

# THE CSN SCHOOL ON NEUROPHYSIOLOGY TECHNIQUES

14-18 MARCH 2011

NEUROCHIP LABORATORY, UNIVERSITY OF PADOVA, ITALY

## FINAL PROGRAM

### *DAY 1 - 14 MARCH 2011: INTRACELLULAR RECORDING IN-VITRO*

08:00 - 08:30		<b>Registration</b>
08:30 - 08:45	Vassanelli Stefano	Opening of the School and Welcome Speech
08:45 - 10:15	Mammano Fabio	Simultaneous patch clamp and fluorescence imaging in model cells and tissue
10:15 - 11:45	Mapelli Jonathan	Imaging with Voltage Sensitive Dyes / Patch Clamping in Cerebellar Slices
11:45 - 12:00		<b>Coffee Break</b>
12:00 - 13:30	Giugliano Michele	Closed-loop electrophysiology
13:30 - 14:30		<b>Lunch Break</b>
14:30 - 17:30		Practical Demonstrations on Cell Culturing Methods, Patch-Clamping, and Calcium Imaging

### *DAY 2 - 15 MARCH 2011: EXTRACELLULAR RECORDING IN-VITRO (MEA)*

08:30 - 10:00	Berdondini Luca	High-resolution electrophysiological imaging of neuronal activity with a CMOS-MEA platform
10:00 - 11:30	D'Angelo Egidio	Recording from Cerebellar Slices with MEA
11:30 - 12:00		<b>Coffee Break</b>
12:00 - 13:30	Spira Mica E	Multisite, long term, noninvasive intracellular recordings and stimulation of neurons by extracellular MEA
13:30 - 14:30		<b>Lunch Break</b>
14:30 - 17:30		Practical Demonstrations on Recording from Slices using MEA, and Demo on Imaging with Voltage Sensitive Dyes

### *DAY 3 - 16 MARCH 2011: EXTRACELLULAR RECORDING IN-VITRO (MULTI TRANSISTOR ARRAYS)*

08:30 - 10:00	Fromherz Peter	Interfacing of Neurons and Neuronal Tissue with Semiconductor Chips - Stimulation and Recording
10:00 - 11:30	Zeck Günter	Electrical imaging and capacitive stimulation of retinal neurons using a semiconductor-based Neurochip
11:30 - 12:00		<b>Coffee Break</b>
12:00 - 13:30	Felderer Florian Vassanelli Stefano	Recording with MTA from Brain Slices Recording with MTA In-Vivo
13:30 - 15:30		<b>Lunch Break</b>
15:30 - 17:00	Thewes Roland	CMOS-based approaches for in-vitro and in-vivo neural tissue interfacing
17:00 - 17:30		<b>Coffee Break</b>
17:30 - 19:00	Ballerini Laura	The interface between cells and materials at the nanoscale: the carbon nanotube/neuron case study
19:30 - 21:30		<b>Social Dinner</b>

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## *DAY 4 - 17 MARCH 2011: EXTRACELLULAR RECORDING IN-VIVO*

09:00 - 11:00	Diamond Mathew	Investigating the Rat Whisking System by Multielectrode Recording
11:00 - 11:30		<b>Coffee Break</b>
11:30 - 13:30	Cohen Dana	Microwire Recording from Freely Behaving Animals
13:30 - 14:30		<b>Lunch Break</b>
14:30 - 17:30		Poster Session

## *DAY 5 - 18 MARCH 2011: BRAIN-CHIP AND BRAIN-MACHINE INTERFACING*

09:00 - 10:30	Espinosa Manzanal Arnau	Learning About Brain Computer Interfaces: Concepts and Techniques
10:30 - 11:30	Prueckl Robert	EEG Based Brain-Computer Interface
11:30 - 12:00		<b>Coffee Break</b>
12:00 - 13:30	Vassanelli Stefano	Perspectives of Brain-Chip Interfacing in Neuroprosthetics and Therapy of Neurological Disorders
13:30 - 14:30		<b>Lunch Break</b>
14:30 - 17:30		Practical Demonstrations on EEG-based Brain-Machine Interfacing, and In-Vivo Recording with MTA
17:45 - 18:00	Vassanelli Stefano	Concluding Remarks & Closing of the School