

An exciting series of scientific events

2nd International Symposium

Frontiers in Neurophotonics

22-24 September 2010

Venue: Hotel Chateau Laurier, Quebec City, Canada

This **second edition of Frontiers in Neurophotonics** is organized jointly by the **University of Bordeaux** and **Laval University** to foster scientific exchanges between Neurobiologists and Physicists sharing interest in Biophotonics. Following up on the highly successful first meeting in Bordeaux (2008) (www.rdv-routedeslasers.com/neurophotonics), the second edition will take place in Quebec City, the historical French gateway to North-America.'

Speakers:

Mark Bates (Harvard University, Cambridge)
David Bensimon (École Normale Supérieure, Paris)
Francisco Bezanilla (University of Chicago)
Karl Deisseroth (Stanford University)
Valentina Emiliani (Paris Descartes)
Thomas Knopfel (RIKEN, Japan)
Brian MacVicar (UBC, Vancouver)
Jérôme Mertz (Boston University)
Tim Murphy (UBC, Vancouver)
Thomas Oertner (Friedrich Miescher Institute, Basel)
Ed Ruthazer (McGill University, Montreal)
Marc Schnitzer (Stanford University)
Jeff Squier (Colorado School of Mines)
Horst Vogel (EPFL, Lausanne)
Paul Wiseman (McGill Univ., Montreal)
Ryohei Yasuda (Duke University, Durham)
...and more to come!

Topics covered:

From single molecule detection at synapses to imaging network activity in the intact nervous system

- Non-linear optics for high resolution deep tissue imaging
- Detection without labels
- Microendoscopy
- Multimodal imaging
- Overcoming temporal resolution challenges for optical monitoring of network activity
- Monitoring molecular interactions in live neurons
- Molecular dynamics in nanoscale compartments
- Nanophotonics probes for biosensing and molecular tracking
- Novel Image analysis methods to extract molecular information below diffraction limits
- Nanoscopy: super-resolution optical imaging at live synapses
- Exploiting photoactivatable ion channels to manipulate neuronal activity
- Photoablation techniques
- Optical tomography
- Application of fluorescence to neurosurgery



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**BIOPHOTONICS
week IN QUEBEC**

www.biophotonicsworld.org/biophotonicsweek

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