



Neural Information  
Processing Systems

# NIPS 2012

LAKE TAHOE • NEVADA

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## INVITED SPEAKERS

**Scott Aaronson**  
(Massachusetts Institute of Technology)  
*Quantum information and the Brain*

**Stéphane G. Mallat**  
(LIENS, Ecole Normale Supérieure)  
*Classification with Deep Invariant Scattering Networks*

**Stanislas Dehaene**  
(Collège de France and NeuroSpin)  
*Signatures of Conscious Processing in the Human Brain*

**Leslie Greengard**  
(Courant Institute, New York University)  
*Fast Algorithms, Matrix Compression and Design by Simulation*

**Terry Sejnowski** (Salk Institute)  
*Suspicious Coincidences in the Brain*

**Tom Dietterich** (Oregon State University)  
*Challenges for Machine Learning in Computational Sustainability*

## TUTORIAL SPEAKERS

**Emma Brunskill** (Carnegie Mellon University)  
**Geoff Gordon** (Carnegie Mellon University)  
*Machine Learning for Student Learning*

**Paul Fearnhead** (Lancaster University)  
*Exact Approximate Learning*

**Lise Getoor** (University of Maryland)  
*Representation, Inference and Learning in Structured Statistical Models*

**Christof Koch** (Allen Institute for Brain Science)  
**Giulio Tononi** (University of Wisconsin)  
*Consciousness and Information Theory*

**James C. Spall** (Johns Hopkins University)  
*Stochastic Search and Optimization*

**Joel Tropp** (California Institute of Technology)  
*User-Friendly Tools for Studying Random Matrices*

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**Workshop Chairs:** Raquel Urtasun (TTI - Chicago), Mate Lengyel (University of Cambridge)

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