

GSI'15 - Geometric Science of Information

October 28th (Wed.)-30th(Fri.) 2015, Ecole Polytechnique, Paris-Saclay Campus

Registration: www.gsi2015.org

Invited Speaker

C.M. Marle (UPMC) - Actions of Lie groups and Lie algebras on symplectic and Poisson manifolds

Keynote Speakers

M. Arnaudon (Bordeaux Univ.) - Stochastic Euler-Poincaré reduction

T. Ratiu (EPFL) - Symmetry methods in geometric mechanics

M. Marcolli (Caltech) - From Geometry and Physics to Computational Linguistics

Short Course chaired by **R. Balian (CEA)**

D. Spehner (Grenoble Univ.) – Geometry on the set of quantum states and quantum correlations

Topics

- Manifold/Topology Learning
- Riemannian Geometry in Manifold Learning
- Optimal Transport theory and applications in Imagery/Statistics
- Shape Space & Diffeomorphic mappings
- Geometry of distributed optimization
- Random Geometry/Homology
- Hessian Information Geometry
- Topology and Information
- Information Geometry Optimization
- Divergence Geometry
- Optimization on Manifold
- Lie Groups and Geometric Mechanics / Thermodynamics
- Quantum Information Geometry
- Infinite Dimensional Shape spaces
- Geometry on Graphs
- Bayesian and Information geometry for inverse problems
- Geometry of Time Series and Linear Dynamical Systems
- Geometric structure of Audio Processing
- Lie groups in Structural Biology
- Computational Information Geometry