

## Cronograma del curso:

### Aprendizaje automático (*Machine Learning*) para el análisis de neuroimágenes

#### Día 1 (16/3/2017)

Participación en el II Congreso de **LABMAN (Latin American Brain Mapping Network)** (ver cronograma abajo)

#### Día 2 (17/3/2017)

Participación en el II Congreso de **LABMAN (Latin American Brain Mapping Network)** (ver cronograma abajo)

#### Día 3 (20/3/2017):

Data collection & preprocessing .

#### Día 4 (21/3/2017):

- General intro: Machine learning and its application to neuroimaging analysis
- Get your computer ready to run CoSMoMVPA and use the tutorial dataset
- Dataset input, output and operations
- Split-half correlation analysis
- Single-fold classification

#### Día 5 (22/3/2017)

- Classification with cross-validation
- Measures, neighborhoods, searchlight applied to fMRI data
- fMRI ROI RSA
- fMRI searchlight RSA
- fMRI resting-state, different approaches

#### Día 6 (23/3/2017)

- EEG intro & basic classification
- EEG temporal and spatio-temporal classification searchlight



- EEG time generalization

**Día 7 (25/3/2017):**

- fMRI and EEG: multiple comparison correction using Threshold-Free Cluster Enhancement
- Analysis decisions
- Concluding remarks
- Question and answer session for design and analysis of your own study

16 y 17 de marzo: Participación en el **II Congreso de LABMAN (Latin American Brain Mapping Network)**

**Cronograma tentativo del Congreso**

**16/03/2017**

9.00 – 9.30	Registración
9.30 – 11.30	<p><b>SIMPOSIO # 1: APRENDIZAJE MOTOR Y PLASTICIDAD</b></p> <p><b>1. Pablo Celnik (Argentina) Department of Physical Medicine and Rehabilitation. Johns Hopkins University, Baltimore, USA.</b> <i>Understanding and modulating motor learning with cerebellar stimulation.</i></p> <p><b>2. Valeria Della-Maggiore (Argentina)</b> IFIBIO Houssay – Departamento de Fisiología, Facultad de Medicina, UBA, Argentina <i>Functional and structural reorganization induced by sensorimotor adaptation</i></p> <p><b>3. Maximo Zimmerman (Argentina)</b> Instituto de Neurología Cognitiva, INECO, Buenos Aires, Argentina <i>Recovery of motor function and Brain Plasticity: New concepts in Neurorehabilitation</i></p> <p><b>4. Claudia Vargas (Brasil)</b> Universidad Federal de Rio de Janeiro. <i>Reduced functional connectivity within the primary motor cortex of patients with brachial plexus injury.</i></p>
11.30 - 12.00	Coffee break
12.00 – 13.00	Charla Plenaria # 1
13.00 – 14.30	Almuerzo
14.30 – 16.30	Posters



16.30 – 18.30	<p><b>SIMPOSIO # 2: MECANISMOS INVOLUCRADOS EN LA CONSOLIDACION DE MEMORIAS DECLARATIVAS</b></p> <p>1. Germán Campos Arteaga (Chile), Pontifical Catholic University of Chile. <i>Neural signatures of modified declarative memories as result of reconsolidation process.</i></p> <p>2. Silvia Kochen (Argentina), Instituto De Robertis Biología Celular y Neurociencia (IBCN), Univ. de Buenos Aires (UBA). Directora, Centro de Epilepsia Hospital El Cruce, Argentina <i>Emotional memory: behavioral aspects and intracerebral recordings in humans.</i></p> <p>3. Cecilia Forcato (Argentina), Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Centro de Epilepsia Hospital El Cruce, Argentina Pending abstract</p> <p>4. Laura Kaczer (Argentina), Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires. <i>Pending abstract</i></p>
18.30 - 19.30	Asamblea LABMAN

17/03/2017

9.30 – 10.30	Charla Plenaria #2
10.30 - 11.00	Coffee break
11.00 – 13.00	<p><b>SIMPOSIO # 3: NUEVOS ABORDAJES METODOLOGICOS NEUROCIENTIFICOS</b></p> <p>1. Sergio Ruiz (Chile) Pontifical Catholic University of Chile. Santiago de Chile, Chile. <i>Interfaces Cerebro-Máquinas basadas en fMRI y su aplicación en enfermedades Neuro-Psiquiátricas severas.</i></p> <p>2. Patricio Konelly (Argentina), Universidad de Rosario. <i>Reproducibility in functional connectivity assessed using resting-state fMRI.</i></p> <p>3. Edson Amaro (Brasil), Associate Professor, School of Medicine, Department of Radiology, University of São Paulo <i>Using post-mortem modern imaging techniques to investigate human brain diseases</i></p> <p>4. Daniel Fraiman (Argentina), Universidad de San Andres, Buenos Aires, Argentina <i>Stochastic processes in Human Neuroscience</i></p> <p>5. Nikolaas Oosterho (Italia), CiMec, Universidad de Trento <i>Application of Machine Learning to the analysis of Neuroimaging and Electroencephalographic data"</i></p>
13.00 – 14.30	Almuerzo
14.30 – 16.30	Posters
16.30 – 18.30	<p><b>SYMPOSIO # 4: CONCIENCIA</b></p> <p>1. Enzo Tagliazucchi (Argentina), Netherlands Institute for Neuroscience,</p>



	<p><b>Amsterdam, The Netherlands.</b></p> <p><b><i>Conscious states and collective behaviour in the human brain</i></b></p> <p><b>2. Eugenio Rodriguez (Chile), Pontificia Universidad Católica de Chile.</b> <b><i>Expectations Change the Signatures and Timing of Electrophysiological Correlates of Perceptual Awareness.</i></b></p> <p><b>3. Pablo Barttfeld (Argentina), Laboratorio de Neurociencias Cognitiva, Universidad Torcuato Di Tella; INECO, Buenos Aires, Argentina.</b> <b><i>Factoring the brain signatures of anesthesia concentration and level of arousal across individuals</i></b></p> <p><b>4. Tristan Beckinschtein (Argentina), Department of Psychology, University of Cambridge, UK</b> <b><i>Fragmentation and resilience of Cognitive processes as we fall asleep</i></b></p>
<b>18.30 - 19.30</b>	<b>Charla Plenaria #3</b>

#### KEYNOTE SPEAKERS

1. Julien Doyon (Canadá)

Functional Neuroimaging Unit, University of Montreal

*Sleep Contribution to Motor Skill Learning and Consolidation*

2. Vivian Reigosa (Cuba)

Centro de Neurociencias, La Habana, Cuba

*Utilización de video juegos en la rehabilitación de niños con trastornos en la lectura*

3. Leonardo Cohen (Argentina)

Human Cortical physiology and Neurorehabilitation Section, NINDS, NIH

*Plasticity of Sensorimotor Networks: Multiple Overlapping Mechanisms*

