

Disruptive Neuroscience Technologies Changing the World Today

District Hall /
Venture Café
Providence
Innovation
Rhode Island
September 18, 2019

Proof

Organized by:



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Consulate General of Israel
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הקונסוליה הישראלית לניו אינגלנד

Special thanks to Venture Café for their support

Dear Friends and Participants,
It is with great pleasure that we welcome you to this important event, "Disruptive Neuroscience Technologies Changing the World Today."

First, I would like to take this opportunity to give thanks to Friends of Ben-Gurion University (BGU) for assisting and bringing in our keynote speakers; to Stefan Pryor, Rhode Island Secretary of Commerce; to our partner, RI Bio, especially to Carol Malysz, Executive Director; to our moderator, Dr. Kunal Mankodiya, Director of Wearable Biosensing Lab, University of Rhode Island, our keynote speaker, Professor Alon Friedman, Director of Zlowoski Center for Neuroscience, Ben-Gurion University (BGU), speakers and panelists and to all of our sponsors who assisted in bringing this event to fruition.

Further, I truly hope that this connection between the Rhode Island Neuroscience Community and their Israeli counterpart is the first in what will become a start of future collaborations in the field of research, academia and also in business and commercial applications. We at the Rhode Island-Israel Collaborative (RIIC) are ready to help grow and flourish the seeds we started today.

Last, I urge you to become a member of the Rhode Island-Israel Collaborative (RIIC) if you have not done so yet, to help our mission to connect Rhode Island and Israel in research, academia and business.

Avi Nevel,
Founder & CEO
Rhode Island-Israel Collaborative (RIIC)

Dear Friends, and Colleagues:
Neuroscience is making the impossible, possible. Advancements in tools and new technologies are enabling neuroscientists to forge inroads towards an understanding of the brain. As exemplified by the U.S. BRAIN Initiative, funding agencies are recognizing how investments in cutting-edge neuroscience transform knowledge in ways that can directly benefit society — from new clinical treatments to improved brain-computer interfaces and beyond.

Today's forum, Disruptive Neuroscience Technologies Changing the World Today, offers the opportunity to hear from neuroscience thought leaders from Rhode Island to Israel about their insights and perspectives on the evolution of neuroscience research and what excites them about the future prospects for the field.

These advances in neuroscience herald a promising era for translating basic knowledge into practical tools to improve the human condition. RI Bio and the RI Israel Collaborative look forward to communicating future discoveries across the wide-ranging spectrum of organizations and ventures that encompass brain sciences.

We thank you for attending our event, engaging with each other and our speakers and actively participating in our roundtables. We hope you find this forum enlightening and inspiring towards building a better world today.

Carol Malysz
Executive Director, RI Bio



The Purpose of the Rhode Island-Israel Collaborative (RIIC) is the promotion of commerce, academics, and science. The RIIC is a non-profit organization aimed at fostering and strengthening trade, business, academic exchange, and research between the state of Rhode Island and Israel to mutually benefit their economies and communities. RIIC will do so by building and strengthening the relationships between government organizations, businesses, entrepreneurs, investors, members of academia, and the research community in Rhode Island and Israel.



RI Bio is southeastern New England's life sciences industry trade group. We are dedicated to advancing collaboration and growth among life sciences companies, hospitals, universities, sources of capital and governmental partners. We convene, catalyze and advocate. With the support of our partners, including the Biotechnology Innovation Organization (BIO), Real Jobs Rhode Island, CommerceRI and the Rhode Island Foundation, we work to secure resources to support the life sciences community and provide our members with exclusive access to regional industry news, events, materials and supplies, workspaces, growth partners, and more. Visit us at www.ri-bio.org.

Schedule

September 18, 2019

8:00 AM - 8:30 AM	Registration, Breakfast, Networking
8:30 AM - 8:50 AM	<p>Introductions and Greetings</p> <ul style="list-style-type: none"> • Avi Nevel CEO and Founder of Rhode Island-Israel Collaborative (RIIC) • Carol Malysz Executive Director of RI Bio <p>Greetings on Behalf of the State of Rhode Island</p> <ul style="list-style-type: none"> • Stefan Pryor, RI Secretary of Commerce
8:50 AM - 9:10 AM	<p>Opening Remarks by the Moderator</p> <ul style="list-style-type: none"> • Dr. Kunal Mankodiya Director of Wearable Biosensing Lab, University of Rhode Island (URI)
9:10 AM - 9:45 AM	<p>Keynote Speaker</p> <ul style="list-style-type: none"> • Professor Alon Friedman Director of Zilowoski Center for Neuroscience, Ben-Gurion University (BGU)
9:45 AM - 10:00 AM	Q & A
10:00 AM - 10:15 AM	Coffee Break
10:15 AM - 11:30 AM	<p>Panel and Speakers, Moderated by Dr. Kunal Mankodiya, Director of Wearable Biosensing Lab, University of Rhode Island</p> <ul style="list-style-type: none"> • Professor Walter Besio Electrical, Computer, & Biomedical Engineering, Interdisciplinary Neuroscience Program, University of Rhode Island (URI) • Dr. Elinor Amit Assistant Professor of the Collier School of Management, Tel Aviv University and Research Scientist at Brown University • Dr. Rachel Rac-Lubashevsky Fulbright Scholar and Postdoctoral Fellow at the Neural Computation and Cognition Lab at Brown University • Dr. Wael Asaad, MD, PhD Associate Professor of Neurosurgery & Neuroscience at the Warren Alpert Medical School of Brown University
11:30 AM - 11:45 AM	Q & A
11:45 AM - 12:15 PM	Lunch
12:15 PM - 1:30 PM	Roundtable Discussions
1:30 PM - 2:00 PM	Roundtable Summaries, Closing Remarks

Honorary Guest



Stefan Pryor

Secretary of Commerce,
State of Rhode Island

Stefan Pryor serves as Rhode Island's first Secretary of Commerce. Appointed by Governor Gina M. Raimondo and confirmed unanimously by the Rhode Island State Senate in 2015, Secretary Pryor oversees and coordinates the State agencies and offices responsible for economic development, business regulation, housing, and workforce development. Rhode Island's economic progress under Governor Raimondo has been profiled by national publications including *Chief Executive* magazine ("Rhode Island Boasts The Biggest Climb In 'Best States/Worst States' Rankings," May 2, 2018) and the *New York Times* ("After Long Economic Slide, Rhode Island Lures New Business," March 14, 2017). Thirty businesses have announced plans to land or expand in Rhode Island since the Governor's new programs were implemented about three years ago. Pryor and his team have created Rhode Island's first state-backed small business loan program and have launched SupplyRI, which connects local suppliers to larger Rhode Island institutions.

Secretary Pryor served for approximately five years (2006-2011) as Deputy Mayor and Director of Economic and Housing Development in the City of Newark, NJ. He and his team played a key role in orchestrating plans for Newark's first new downtown hotel in 40 years and first new office tower in 20 years. They also helped recruit new commercial tenants to Newark. Before his work in Newark, Pryor was President of the Lower Manhattan Development Corporation (LMDC). The LMDC was created in the aftermath of September 11th by the State and City of New York to plan and help coordinate the physical rebuilding and economic revitalization of Lower Manhattan including the World Trade Center site. From 2002-2006, Pryor served in several leadership capacities at the agency, culminating in his service as the LMDC's President.

Before his current position, Secretary Pryor served as the Commissioner of Education for the State of Connecticut (2011-2015). During his tenure, Connecticut passed important legislation aimed at closing achievement gaps, improving chronically underperforming schools and districts, and increasing rigor and raising expectations for all students.

Secretary Pryor received his undergraduate and law degrees from Yale University.

Organizer



Avi Nevel

CEO and President of the Rhode Island-Israel Collaborative (RIIC)

Mr. Avi Nevel is an entrepreneurial senior executive with more than 30 years of broad international business experience. Mr. Nevel is the President and CEO of Nevel International, a Providence-based international consulting firm, which he founded in 2006. He is also the President and CEO of the Rhode Island Israel Collaborative, which he founded in 2016. Prior to founding Nevel International, Mr. Nevel served as Co-owner, CEO, and President of Lawson-Hemphill, a manufacturer of precision instruments and quality control laboratory equipment for the textiles industry. His company's products were sold worldwide.

Mr. Nevel has received 12 U.S. and foreign patents, several awards for excellence in business, personal achievement, and exportation, and numerous prestigious board and committee appointments in the U.S. and abroad. Among the accolades he has received are the Presidential "E" Award in 1987, and the Presidential "E-STAR" Award in 1991 from the U.S. Department of Commerce, the "Exporter of the Year" Award from the RI Small Business Administration in 2000, and the "Honor Award" in 2010 from the Consulate General of Israel to New England, for his remarkable work in supporting stronger economic collaboration between Israel & New England.

Mr. Nevel served on the board of the Shenkar College of Design and Engineering in Israel, was Chair of the Israel Task Force Committee at the Jewish Alliance of Rhode Island and is on the Executive Board of the New England Israel Business Council (NEIBC) and Rhode Island World Trade Day Committee and was appointed member of the Connecticut/Rhode Island District Export Council in 1997. In 2012, Mr. Nevel was appointed as Vice Chair of the Rhode Island District Export Council, (RIDECE) and is an Executive Board Member of the Providence Chamber of Commerce. Mr. Nevel assists the Rhode Island International Trade Director and Rhode Island Commerce in international matters and works closely with U.S. commerce posts around the world.

In 2011, Mr. Nevel co-organized the first Rhode Island economic mission to Israel which was followed by the first Rhode Island Health Care and Life Science mission to Israel in 2013.

Further, Mr. Nevel was the key organizer and coordinator of the 2013 Connecticut business mission led by Commissioner Catherine Smith.

Mr. Nevel received his bachelor's degree from Shenkar College of Design and Engineering in Israel. Mr. Nevel was born in Israel and has lived in Providence, Rhode Island, with his wife Dr. Laura Nevel for over 30 years.

Organizer



Carol Malysz

Executive Director, RI Bio

As Executive Director of RIBio, Carol's mission is to grow the life sciences economy in Rhode Island and southern New England. She does this by forging strong and impactful relationships with life sciences companies, entrepreneurs, sources of capital, academic and medical centers, hospitals and government organizations. She works with the Board of Directors to advance RIBio's vision of ensuring a high-value life sciences and healthcare community that improves patients' lives, strengthens the economy and enhances the quality of life in the greater Rhode Island region.

Carol brings more than 25 years of economic development, entrepreneurship, management and marketing experience to RI Bio. Most recently, Carol worked with firms across all industries in greater New England to provide executive coaching, leadership, talent development and workplace analytics consulting for startups to Fortune 500 companies.

Previously, Carol led the startup of the Center for Women & Enterprise (CWE) Rhode Island and served as executive director for nine years, building business development programs for aspiring and existing women business owners. Over the course of her tenure, she built CWE from the ground up, from having no clients to a notable 5,000. Carol played a central role in working with the SBA and RI lending community to secure more than \$17 million in bank financing for CWE client companies – advancing their ability to either get companies started or for further expansion into successful businesses. She also served on the board of the Association of Women's Business Centers, supporting development of entrepreneurial women at the national level.

Carol earned her MBA in Entrepreneurship from Babson College and is a graduate of the Center for Creative Leadership.

Keynote Guest Speaker from Israel



Alon Friedman

Director of Zlotowski Center for Neuroscience, Ben-Gurion University (BGU)

The keynote speaker will be Professor Alon Friedman, a leading Neuroscientist and groundbreaking researcher. Prof. Alon Friedman, M.D., Ph.D., led the establishment of the Inter-Faculty Brain Sciences School at Ben-Gurion University of the Negev (BGU). He holds the Dr. Helena Rachmanska-Putzman Chair in Neurology and is also the former director of the University's Zlotowski Center for Neuroscience. Prof. Friedman's expert research focuses on the early diagnosis and cure for brain injury, including a new drug under development that repairs the blood-brain barrier. Among his team's accomplishments are new MRI and EEG-based imaging techniques that enable early diagnosis of brain disorders, including Alzheimer's disease, epilepsy and chronic trauma encephalopathy (CTE)—a progressive degenerative brain disease found in athletes and others with a history of repetitive brain trauma, and which, until now, could only be diagnosed postmortem. Prof. Friedman, who is also the Dennis Chair in Epilepsy Research at Dalhousie University in Canada, recently led a multidisciplinary study on the "Havana Syndrome"—a mysterious brain injury affecting North American diplomats in Cuba.

Moderator



Dr. Kunal Mankodiya

Director Wearable Biosensing Lab,
University of Rhode Island (URI)

Kunal Mankodiya, PhD is the Director of Wearable Biosensing Lab and is an associate professor in the Dept. of Electrical, Computer, and Biomedical Engineering, University of Rhode Island, RI, USA since 2014. He is a recipient of NSF CAREER (2016) Award enabling research on "Internet of e-textile wearables for telemedicine". In 2018, he received TechConnect Defense Innovation Award for his work on "Smart Textile Trouser". He was recognized as the "Innovator-of-the-year" by Future Textiles Awards, Frankfurt, Germany in 2017. Mankodiya was also selected among "40 under 40" by Providence Business News in 2017. His embedded computing design of a smart-textile ECG system earned him the 2010 SYSTEX Award, University of Ghent, Belgium. He regularly organizes scientific workshops/symposiums on IOT for healthcare at various international conferences. He also organizes an annual 48-hour HealthHacks event to promote entrepreneurial thinking in the areas including IOT, healthcare, and aging. His course on Wearable IOT blends design thinking with IOT concepts to nurture entrepreneurial skills in students from various backgrounds. He pursued his postdoctoral research at Intel Science & Technology Center (ISTC) and Carnegie Mellon University (CMU), Pittsburgh, PA, USA. He received his Ph.D. degree from the University of Luebeck, Germany. He holds MS (University of Luebeck, Germany) and BE (Saurashtra University, India) degrees in Biomedical Engineering.

Panelist Speaker



Professor Walter Besio

Electrical, Computer, & Biomedical
Engineering, Interdisciplinary
Neuroscience Program, University of
Rhode Island (URI)

Dr. Besio is a Professor in the Department of Electrical, Computer, and Biomedical Engineering at the University of Rhode Island (URI). Dr. Besio received his M.S. and Ph.D. degrees in biomedical engineering from the University of Miami and a B.S. in electrical engineering from the University of Central Florida. Prior to joining academia, Dr. Besio worked 12+ years in the biomedical device and electronics industries. Dr. Besio specializes in research to develop innovative biomedical instrumentation for diagnosis and therapies for enhancing the lives of persons with neurological disease and disability. This work involves unique patented concentric electrodes for neuromodulation and brain computer interfacing (bidirectional). Dr. Besio is a co-founder of the URI Interdisciplinary Neuroscience Program that has since spawned the Ryan Institute for Neuroscience. He is an Institute for Electrical and Electronics Engineers (IEEE) Senior Member, IEEE Engineering in Medicine and Biology Society (EMBS) (representative to TBioCAS and BioCAS, past EMBS Sensors Council representative, past Vice President of Finance, past North American Administrative Committee Member, past Wearable Biomedical Sensors and Systems Technical Committee Chair, past Chair Providence Chapter, and Faculty Advisor URI Student Chapter), and an active member of the American Epilepsy Society (Technical Committee). Dr. Besio has also developed intellectual property that forms the basis for his medical device startup company CREmedical Corporation. Dr. Besio is passionate about moving his research beyond the laboratory to help relieve disease, disability, pain, and suffering.

Panelist Speaker



Dr. Elinor Amit

Assistant Professor of the Collier School of Management, Tel Aviv University and
Research Scientist at Brown University

Elinor Amit is an Assistant Professor at the Collier School of Management at Tel Aviv University and a Research Scientist at Brown University. She received her Ph.D. in Psychology from Tel Aviv University in 2009 and was a Postdoctoral Fellow at New York University and Harvard University. Amit's research is concerned with how domain-general systems such as the visual and language systems affect people's thoughts, feelings, judgments, and behavior in the social world. An additional research interest of Professor Amit is moral decision-making. Amit's work was published in leading academic journals, including *Psychological Science*, *Journal of Experimental Psychology: General*, *Psychological Bulletin*, and *NeuroImage*, and has been covered in media outlets such as NPR, The Huffington Post, and Scientific American.

Panelist Speaker



Dr. Rachel Rac-Lubashevsky

Fulbright Scholar and Postdoctoral Fellow
at the Neural Computation and Cognition
lab at Brown University

Dr. Rachel Rac-Lubashevsky is a Fulbright scholar and a postdoc fellow at the Neural Computation and Cognition lab at Brown University. She graduated from Ben-Gurion University of the Negev, Israel. Her PhD research focused on studying the neural correlates of cognitive decisions responsible for selecting information relevant to behavior. Her research at Brown University aims to incorporate electrical brain activity measures with machine learning and computational modeling techniques to learn more about the brain functions that support these cognitive decisions. Her main goal is to leverage these techniques to understand the cognitive deficits in Parkinson's patients who suffer from a mal-function in the biological circuits that supports both motor and information selections

Panelist Speaker



Dr. Wael Asaad, MD, PhD

Associate Professor of Neurosurgery & Neuroscience at the Warren Alpert Medical School of Brown University

Dr. Wael Asaad, MD, PhD received his undergraduate degree from Amherst College in 1993, then earned a PhD in systems neuroscience from Massachusetts Institute of Technology in 2001, and his MD from Yale University in 2003. Dr. Asaad completed a general surgery internship and neurosurgical residency at the Massachusetts General Hospital. During his residency, he completed additional training in functional and epilepsy neurosurgery. In 2011, he joined the department of neurosurgery at The Warren Alpert Medical School of Brown University. Dr. Asaad's clinical interests include functional neurosurgery for movement disorders, epilepsy and psychiatric disease, as well as traumatic brain injury. His clinical work incorporates the latest technical advances in neurosurgical instrumentation and implantable devices for neuromodulation. His lab studies the links between neural activity and cognition in humans and animal models and aims to elucidate how perturbations in activity underlie disease states and symptoms.

BIRD Foundation

RIIC: BIRD Foundation Representative for Rhode Island



The Rhode Island-Israel Collaborative (RIIC) is designated as the BIRD Foundation representative for Rhode Island. The RIIC will promote and provide information and assistance to companies in Rhode Island who are interested in learning more about collaboration and R&D funding opportunities up to \$1 million.

About the BIRD Foundation

BIRD is an acronym for Israel-U.S. Binational Industrial Research and Development. The BIRD Foundation's mission is to stimulate, promote and support industrial R&D of mutual benefit to the U.S. and Israel.

BIRD activities include facilitating introductions between Israeli and American companies interested in collaborative R&D. BIRD takes no equity in the joint projects it funds; all services are free of charge.

The BIRD Foundation was established by the U.S. and Israeli governments in 1977 to generate mutually beneficial cooperation between the private sectors of the U.S. and Israeli high-tech industries, including start-ups and established organizations. BIRD provides both matchmaking services between U.S. and Israeli companies, as well as funding covering up to 50 percent of project development and product commercialization costs.

Notes

Proof



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