PARTNERED WITH THE SUBCORTICAL SURGERY GROUP 11TH ANNUAL MEETING

SUBCORTICAL SURGERY GROUP

NEURASEED BCI EXPO 2024

A VIRTUAL WORLD'S FAIR FOR BCI

August 2, 2024 | 12:00PM - 5:00PM MST

REGISTER NOW

WHAT IS NEURASEED BCI EXPO 24?

The **NeuraSeed BCI Expo 24, A Virtual World's Fair for BCI**, is a global symposium bringing together industry leaders, world class researchers, and students across a wide range of disciplines to explore the field of Brain-Computer Interface (BCI).

In one afternoon, the NeuraSeed BCI Expo 24 will feature presentations, panels, and exhibits from the top leaders who are advancing research, product development, and clinical translation for emerging applications.

The Expo platform will be a virtual hub prior and following the event that enables networking and collaboration within the BCI community. The connections made at the Expo will give rise to countless collaborations in the future.

PARTNERSHIP

The NeuraSeed BCI Expo 24 is a virtual exhibition partnered with the 11th Annual Conference of the **Subcortical Surgery Group (SSG)**, a group of U.S. and international neurosurgeons that treat neurological conditions in the deep brain through a minimally invasive approach.

Since its inception, the SSG has brought together representatives from industry that have developed cutting-edge technology and world-renowned neurosurgeons to collaboratively share their concepts, experiences, and techniques to improve patient outcomes for acquired neoplastic, cerebrovascular, post-traumatic, and neurodegenerative disorders.

The **Minimally Invasive Parafascicular Surgery (MIPS)** technique to access deep brain regions has been performed in over forty thousand patients for various neurological conditions. The next generation of Brain Computer Interface (BCI) could leverage this approach for implantation in the brain’s subcortical regions. For this reason, SSG leadership has expanded the scientific program to include BCI.

Regards,

SUBCORTICAL SURGERY GROUP

NEURASEED BCI EXPO 2024

Julian E. Bailes, M.D.
President & Chairman, Subcortical Surgery Group
Chair, Department of Neurosurgery
Northshore University Health System
Clinical Professor of Neurosurgery,
University of Chicago Pritzker School of Medicine

Neilank K. Jha, M.D., M.Sc., M.B.A., FRCSC
Executive Chairman & CEO, NeuraSeed BCI
Staff Neurosurgeon / Spine Surgeon
Director of Head Injury Program
Mackenzie Health Hospital

BRINGING TOGETHER INDUSTRY LEADERS

The conference will bring together the leaders who are at the forefront of taking BCI from the lab to the clinic and onward. Collaboration between academia and industry has brought the field to its current inflection point which will inevitably lead to meaningful impact on patients around the world.

With effective clinical translation, BCI's will be a milestone contribution to medicine by way of restoring functionality, augmenting human capabilities, and revolutionizing current treatment. The leaders of the companies who are leading this charge will all be present together to present and discuss where latest advancements of their company, technology, future indications, clinical expertise, regulatory process, funding, and more.

Presentations can be viewed live on the main stage within our virtual platform. The presentations and panels will be streamed from the St. Julien Hotel in Boulder, Colorado, beginning at **1:00PM MST.**

INDUSTRY PANELISTS AND PRESENTERS

Neilank K. Jha, MD
Neurosurgery, Mackenzie Health
Chairman, CEO

NEURASEED BCI

Rob Franklin, PhD
Director, BCI

Blackrock Neurotech

J Mocco, MD
Neurosurgery, Mount Sinai
Chief Medical Officer

synchron

Ben Rapoport, MD, PhD
Neurosurgery, Mount Sinai
Co-Founder, CSO

Precision

Jayme Strauss, MSN, SCRN
Chief Clinical Officer

Viz.ai

Nicholas Vachicouras, PhD
Co-Founder, CEO

NEUROSOFT BIOELECTRONICS

BRINGING TOGETHER TOP RESEARCHERS

BCI is at this inflection point today because of the groundbreaking efforts of researchers worldwide. The multidisciplinary research of BCI has shown what is possible in helping restore functionality to patients and transforming how neurological disorders are treated. These researchers will compare their perspectives with industry leaders to further explore collaborations that will bring these technologies to the patients who need it most.

Further advancements in treating neurological disorders and expanding possibilities start with the cutting edge research in academia that intersects a wide range of disciplines. Researchers presenting at NeuraSeed BCI Expo 24 are the world's experts in fields such as artificial intelligence, bioelectronics, microfluidics, neurosurgery, and neural interfaces. Their labs are at the frontier of interfacing with the nervous system in novel ways that transform human capability and treatment of neurological disorders.

ACADEMIA PRESENTERS AND PANELISTS

Shadi Dayeh, PhD
Integrated Electronics and Biointerfaces Lab
UC San Diego

Ivan Minev, PhD
The Else Kröner Fresenius Center for Digital Health
Dresden University of Technology

Bruce Gale, PhD
Center of Excellence For Microfluidics
University of Utah

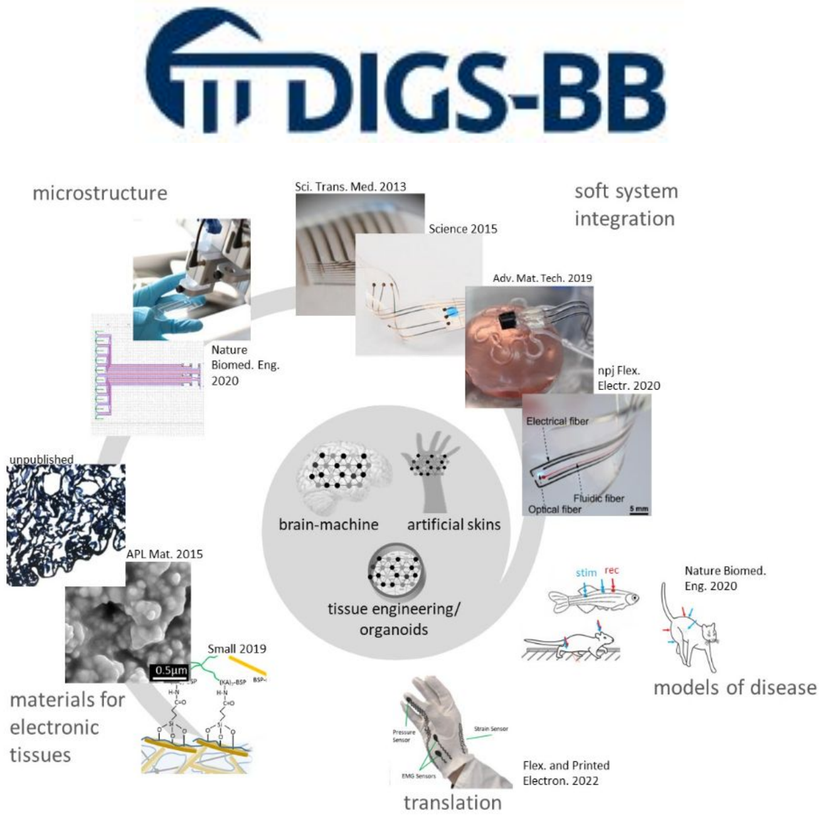
Azur Azapagic, PhD
Center of Excellence For Microfluidics
University of Utah

BCI VIRTUAL EXHIBITOR LAB CASE STUDY

Ivan Minev, Principal Investigator of the Ivan Minev Group at Dresden University, School of Biomedicine and Bioengineering

Virtual booth outlining:

- ➔ **New materials** for BCI
- ➔ **3D printing** of **personalized** implants
- ➔ **Neuromodulation**



WHO SHOULD ATTEND?

The NeuraSeed BCI Expo 24 will bring together researchers from labs and institutions of all different levels to present research and collaborate across a multitude of disciplines. Students interested in novel applications of technology to transform how we understand and interface with the brain in ways that will have a profound impact on society are invited to attend. Students can learn from industry leaders, academia professionals, peers, mentors, and the top researchers in science and technology.

The NeuraSeed BCI Expo 24 is geared to give an immersive experience exploring the intersections of many disciplines to create a brain-computer interface.

Undergraduate Students

Undergraduates from all disciplines are invited to foster and advance their understanding of BCI, gaining unique firsthand insights from the world's leaders in the space. As an undergraduate student, exposure to labs and companies in from different fields will help guide your interests, networking, and career aspirations. Whether you are interested in neuroscience, electrical engineering, psychology, or another field, the NeuraSeed BCI Expo 24 enables you to see the cutting edge of this exciting field.

Graduate Students

The NeuraSeed BCI Expo 24 will bring together graduate students from different fields both as attendees and exhibitors all within the virtual platform. Graduate students of different education levels from institutions all over the world will showcase their work and connect with like-minded world class researchers. Features of the virtual platform enable networking and live private chats to make connections with fellow graduate students and professors of your field.

Postdoc Researchers

Postdoctoral researchers from various fields will attend the NeuraSeed BCI Expo 24 to gain direct insights from various labs and showcase their work to the entire BCI field. With diverse labs attending from institutions all over the world, the connections made will foster collaboration and create opportunities for postdoctoral researchers.

Industry and Academia Professionals

Over the last decade or so, there has been a flourishing of companies making great strides in utilizing BCI to transform patient treatments and augment human capabilities. Translation from the lab to the clinic requires the collaborative process of academia and industry that the NeuraSeed BCI Expo 24 is celebrating. Professionals from different BCI companies can attend to learn and connect with colleagues. The main stage will feature presentations and panels from leaders at the biggest BCI companies taking on this challenge of a generation.

WHY ATTEND?

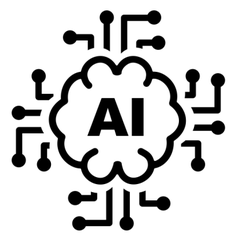
The current state of BCI has gotten to this point through decades of interdisciplinary research. The creation of a BCI is perhaps one of the most interdisciplinary technological undertakings from a science and engineering perspective. As a result of the collaboration and exploration of countless researchers, we are seeing the groundbreaking product of synergy across a wide range of disciplines. This is why the NeuraSeed BCI Expo 24 is inviting a diverse audience with interests in various fields to see the profound applications of BCI from the world's experts in both academia and industry.

Neuroscience

- Computational Neuroscience
- Motor Systems and Intention
- Neuroplasticity
- Neural Signal Decoding
- Neuroepigenetics

Computer Science & AI

- Machine Learning
- Computational Neuroscience
- Signal Processing Algorithms
- Data Science
- Feature Extraction



Materials Science & Engineering

- Thin Film Materials
- Biodegradable Materials
- High Channel Electrode Arrays
- Semiconductor Deposition
- Microfabrication Techniques

Biomedical Engineering

- Implantable Bio-MEMS
- Microfluidics for Drug Delivery
- Neuroimaging
- Genomics
- Bioprinting

Neurology & Neurosurgery

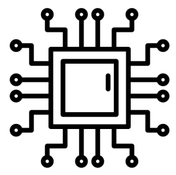
- Responsive Deep Brain Stimulation
- Functional Brain Mapping
- Neurodegenerative Disorders
- Traumatic Brain Injury
- Brain Cancer Treatments

Radiology

- Neuroimaging
- Computer Vision for AI Prediction
- Functional MRI(fMRI)
- Diffusion Tensor Imaging
- Non-Invasive Recording & Imaging

Electrical and Electronics Engineering

- Mixed Signal Processing
- Ultra-Low Power Chips
- Application Specific IC Design
- Robotics and Mechatronics
- Wireless Neural Signal Communication



Psychology

- Mental Health Digital Therapy
- Psychiatric Disorder Sensing
- Cognitive Psychology
- Clinical Psychology
- Social Psychology

Health Sciences

- Digital Healthcare
- Continuous Biometric Monitoring
- Speech-Language Pathology
- Health Informatics
- Personalized Medicine

Kinesiology

- Biomechanics
- Rehabilitation Sciences
- Motor Control and Learning
- Muscular Plasticity
- Human Strength Augmentation

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Brain Computer Interface

Friday, August 2nd, 2024

12:00 pm **LOG-ON, EXHIBIT VIEWING & PRE-RECORDED SESSION(Prof Ivan Minev)**

12:45 pm **Opening Remarks**
Julian Bailes, MD: NorthShore University Health System & SSG President and Chairman

12:50 pm **Welcome, Introduction, Overview**
Neilank Jha, MD, MSc, MBA, FRCSC: Mackenzie Health Hospital, NeuraSeed BCI Executive Chairman & CEO & NeuraSeed BCI Expo President and Chairman

1:00 pm **Development, Surgical Utilization & Potential**
Rob Franklin, PhD: Director of BCI Blackrock Neurotech

1:20 pm **Engineering and Design of Brain Microfluidic Devices**
Bruce Gale, PhD & Azur Azapagic, PhD: University of Utah

1:40 pm **Clinical Trials with Stentrode**
J Mocco, MD: Icahn School of Medicine at Mount Sinai & CMO, Synchron

2:00 pm **Neural Interfaces for CNS Disorders**
Nicolas Vachicouras, PhD: CEO Neurosoft

2:20 pm **PANEL - Capital Markets of BCI: North America, Europe, Asia, Australia**
Moderator: Neilank Jha, NeuraSeed BCI, North America

J Mocco, MD, Synchron, Australia

Nicholas Vachicouras, PhD, Neurosoft, Europe

2:40 pm **BREAK WITH EXHIBITORS - 20 MINUTES**

3:00 pm **Subcortical Deep Micro-Recording - Potential & Implications**
Shadi Dayeh, PhD, University of California San Diego

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3:10 pm **Artificial Intelligence in Healthcare - Potential for Patient Outcomes**
Jayme Strauss, Chief, Clinical Officer, Viz.ai

3:30 pm **The Layer 7 Cortical Interface - Scalable and Minimally Invasive BCI**
Benjamin Rapoport, MD, PhD: Co-Founder, CSO, Precision Neuroscience

4:00 pm **Future of BCI: Clinical Progress & Capital Markets - North America**
Neilank Jha, MD, MSc, MBA, FRCSC: Mackenzie Health Hospital, NeuraSeed BCI Executive Chairman & CEO & NeuraSeed BCI Expo President and Chairman

4:20 pm **PANEL Q&A - TOPIC TBD**
Moderator: Neilank Jha, MD, MSc, MBA, FRCSC: Mackenzie Health Hospital, NeuraSeed BCI Executive Chairman & CEO & NeuraSeed BCI Expo President and Chairman

Rob Franklin, PhD: Director of BCI Blackrock Neurotech

J Mocco, MD: Icahn School of Medicine at Mount Sinai & CMO Synchron

Speaker TBD, Paradromics TBD

Benjamin Rapoport, MD, PhD: Precision Neuroscience

Nicolas Vachicouras, PhD: CEO Neurosoft TBD

4:45 pm **Awards Presentation**
Neilank Jha, MD, MSc, MBA, FRCSC: Mackenzie Health Hospital, NeuraSeed BCI Executive Chairman & CEO & NeuraSeed BCI Expo President and Chairman

4:50 pm **Closing Remarks and NeuraSeed BCI Expo 2024 Wrap-Up**
Neilank Jha, MD, MSc, MBA, FRCSC: Mackenzie Health Hospital, NeuraSeed BCI Executive Chairman & CEO & NeuraSeed BCI Expo President and Chairman
Julian Bailes, MD: NorthShore University Health System & SSG President and Chairman

5:00 pm **NEURASEED BCI EXPO 2024 ADJOURNED**

VIRTUAL EXHIBITION

The NeuraSeed BCI Expo 2024 is bringing labs from around the world to showcase their cutting edge research within the virtual exhibit hall on the day of the event.

Labs will showcase their work to students, fellow researchers, and industry professions from their virtual booths within our virtual platform.

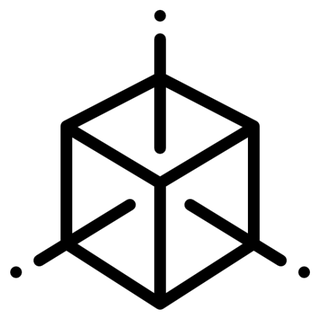
Showcase Your Research

Present your research to viewers from all around the world in virtual booths where they can engage, ask questions, and learn about the work your lab is doing in the BCI space.

These viewers will be from across all disciplines, including both peers in your field, as well as those interested in learning more.

3D Virtual Environment

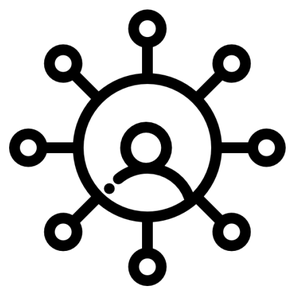
The 3D virtual exhibitor hall located inside the lobby of the platform will give an immersive experience of being surrounded by peers and like-minded individuals.



The virtual environment allows for there to be thousands of attendees all together inside the virtual exhibitor hall, so all those interested will be able to engage with your lab.

Chat and Networking

The virtual environment enables networking with the live Q&A, group and private audio, text, and video chats, private breakout room sessions, and contact information sharing via QR codes.



The connections made will foster the collaborations that are needed in the space for continued innovation by bringing together researchers' different perspectives, as well as spark interest to bring new minds into the field.

Audio, Video, and PDF Formats

You will be able to post your research and abstracts in a range of formats from video with audio to PDF documents and slide presentations. This will give the best representations to convey the concepts of your ideas and research.

Continuously Edit and Update

You will be able to continuously update your content in the virtual exhibitor hall before and after the event so your profile can stay up to date with what you want to showcase to viewers.

NEURASEED
BCI
EXPO 2024

Click the button or scan the QR code to Register

- No cost to attend
- Registrants receive pre/post-event access

REGISTER NOW

For questions, contact:
Daniel Aliee, Clint Bailes, Ahsas Nagee
NeuraSeed BCI
conference@neuraseedbci.com