



III LATIN AMERICAN WORKSHOP ON COMPUTATIONAL NEUROSCIENCE


FINAL PROGRAM

First day – December 8th, 2021 (Wednesday)

9:00 – 9:30	Registration with coffee break
09:30 – 10:30	<p>Oral presentation of accepted papers (15 minutes each)</p> <p>Session A: Interdisciplinary applications of Artificial Intelligence (AI) and Machine Learning (ML)</p> <ul style="list-style-type: none">• “Modelo baseado em aprendizado de máquinas para classificar atividades encefálicas cognitivas” Juliana Mycaelle Silva, Gean Carlos Sousa, George V. S. Souza, Jonathan A. Queiroz and Allan Kardec Barros Filho• “Semantic segmentation of the cultivated area of plantations with U-net” Walysson Oliveira, Geraldo Braz Junior and Daniel Gomes Jr• “A Random LSTM Model for Stock Market Prediction” Elaine Pinto Portela and Omar Andres Carmona Cortes• “Use and Interpretation of Item Response Theory applied to Machine Learning” Jade Dias, Caio Rodrigues and Abner Rodrigues <p>Session chair: Prof. Dr. Paulo Rogério de Almeida Ribeiro</p>
10:30 - 12:00	<p>Keynote speaker: Prof. Dr. Andre Carvalho - University of São Paulo (Brazil). “The Machine Learning of the Machine Learning”.</p> <p>Host: Prof. Dr. Alex Oliveira Barradas Filho</p> 
12:10 – 14:00	Lunch
14:00 – 14:45	<p>Oral presentation of accepted papers (15 minutes each)</p> <p>Session B: AI and ML applied to robotics</p> <ul style="list-style-type: none">• “Towards Loop Closure Detection for SLAM Applications using Bag of Visual Features: Experiments and Simulation” Alexandra Miguel Raibolt da Silva, Gustavo Alves Casqueiro, Alberto Torres Angonese and Paulo Fernando Ferreira Rosa• “Loss Function Regularisation on the Iterated Racing Procedure for Automatic Tuning of RatSLAM Parameters” Paulo Gomes, Cicero Oliveira, Matheus Menezes, Paulo Ribeiro and Alexandre Oliveira• “Controlling the UR3 robotic arm using a leap motion: a comparative study” Diego A. Lopez, Manuel A. Lopez, Dario S. Muñoz, Jesús A. Santa, David F. Gomez, Dante Barone, Jim Torresen and Jaime A Riascos Salas <p>Session chair: Prof. Dr. Paulo Rogério de Almeida Ribeiro</p>



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14:45 – 15:30	<p>Oral presentation of accepted papers (15 minutes each)</p> <p>Session C: AI and ML applied to biomedical sciences</p> <ul style="list-style-type: none"> • “Machine learning-based application for long-term electrocardiogram analysis” Juliana Mycaelle Silva, Jonathan Araujo Queiroz, Luís Fillype da Silva, Gean Carlos Sousa, Allan Kardec Barros Filho and Marta de Oliveira Barreiros • “Multi-class classification of Atrial Fibrillation Signs with High-Order Statistics, ICA and Machine Learning” Luís Fillype da Silva Lago Cutrim Barros, Jonathan Araújo Queiroz, Juliana Mycaelle Oliveira Silva and Allan Kardec Barros • “Web service based epileptic seizure detection by applying machine learning techniques” Pedro Augusto Araujo da Silva de Almeida Nava Alves, Alex Oliveira Barradas Filho and Paulo Rogério de Almeida Ribeiro <p>Session chair: Prof. Dr. Alex Oliveira Barradas Filho</p>
15:30 – 16:00	Coffee break
16:00 – 17:00	<p>Keynote speaker: Prof. Dr. Angela Wyse - Federal University of Rio Grande do Sul (Brazil). “The neurobiology of memory and forgetting”.</p> <p>Host: Prof. Dr. Dante Barone</p> 
17:00 – 17:30	Opening Ceremony

Second day – December 9th, 2021 (Thursday)

9:00 – 10:00	<p>Oral presentation of accepted papers (15 minutes each)</p> <p>Session D: Health issues and computational neuroscience</p> <ul style="list-style-type: none"> • “COVID-19 Cognitive Sequelae and Their Possible Relation with Educational Issues: a systematic review” Drielle Vieira, Tainá Rêgo, Sayonara da Silva, Maria Carolina Gonzalez and Edgard Morya • “Machine Learning Search of Novel Selective NaV1.2 and NaV1.6 Inhibitors as Potential Treatment against Dravet Syndrome” Maximiliano Fállico, Lucas Alberca, Denis Prada Gori, Luciana Gavernet and Alan Talevi • “Implementation of intra and extracellular nonperiodic scale-free stimulation in silico for the Neuron platform” Heitor Terra, Fernando Borges, Marcio Moraes and Vinícius Cota • “In silico investigation of the effects of distinct temporal patterns of electrical stimulation to the amygdala using a network of Izhikevich neurons” João Pedro Oliveira, Victor Discacciati, Daniel Medeiros, Márcio Moraes, Grace Pereira, Keite França and Vinícius Cota <p>Session chair: Prof. Dr. Alan Talevi</p>
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10:00 – 10:30	Coffee break
10:30 – 12:00	<p>Keynote speaker: Prof. Dr. Alan Talevi - Universidad Nacional de La Plata (Argentina). “Application of machine learning to identify new potential drug candidates for Dravet syndrome”.</p> <p>Host: Prof. Dr. Vinícius Rosa Cota</p> 
12:00 – 14:00	Lunch
14:00 – 15:30	<p>Keynote speaker: Prof. Dr. Peter Tass - Stanford University (USA). “Vibrotactile Coordinated Reset Stimulation for the Therapy of Parkinson’s Disease: Theory and Clinical Results”.</p> <p>Host: Prof. Dr. Vinícius Rosa Cota</p> 
15:30 – 16:00	<p>Oral presentation of accepted papers (15 minutes each)</p> <p>Session E: Software and hardware implementations in neuroscience</p> <ul style="list-style-type: none"> • “Brain connectivity measures in EEG-based biometry for epilepsy patients: a pilot study” Bruna M. Carlos, Brunno M. Campos, Marina K. M. Alvim and Gabriela Castellano • “A multi-platform output stage for the development of current-fixed electrical stimulators applied to neural electrophysiology” Maikon L. Santos, João D. Nolasco and Vinícius R. Cota <p>Session chair: Prof. Dr. Jean Faber</p>
16:00 – 17:30	Poster session with extended coffee break

Third day – December 10th, 2021 (Friday)

9:00 – 10:15	<p>Oral presentation of accepted papers (15 minutes each)</p> <p>Session F: Neuroengineering – science and technology</p> <ul style="list-style-type: none"> • “Physiological self-regulation using biofeedback training: from concept to clinical applicability” Karina Rodrigues, João Vitor Moreira, Daniel José Lins Leal Pinheiro, Ana Tereza Contier, Esper Cavalheiro and Jean Faber • “Movement-Related Electroencephalography in Stroke Patients across a Brain-Computer Interface-based Intervention” Juan C. Castro-Aparicio, Ruben I. Carino-Escobar and Jessica Cantillo-Negrete • “Electrophysiological Correlates of Freeze of Gait in Parkinson Disease: Increased STN-LFP Alpha Power and the Possible Role of Attentional Circuits”
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	<p>Arnaldo Fim Neto, Maria Sheila Rocha, Luiz Ricardo Trajano, Julia Baldi de Luccas, Bruno Bianqueti, Tiago Paggi de Almeida, Fabio Godinho and Diogo Coutinho Soriano</p> <ul style="list-style-type: none"> • “Effect of hand dominance when decoding motor imagery grasping tasks within the same hand” Katrine Nergård and Jim Tørresen • “Kinematic responses as a control strategy to visual occlusion” Carlos Eduardo Campos, Cíntia de Oliveira Matos, Lucas Cléopas Costa Da Silva, Paulo Ribeiro, Crislaine Rangel Couto, Suziane Peixoto Dos Santos and Herbert Ugrinowitsch <p>Session chair: Prof. Dr. José C. Príncipe</p>
10:15 – 10:45	Coffee break
10:45 – 12:15	<p>Keynote speaker: Prof. Dr. José C. Príncipe - University of Florida (USA). “Neuromodulatory Pattern Analysis for Local Field Potentials”.</p> <p>Host: Prof. Dr. Allan Kardec Duailibe Barros Filho</p> 
12:15 – 14:00	Lunch
14:00 – 15:15	Round table: gender diversity in neuroscience
15:15 – 15:45	Coffee break
15:45 – 17:15	<p>Keynote speaker: Prof. Dr. Kerstin Schmidt - Federal University of Rio Grande do Norte (Brazil). “What to expect? Anticipation of contours and motion in early visual cortical circuits”.</p> <p>Host: Prof. Dr. Paulo Rogério de Almeida Ribeiro</p> 
17:15 – 17:30	Closing Ceremony



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