 Invited Speaker: **Avraham Reichenberg**

Professor of Preventive Medicine and Psychiatry at the Ichan School of Medicine at Mount Sinai in New York, Senior Fellow of the Seaver Center for Autism Research and Treatment, New York (USA)

16:30 **HOW THE STARTUP NATION MAY BECOME THE NATION THAT WILL PREVENT ALZHEIMER'S DISEASE?**

Invited Speaker: **Michal Beeri**

Director of the Sagol Neuroscience Research Center, Sheba Medical Center (Israel)

16:45 **THE OBSTACLES IN ADOPTING NEW TECHNOLOGIES IN NEURO-MEDICINE**

Invited Speaker: **Gili Givaty**

Deputy Director of Barzilai Medical Center (Israel)

KEYNOTE LECTURE: BRAINMIND: ACADEMICS, ENTREPRENEURS, INVESTORS, PHILANTHROPISTS – A COALITION CATALYZING IMPACT IN BRAIN SCIENCE

17:00 - 17:30

17:00 Invited Speaker: **Michael McCullough**
Entrepreneur in Residence at Greylock Partners, Investor, Founder BrainMind & ER doc (USA)

BrainMind is an ecosystem and platform for impact-oriented company creation in brain and mind science. Brain science is in the midst of a transformative step change in capacity, akin to the sequencing of the human genome in genetics or development of nuclear fission in physics. Emerging technologies with unprecedented ability to access and manipulate the brain and mind are being rapidly developed in the private sector, where public oversight is limited. As a species, we must proactively navigate this watershed era in neuroscience. The BrainMind ecosystem will catalyze impact-maximizing innovation in brain science with new forms of capital and leadership support for non-venture-backable ideas with the most potential to benefit humanity. Less than a year old, the platform has attracted Stanford, MIT, and Oxford and a growing list of academic collaborators. BrainMind's leaders Michael McCullough, Ed Boyden, Laura Roberts, and Reid Hoffman have leveraged the private sector to draw together top philanthropists/foundations (>\$100BN in capital), and the world's top investors and entrepreneurs in this ecosystem to support these pivotal ideas from the lab to society.

START UP COMPETITION ANNOUNCEMENT & CLOSING REMARKS

17:30 - 17:45

**Subject to change*