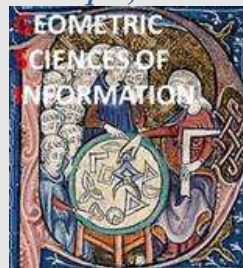


GSI'15

GEOMETRIC SCIENCE OF INFORMATION

28th-30th October 2015, Ecole Polytechnique, Paris-Saclay Campus



Conference chairs:

[Frank Nielsen](#)

LIX - Laboratoire d'Informatique de l'Ecole Polytechnique
UMR 7161, Campus Paris-Saclay
Palaiseau, France

[Frédéric Barbaresco](#)

President of SEE Club ISIC *Ingénierie des Systèmes d'Information et de Communications*
Thales Air Systems
Limours, France

Local organizing committee:

To be defined

First announcement and call for papers

As for GSI'13 (<https://www.see.asso.fr/gsi2013>), the objective of this SEE Conference GSI'15, hosted by Ecole, is to bring together pure/applied mathematicians and engineers, with common interest for Geometric tools and their applications for Information analysis.

It emphasizes an active participation of young researchers for deliberating emerging areas of collaborative research on "Information Geometry Manifolds and Their Advanced Applications".

Current and ongoing uses of Information Geometry Manifolds in applied mathematics are the following: Advanced Signal/Image/Video Processing, Complex Data Modeling and Analysis, Information Ranking and Retrieval, Coding, Cognitive Systems, Optimal Control, Statistics on Manifolds, Machine Learning, Speech/sound recognition, natural language treatment, etc., which are also substantially relevant for the industry.

The Conference will be therefore being held in areas of priority/focused themes and topics of mutual interest with a mandate to:

- Provide an overview on the most recent state-of-the-art
- Exchange of mathematical information/knowledge/expertise in the area
- Identification of research areas/applications for future collaboration
- Identification of academic & industry labs expertise for further collaboration

This conference will be an interdisciplinary event and will federate skills from Geometry, Probability and Information. The conference proceedings are published in Springer's Lecture Notes in Computer Science (LNCS) series.

Authors will be solicited to submit a paper in a special Issue "Geometric Science of Information" in Entropy Journal, an international and interdisciplinary open access journal of entropy and information studies published monthly online by MDPI.

<http://www.mdpi.com/journal/entropy>

Important Dates:

Main deadlines are the following:

- Deadline for 8 pages LNCS format: 1st of March 2015
- Notification of acceptance: 30th of April 2015
- Final paper submission: 30th of May 2015

Provisional topics of Special Sessions and Keynote Speakers:

Provisional Topics of Special Sessions:

- Shape spaces (geometric statistics on manifolds and Lie groups, deformations in shape space,...)
- Probability/optimization & algorithms on manifolds (structured matrix manifold, structured data/Information, ...)
- Relational and discrete metric spaces (graph metrics, distance geometry, relational analysis,...)
- Computational and hessian information geometry,
- Algebraic/infinite dimensionnal/Banach information manifolds,
- Divergence geometry,
- Tensor-valued morphology,
- Optimal transport theory,
- Manifold & topology learning

Provisional program of Keynote Speakers:

Stochastic Flow on Compact and Non-Compact Manifolds, [Marc Arnaudon](#)

To be completed

Secretariat:



SEE MaxEnt 2014
Mrs. Valérie ALIDOR
SEE, France
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Fax: + 33 (0) 1 56 90 37 19

Internet web page:

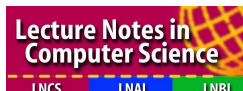
<http://www.gsi15.org/>

Scientific committee:

[Jesus Angulo](#) - Mines-Paristech
[Marc Arnaudon](#) - Université de Poitiers
[Michael Aupetit](#) - CEA LIST
[Frédéric Barbaresco](#) - Thales Air Systems
[Silvere Bonnabel](#) - Mines-Paristech
[Michel Boyom](#) - Université de Montpellier
[Michel Broniatowski](#) - UPMC
[Frédéric Chazal](#) - INRIA
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