

## Conference Program

### MONDAY, MARCH 04, 2019

#### REGISTRATION & MORNING NETWORKING COFFEE

08:00 - 09:00

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#### PLENARY: WELCOME REMARKS

09:00 - 09:15

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- 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: PRESCRIPTION DIGITAL THERAPEUTICS: CHARTING A COURSE TOWARD STANDARD OF CARE

09:15 - 09:45

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

Pear Therapeutics is leading development of a new treatment class known as prescription digital therapeutics, or PDTs. PDTs are designed to directly treat disease, tested for safety and efficacy in randomized clinical trials, evaluated by the FDA, and prescribed by healthcare providers. Dr. McCann will discuss this new treatment class and share recent developments across the portfolio, including the commercial launch of reSET, for the treatment of Substance Use Disorder, and reSET-O, for the treatment of Opioid Use Disorder. He will also provide a view into the company's pipeline, with PDTs in development across a range of serious diseases.

#### FIRESIDE CHAT

09:45 - 10:30

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- 09:45 Invited Speaker: **Moran Cerf**  
Professor, Neuroscience & Business, Kellogg School of Management, Northwestern University, (USA)
- Invited Speaker: **Alim Louis Benabid**  
Professor, Chairman of the Board, Clinatec; Member of the Academy of Sciences; Professor Emeritus of Biophysics at Joseph Fourier University; Scientific Advisor at the Atomic Energy Commission; Clinatec, 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: **David Ben Shimol**

Product Manager at Google, Research and Machine Intelligence, Israel

14:45 **PANEL DISCUSSION**

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: **Shlomo Mendlovic**

Director, Shalvata Mental Health Center (Israel)

Panelist: **Eran Harary**

Senior Director, Global Clinical Development, Neuropsychiatry, Teva Pharmaceutical Industries Ltd. (Israel)

15:30 **STARTUP SPOTLIGHT**

- Brainmarc
- Neurolif
- Novotalk
- Train Pain

## 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**, Assistant Professor, Dept. of Cognitive and Brain Sciences and Dept. of Computer Science, Zlotowski Center for Neuroscience, Ben-Gurion University of the Negev (Israel)

16:30 **CLOSING THE CHASM: ACCELERATING TRANSLATIONAL NEUROSCIENCE APPLICATIONS THROUGH AUTOMATED BIOSIGNAL ANALYSIS IN THE CLOUD**

Invited Speaker: **Tim Mullen**

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

- 16:50 **MEASURING PHYSIOLOGY AND BEHAVIOR IN YOUNG CHILDREN WITH AUTISM**  
Invited Speaker: **Ilan Dinstein**  
Negev Autism Center, Ben-Gurion University (Israel)
- 17:10 **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)
- 17:30 **LIVING ON THE EDGE: ON CRITICAL BRAIN DYNAMICS AND ITS APPLICATIONS TO DIAGNOSING NEUROLOGICAL DISORDERS**  
Invited Speaker: **Oren Shriki**  
Assistant Professor, Dept. of Cognitive and Brain Sciences and Dept. of Computer Science, Zlotowski Center for Neuroscience, Ben-Gurion University of the Negev (Israel)
- 17:50 **Q&A**

**MATHEMATICAL NEUROSCIENCE PRIZE AWARD, IBT**

18:00 - 18:15

**NETWORKING HAPPY HOUR**

18:15

**TUESDAY, MARCH 05, 2019**

**REGISTRATION & MORNING NETWORKING COFFEE**

08:00 - 09:00

**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.

**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.

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

14:00 Invited Speaker: **Yossi Matias**  
Vice President, Engineering at Google; Managing Director of Google's R&D Center (Israel)

14:20 **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)

14:40 **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: **Ido Strauss**  
Director, Neuromodulation Unit, Department of Neurosurgery, Tel Aviv Sourasky Medical Center (Israel)

16:15 **REAL WORLD CHALLENGES TO PREDICTION OF PSYCHIATRIC DISORDERS**

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, Founder & President of BrainMind & QuestBridge, & Asst Professor of Emergency Medicine at UCSF, (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

**Rafi Gidron**, IBT Founder and Chairman (Israel)

*\*Subject to change*