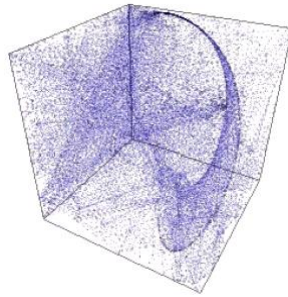


**PRINCIPLES OF AUTONOMOUS NEURODYNAMICS 2014**  
**Paris, France**  
**July 7-9, 2014**



**SAND XI**

**11<sup>th</sup> Annual Meeting of the Society for Autonomous Neurodynamics (SAND)**

**Location:**

Institut Pasteur  
28 Rue Du Docteur Roux, 75015  
Paris, France

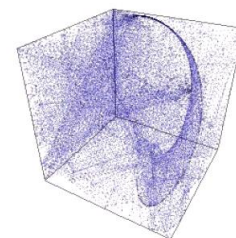
**Supporting Institutes and Programs:**

Human Genetics & Cognitive Functions Lab, Pasteur Institute  
The Green Neuroscience Laboratory, NeuroInx Research Institute  
The University of Toronto Epilepsy Research Program (UTERP)  
Hack Your PhD  
Stichting Epilepsie Instellingen Nederland (SEIN)  
Institute of Experimental Physics, Warsaw University  
Greenspiration Foundation, Canada

[www.utoronto.ca/sand/PAND2014/](http://www.utoronto.ca/sand/PAND2014/)

# SAND XI - PRINCIPLES OF AUTONOMOUS NEURODYNAMICS 2014

Paris, France - July 7-9, 2014

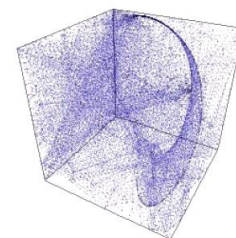


DAY 1 - Monday, July 7

<b>Registration</b>		9:00 - 10:00
<b>Opening &amp; Orientation</b>		
	Welcome & Opening Remarks (G. Dumas, C. Gruson-Daniel, A. Lam)	10:00 - 10:10
	Introduction & Welcome to Institut Pasteur (Thomas Bourgeron)	10:10 - 10:25
	An Orientation to SAND (A. Lam)	10:25 - 10:30
	A Brief Primer on Autonomous Neurodynamics (E. Ohayon)	10:30 - 10:50
<b>Session 1 - Epilepsy I: Transitions in Space, Time and Modulation</b>		Chair: P. Carlen
Piotr Suffczynski	Modeling of Seizure Transitions with Ion Concentration Dynamics	10:50 - 11:10 <i>p.x</i>
Suzie Dufour	Revisiting Extracellular and Intracellular K <sup>+</sup> Accumulation and Buffering during Epilepsy: A Spatiotemporal Study	11:10 - 11:30 <i>p.x</i>
Marc Koppert	Seizure Control in Autonomous Computational Models of Epilepsy	11:30 - 11:50 <i>p.x</i>
Berj Bardakjian	Estimation of Regions of Interest in the Epileptic Brain from Intracranial EEG	11:50 - 12:10
	<i>Group Discussion over Lunch</i>	12:10 - 13:30
<b>Session 2 - Dynamics I: Harmonics, Looping &amp; Grooving</b>		Chair: S. Kalitzin
Maciej Labecki	Nature of Fundamental and Harmonic Components of Steady State Visual Evoked Potentials	13:30 - 13:50 <i>p.x</i>
David Colliaux	Une Boucle Sensorimotrice Minimale: Modeles Subjectifs et Voies Biochimiques / Minimal Sensorimotor loop: Subjective Models and Biochemical Pathways	13:50 - 14:10 <i>p.x</i>
Julien Laroche	The Autonomous Groove of Relational Dynamics	14:10 - 14:30 <i>p.x</i>
	<i>Group Discussion</i>	14:30 - 14:40 <i>p.x</i>
	<i>Coffee break</i>	14:40 - 14:50
<b>Session 3 - Epilepsy II: Molecules &amp; Metabolism (Fatty Acids, Hormones, Metals)</b>		Chair: A. Lam
Paul Hwang	A Double Blind Placebo Controlled Trial of Docosahexaenoic Acid (DHA) in Epilepsy - A Preliminary Report	14:50 - 15:10 <i>p.x</i>
Melanie Jeffrey	Electrophysiological Studies of Progesterone and its Metabolites: Open to Whom?	15:10 - 15:20 <i>p.x</i>
Laura Frutos	A Working Chapter in the Hidden Story of Metals and Epilepsy	15:20 - 15:50 <i>p.x</i>
	<i>Group Discussion</i>	15:50 - 16:00
<b>Session 4 - Imaging Across Scales, Conditions and Stages of Treatment</b>		Chair: J. Hwang
Ann Lam	How do you Translate Particle Accelerator Images to Post-Surgical Treatment?	16:00 - 16:20 <i>p.x</i>
Yotin Chinvarun	Ictal PET in Status Epilepticus: A Valuable Presurgical Tool in Selected Patients with Status Epilepticus (SE)	16:20 - 16:40 <i>p.x</i>
	<i>Group Discussion</i>	16:40 - 16:50
	<i>Close of Day 1 Announcements &amp; planning for retreat</i>	16:50 - 17:00
	<i>SAND Social &amp; Dinner</i>	<i>Evening</i>

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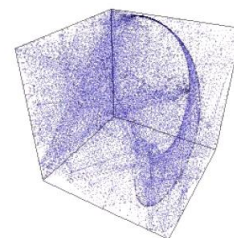
Paris, France - July 7-9, 2014



DAY 2 - Tuesday, July 8

<i>Introduction to Day 2, Updates &amp; Announcements</i>		09:30 - 09:35
<b>Session 5 - Epilepsy III: Start, Stop and See</b>		Chair: P. Suffczynski
Robert Helling	Gap-Junctions as Common Cause of High-Frequency Oscillations and Epileptic Seizures: A Computational Cascade of Neural Mass and Compartmental Modelling	09:35 - 09:55 <a href="#">p.x</a>
Prisca Bauer	Post-Ictal Generalised EEG Suppression (PGES) - the "Neuronal brake"?	09:55 - 10:15 <a href="#">p.x</a>
Stiliyan Kalitzin	In and Out United: Whole Body Motion Detection and its Electrographic Correlates in Cases of Major Motor Seizures	10:15 - 10:35 <a href="#">p.x</a>
	<i>Group Discussion</i>	10:35 - 10:45
	<i>Coffee break</i>	10:45 - 10:55
<b>Session 6 - The Open Future I: Technology &amp; Medicine in Autonomy, Cognition &amp; Health</b>		Chair: M. Labecki
Jie Mei	Transitioning to a New Era: How will Future Technologies Revolutionize Cognition, Autonomy and Social Thinking	10:55 - 11:15 <a href="#">p.x</a>
Julie Hwang	Naturopathic Medicine and Neurology: a Glance into the Philosophy and Science of Treatments of People and their Neurologic Conditions from a Naturopathic Perspective	11:15 - 11:35 <a href="#">p.x</a>
Paul Hwang	A Common Platform for Neurophysiological Database: EEG, ERP, MEG and PSG	11:35 - 11:55 <a href="#">p.x</a>
	<i>Group discussion</i>	11:55 - 12:05
	<i>Lunch &amp; leisurely deep discussions</i>	12:05 - 13:30
<b>Session 7 - Neural Networks and Artificial Life: Structures, Embodiment &amp; Surprise Returns</b>		Chair: S. Dufour
Stiliyan Kalitzin	Post-Lunch Reawakening: The SANDS of Time	13:30 - 13:40
Gueorgui Petkov	A Computational Modelling Approach to the Critical Role for Network Structure and Spread of Information in Seizure Onset	13:40 - 14:00 <a href="#">p.x</a>
Remi Sussan	Grandeur et Misère de la "Vie Artificielle" / The Grandeur and Misery of "Artificial Life"	14:00 - 14:20 <a href="#">p.x</a>
Elan Ohayon	Wait, did that just move? Strange embodied behavior in naive spatial networks	14:20 - 14:40 <a href="#">p.x</a>
	<i>Coffee break</i>	14:40 - 14:50
<b>Session 8 - The Open Future II - Nouveaux Ports Vers L'autonomie: Neural, Social, Cultural</b>		Chair: E. Ohayon
Guillaume Dumas	Probing the Complementary Nature of Autonomy and Coupling Across Neural, Behavioral, and Social Scales	14:50 - 15:10 <a href="#">p.x</a>
Martin Fortier	Importing Bayesianism into Anthropology? An Ethnobiological Look at Probabilistic Models of Categorization	15:10 - 15:30 <a href="#">p.x</a>
Bronwyn Sekulovich	Triple E: Environmentally Engaged Education	15:30 - 15:50 <a href="#">p.x</a>
	<i>Group discussion</i>	15:50 - 16:00

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**DAY 2 - Tuesday, July 8 (Continued)**

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**Session 9 - Reports from the Frontiers of Open Science:  
Principles & Practice**

Chair: L. Frutos

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Célya Gruson-Daniel	Tales from the Open Science Tour	16:00 - 16:20	<a href="#">p.x</a>
Ann Lam	Challenges, New Approaches and Opportunities in Green and Open Neuroscience	16:20 - 16:40	<a href="#">p.x</a>
	<i>Group discussion</i>	16:40 - 16:50	
	<i>Close of Day 2 Announcements &amp; Coordinate for Paris Open Laboratory Space Tour</i>	16:50 - 17:00	

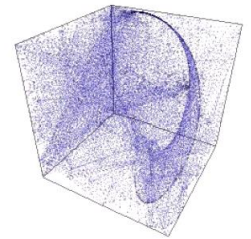
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***Paris Open Community Laboratory Space Tour  
& Potluck Apéro  
@ La Paillasse  
226 rue Saint Denis, 75002 Paris  
<http://lapaillasse.org/>***

***With our Guide: Célya Gruson-Daniel  
Evening (18:30 - 21:00)***

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**DAY 3 - Wednesday, July 9**

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<i>Introduction to Day 3, Updates &amp; Announcements</i>		09:30 - 09:35	
<b>Session 10 - Dynamics II: Brain Oscillations</b>		Chair: Y. Chinvarun	
Peter Carlen	Potassium and Seizures: an Oscillatory Relationship	09:35 - 09:55	<a href="#">p.x</a>
Uziel Awret	Brain Oscillations and Sparse Predictive Coding	09:55 - 10:15	<a href="#">p.x</a>
	<i>Coffee break</i>	10:15 - 10:25	
<b>ROUNDTABLE DISCUSSIONS:</b>		Chairs: Lam & Dumas	
<i>Round Table</i>	What are the Relations of Open Science & Autonomy: Necessary Bedfellows or Risky Business?	10:25 - 11:25	<a href="#">p.x</a>
	<i>SAND Next Stops &amp; Steps</i>	11:25 - 11:40	
	<i>Closing of Day 3 Remarks and Announcements</i>	11:40 - 11:45	<a href="#">p.x</a>
	<i>Retreat coordination</i>	11:45 - 12:00	

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**SAND SCIENTIFIC RETREAT**

July 9 -12

**CÉVENNES AND STEVENSON TRAIL**

Post-Presentation Events Begin the Afternoon of July 9th, 2014

Depart from Gare de Lyon with TGV 2pm

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