



# 2<sup>nd</sup> International Conference on Neuroscience, Neuroinformatics, Neurotechnology and Neuro- Psycho- Pharmacology



November 18-20, 2021

Bucharest, Romania

# 2<sup>ND</sup> INTERNATIONAL CONFERENCE ON NEUROSCIENCE, NEUROINFORMATICS, NEUROTECHNOLOGY AND NEURO- PSYCHO-PHARMACOLOGY

*We kindly invite you to participate in the*

*2<sup>nd</sup> International Conference on  
Neuroscience, Neuroinformatics, Neurotechnology and  
Neuro-Psycho-Pharmacology*

*organized by the Romanian Academy - Romanian Center for  
Brain Research, Romanian Society of Neurology, the  
Foundation of the Romanian Society of Neurology, the National  
Neuroscience Society of Romania and the Romanian Society for  
Automation and Technical Informatics.*

*The aim of the conference is to bring together experts from  
various areas of brain science, neuroscience, clinical neurology,  
psychology, pharmacology with engineers in systems science,  
neuroinformatics, computer science and technology in order to  
debate aspects of the brain and mind, to identify efficient  
theories, models and tools that will contribute to a better  
understanding of the brain and its functioning. The conference  
will be organized in Bucharest on 18-20 November 2021.*

*Due to the epidemiological context, the Conference will be  
organized in a hybrid format, both physical and virtual*

*The opening ceremony and the invited papers will be presented  
in the "Heliade Radulescu" Hall, Romanian Academy Library.*

## ORGANIZERS



Romanian Academy - Center for Brain Research

Foundation of the Romanian Society of Neurology (FSNR)

Romanian Society for Automation and Technical Informatics (SRAIT)

National Neuroscience Society of Romania (NNSR)

# Steering Committee

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Romanian Academy, RSATI, University “Politehnica” of Bucharest, Romania

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Nirvana Popescu, SRAIT, University "Politehnica" of Bucharest, Romania

Ioan Sacala, SRAIT, University "Politehnica" of Bucharest, Romania

Octavian Arsene, RSAIT, Romania

# KEYNOTE SPEAKERS

Jean-Jacques Askenasy

*On the quantic activity of the brain*

Victor Voicu

*Neuro-invasion SARS-Cov-2 virus:  
symptomatology, penetration routes and pathogenic mechanisms*

Mircea Dumitru

*Unlocking the Mind, Deciphering the Consciousness*

Daniel David

*Clinical cognitive neurosciences: New frontiers*

Stuart Hameroff

*Consciousness and quantum brain biology*

# CONFERENCE PROGRAM

## Day 1

Thursday - November, the 18<sup>th</sup>

Location:

Romanian Academy Library - "Heliade Radulescu" Hall

**09:00 – 09:30**    **Opening ceremony**

**09:30– 13:00**    Plenary papers

**13:00 – 14:00**    Lunch Break

**14:00 – 16:15**    **Session 1**

**16:15 – 16:30**    Coffee Break

**16:30 – 18:15**    **Session 2**



## Day 2

### Friday - November, the 19th

Location:

Romanian Academy Library - "Heliade Radulescu" Hall

**09:00 – 10:45      Session 3**

**10:45 – 11:00      Coffee break**

**11:00 – 13:00      Session 4**

**13:00 – 14:00      Lunch Break**

**14:00 – 16:00      Session 5**

**16:15 – 16:30      Coffee Break**

**16:30 – 18:30      Session 6**

**19:00 – 19:30      Conference Closing**

## Plenary Paper Session

Day 1 - Thursday - November, the 18<sup>th</sup>

*Chairs:*

*Ioan Dumitrache, Simona Caramihai*

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**Jean-Jacques Askenasy**    **On the quantic activity of the brain**

**Victor Voicu**    **Neuro-invasion SARS-Cov-2 virus: symptomatology, penetration routes and pathogenic mechanisms**

**Mircea Dumitru**    **Unlocking the Mind, Deciphering the Consciousness**

**Daniel David**    **Clinical cognitive neurosciences: New frontiers.**

## Regular Sessions

### Session 1

#### *Session Chairs*

*Luiza Flonta, Beatrice Mihaela Radu*

#### Day 1 - Thursday - November, the 18<sup>th</sup>

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14:00	Roberta Stoica, Mihai Radu and Beatrice Mihaela Radu: <b>Low-energy accelerated protons induce cytotoxic, genotoxic and functional changes of an in vitro Blood- Brain Barrier Model</b>
14:20	Viorel Ovidiu Ciobotaru, Călin Mircea Rusu and Beatrice Mihaela Radu: <b>A novel approach to automatic detection of individual cells from confocal microscopy images: A pilot study on endothelial cells from brain microvasculature</b>
15:40	Cristina Elena Staicu, Florin Jipa, Anca Bonciu, Calin Mircea Rusu, Emanuel Axente, Beatrice Mihaela Radu and Felix Sima: <b>Investigation of new polymeric materials and photosensitive glasses for blood-brain barrier applications</b>
15:00	Florin Zamfirache and Beatrice Mihaela Radu: <b>Low intensity transcranial electrical stimulation (tDCS) in combination with other therapeutic approaches in experimental and clinical depression</b>
15:20	Catalina Lumpan, Beatrice Mihaela Radu, Carmen Strungaru and Livia Petrescu: <b>Morphometric discriminants for rapid differentiation of emotions</b>
15:40	Andrei C. Miu, Ștefania Crișan, Simina Pițur, Alexandra Huh, Marius Susu, Róbert Balázsi, Gal Sheppes, Seth D. Pollak, Aurora Szentágotai-Tătar : <b>Neural markers of emotion regulation in childhood maltreatment</b>
16:00	Discussions

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## Regular Sessions

### Session 2

*Session Chairs*

*Ioan Dumitache, Mihnea Moisescu*

**Day 1 - Thursday - November, the 18<sup>th</sup>**

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**16:30** Ioan Dumitrache, Simona Caramihai, Mihnea Moisescu, Ioan Sacala: **A systemic view of the human brain**

**16:50** Mihaela Malita, Marius Stoian and Gheorghe Stefan: **Can the mind-trueRNG-computer loop be a form of ortho-computing ?**

**17:10** Stefan Trausan-Matu: **Natural Language Processing with Deep Neural Networks; A Dialogical Hermeneutic Perspective**

**17:30** Maria-Alexandra Paun, Vladimir-Alexandru Paun and Viorel-Puiu Paun: **Image Processing in Serious Brain Disease by Clustering Algorithms**

**17:50** Mihai Moldovan: **The oscillatory macrostate concept and its applications**

**18:10** Discussions

## Regular Sessions

### Session 3

#### *Session Chairs*

*Dafin Muresanu, Bogdan Popescu*

#### **Day 2 - Friday - November, the 19th**

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**9:00** David Good : **What will stroke rehabilitation be like in 2030?**

**9:20** Bogdan Popescu : **Neurorights, neuromodulation and the neurologic catastrophe of our era**

**9:40** Kenneth Baker : **Cerebellar DBS to Promote Upper Extremity Motor Function in Chronic Stroke - Phase I Trial**

**10:00** Wolfgang Grisold : **Paraneoplastic neuropathies**

**10:20** Discussions

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## Regular Sessions

### Session 4

#### *Session Chairs*

*Dafin Muresanu, Bogdan Popescu*

*Day 2 - Friday - November, the 19th*

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<b>11:00</b>	Claudio Bassetti : <b>Sleep and brain health</b>
<b>11:20</b>	Dafin Muresanu: <b>Monomodal versus multimodal drugs in brain recovery</b>
<b>11:40</b>	Volker Homberg: <b>Ways to enable impairment oriented rehab after stroke</b>
<b>12:00</b>	Natan Bornstein: <b>Novel and non-invasive brain-computer interface-based stimulation device using frequency tuned electromagnetic fields to significantly reduce disability following sub-acute ischemic stroke: A BrainQ technology-pilot randomized controlled trial</b>
<b>12:20</b>	Discussions

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## Regular Sessions

### Session 5

#### Session Chairs

Alexandru **Babeş**, Violeta **Ristoiu**

#### Day 2 - Friday - November, the 19th

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14:00	Roxana-Olimpia Gheorghe, Andreea Violeta Grosu, Mihail-Sebastian Ghenghea, Melania Bica-Popi and Violeta Ristoiu: <b>Harvesting the analgesic and regenerative potential of macrophages from peripheral nervous system.</b>
14:20	Alexandra Manolache, Alexandra Bănică, Teodora Stratulat, Cosmin Trif, Debora Huţanu, Dan Domocoş, George Opreţă, Tudor Şelescu, Alexandru Babeş and Sorin Tunaru: <b>Effects of the prostacyclin receptor on TRPM8 activation</b>
15:40	Melania Bica-Popi and Violeta Ristoiu: <b>Efficient delivery of small interfering RNA in HMC3 human microglia using Magnetofection</b>
15:00	Andreea Grosu, Alexandru Florian Deftu, Marie Pertin, Guylène Kirschmann and Violeta Ristoiu: <b>Activation of dorsal root ganglia's macrophages and spinal microglia is spatially correlated after Spared Nerve Injury model</b>
15:20	Diana Rotaru, Georg Oeltzschner, Richard Edden and David Lythgoe: <b>Advancements in human brain MR spectroscopy: the simultaneous assessment of inhibitory neurotransmitter GABA and antioxidant GSH</b>
15:40	Roxana-Olimpia Gheorghe, Andy-Gabriel Buga, Izabela Cristina Stancu, Elena Olaret and Violeta Ristoiu: <b>Assessing the peripheral nerve regeneration through autotomy parameters development</b>
16:00	Discussions

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## Regular Sessions

### Session 6

#### Session Chairs

*Leon Zagrean, Bogdan Pavel*

#### Day 2 - Friday - November, the 19th

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<b>16:30</b>	Bogdan Pavel, Patricia Popovici, Diana Ilie, Madalina Gherghe, Diana Georgiana Rotaru, Denise Zahiu, Daniela Popa, Ana-Maria Zagrean and Leon Zagrean: <b>Clastrum Within Neural Mechanisms of Anesthesia</b>
<b>16:45</b>	Mihail-Sebastian Ghenghea, Florian-Vintilă Armășescu, Roxana-Olimpia Gheorghe, Izabela Stancu, Elena Olaret, Marieta Costache and Violeta Ristoiu: <b>Using Python as a tool to analyze electrical activity of dorsal root ganglia neurons in a model of peripheral nerve regeneration</b>
<b>17:00</b>	Sumit Raman Kumar, Tyger Lin and Tudor Constantin Badea: <b>Physiological Changes in Retinal Ganglion Cells Lacking the Transcription Factor Brn3b/Pou4f2</b>
<b>17:15</b>	Dan Domocos, Tudor Selescu, Laura Cristina Ceafalan, Mirela Iodi Carstens, Earl Carstens and Alexandru Babeș: <b>Serotonergic 5-HT1A and 5-HT3 receptors are involved in the activation of rat primary sensory neurons by serotonin</b>
<b>17:30</b>	Alexandra Manolache, Angelika Lampert and Alexandru Babeș: <b>Voltage-gated sodium channels as molecular targets for pain signaling in acute neurovisceral porphyria</b>
<b>17:45</b>	Adrian Sorin Mihalache, Leon Zăgrean: <b>Free Will - an Approach from the Perspective of Neuroscience</b>
<b>18:00</b>	Aurel Popa-Wagner: <b>Genetic conversion of proliferative astroglia into neurons after cerebral ischemia: a new therapeutic tool for the aged brain?</b>
<b>18:15</b>	Stuart Hameroff - <b>Consciousness and quantum brain biology</b>
<b>18:45</b>	Discussions

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# Conference Venue

The conference attendance will be organized in the  
“Heliade Radulescu” hall of the Romanian Academy Library  
Romanian Academy - Calea Victoriei 125, Bucharest, Romania



