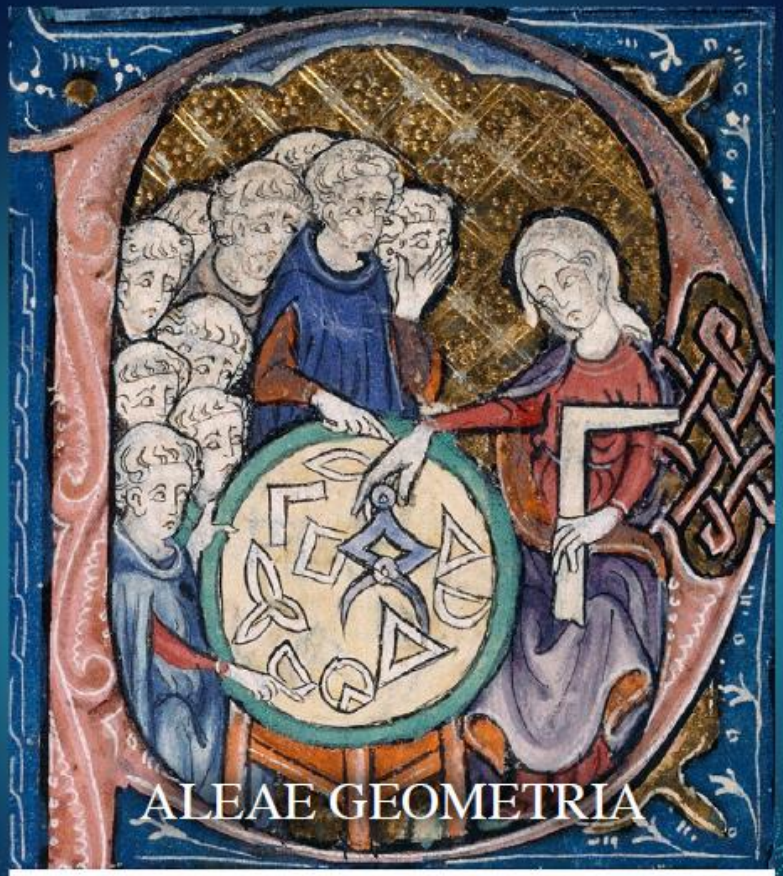
5th Conference on the Geometric Science of Information

GSI'21

Sorbonne University

July 21st – 22nd – 23rd 2021



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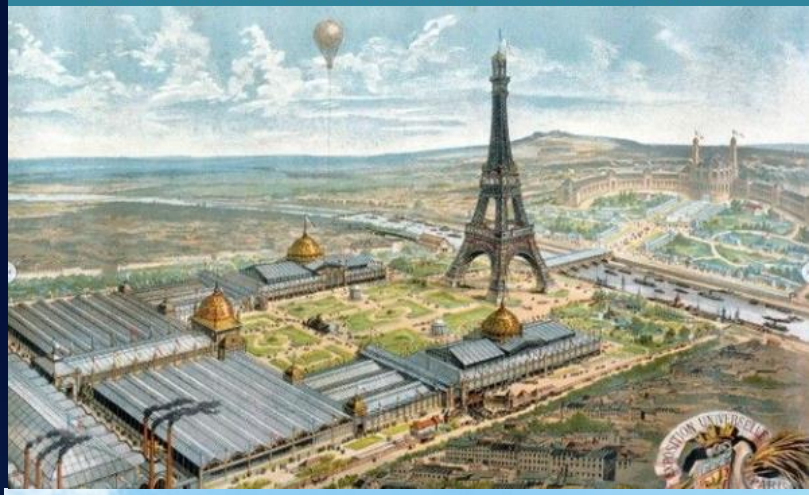
GSI'21

LEARNING GEOMETRIC STRUCTURES



Société de l'électricité, de l'électronique et des technologies de l'information et de la communication

CLOSING SESSION

Geometric Science of Information

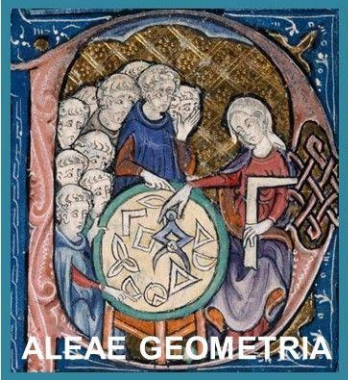
GSI'21 Conference, 21st-23rd July 2021

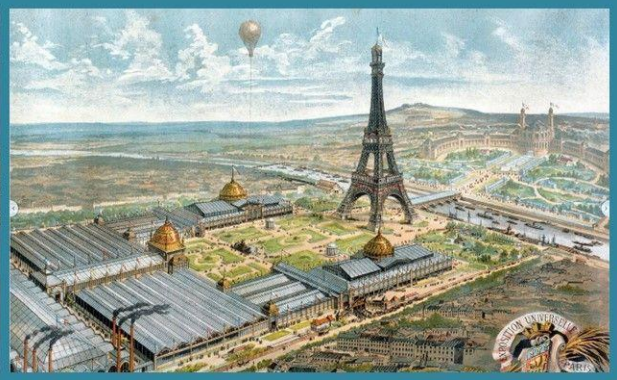
Sorbonne University, Paris

General Chairs: Frédéric BARBARESCO*, Frank NIELSEN**

(*) THALES, SEE ISIC Club President (Ingénierie des Systèmes d'Information & Communications)

(**) Sony CSL Tokyo





GSI'21

LEARNING GEOMETRIC STRUCTURES

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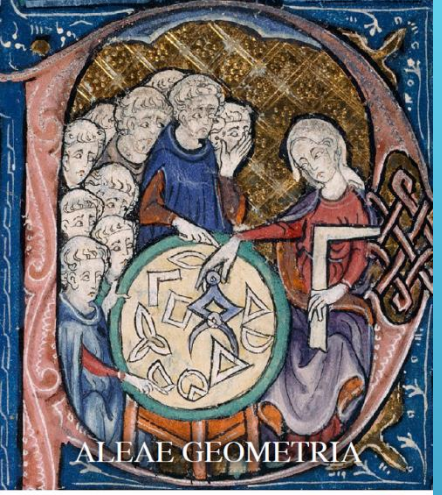

Jean Petitot

Directeur d'Études, Centre d'Analyse et de Mathématiques, Sociales, École des Hautes Études, Paris.

Yvette Kosmann-Schwarzbach

Professeur des universités honoraire

5th GSI'21 Conference

LEARNING GEOMETRIC STRUCTURES

Sorbonne University

July 21st –22nd– 23rd 2021

THANKS TO 6 KEYNOTES & 180 ATTENDEES

Giuseppe Longo

Centre Cavaillès, CNRS & Ens Paris and School of Medicine, Tufts University, Boston
http://www.di.ens.fr/users/longo/

Michel Broniatowski

Sorbonne Université, Paris

Max Welling

Informatics Institute, University of Amsterdam and Qualcomm Technologies
https://staff.fnwi.uva.nl/m.welling
ELLIS Board Member (European Laboratory for Learning and Intelligent Systems: https://ellis.eu)

Maurice de Gosson

Professor, Senior Researcher at the University of Vienna https://homepage.univie.ac.at/maurice.de.gosson
Faculty of Mathematics, NuHAG group

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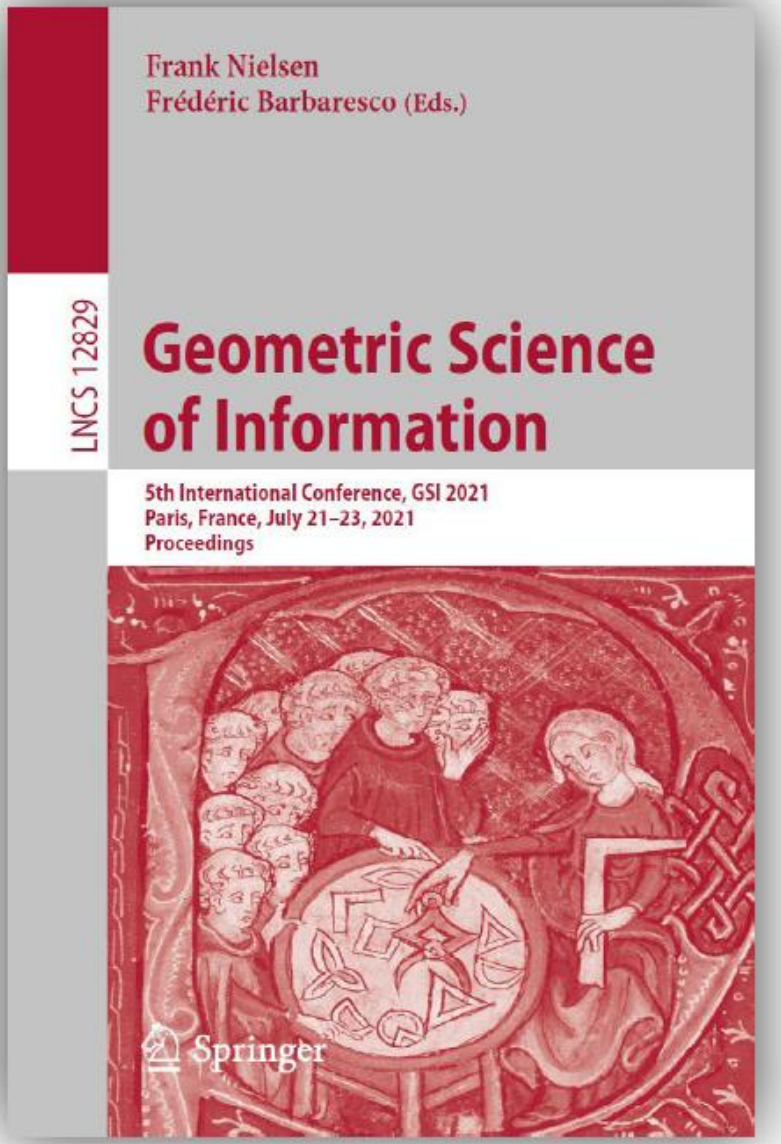

https://www.springer.com/gp/book/9783030802080

https://franknielsen.github.io/GSI/

Good Book to read on the beach this Summer

International Conference on Bayesian and Maximum Entropy methods in Science and Engineering, MaxEnt 2022

July 18-22 2022, Institut Henri Poincaré, Paris

Local organizers:

- Ali Mohammad-Djafari
- Frédéric Barbaresco
- Frank Nielsen
- Martino Trassinelli
- Lune Maillard
- Leila Gharsali
- Maria Trocan
- …

MaxEnt'14 Clos Lucé

Scientific committee:

- John Skilling
- Kevin Knuth
- Udo von Toussaint
- Ariel Caticha
- Robert Niven
- Wolfgang von der Linden
- Julio Michael Stern
- Romke Bontekoe
- Barrie Stokes
- Donald Nelson
- Keith Earle
- …

Institutions & Locals

Institut Henri Poincaré
http://www.ihp.fr/en
Institut des NanoSciences de Paris (INSP)
http://www.insp.upmc.fr
Institut des Neurosciences Paris-Saclay
https://neuropsi.cnrs.fr/
Sorbonne Center for Artificial Intellegence (SCAI)
https://scai.sorbonne-universite.fr/
Institut DATAIA
https://dataia.eu/en
Artificial Intelligence in Paris and Europe
https://ellis-paris.github.io/
SEE: Société de l'électricité, de l'électronique et des technologies de l'information et de la communication
https://www.see.asso.fr/
ISCT: https://isct7.webnode.com/

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1st **GSI'13**
Mines ParisTech
2013

HOPE TO SEE YOU
FOR NEXT GSI EVENT

6th GSI'23
10th Birthday
2023

GSI'21

5th GSI'21 Conference

LEARNING GEOMETRIC STRUCTURES

Sorbonne University

July 21st –22nd– 23rd 2021

WiMLDS
Women in Machine Learning & Data Science

mathematics

Lecture Notes in Computer Science
LNCS LNAI LNBI
Springer

GSI'21 Awards

Jury President: Gabriel Peyré (ENS Paris)

SORBONNE UNIVERSITY SINCE 1257

The 5th international conference on Geometric Science of Information

Learning geometric structures

GSI 2021

July 21st-23rd 2021

Paris-Sorbonne University

SORBONNE CENTER FOR ARTIFICIAL INTELLIGENCE

Achievement award

PRESENTED TO

Matilde Marcolli

California Institute of Technology

Frédéric Barbaresco
Thales, France
General co-chair

Frank Nielsen
Sony Computer Science Laboratories, Japan
General co-chair

Gabriel Peyré
CNRS, ENS, France
Prize committee, President

The 5th international conference on Geometric Science of Information

Learning geometric structures

GSI 2021

July 21st-23rd 2021

Paris-Sorbonne University

WiMLDS Best Paper Award

PRESENTED TO

Rosa Kowalewski and Barbara Gris

AUTHORS OF THE PAPER

SPONSORED BY

MDPI

mathematics

Multi-shape registration with constrained deformations

Frédéric Barbaresco
Thales, France
General co-chair

Frank Nielsen
Sony Computer Science Laboratories, Japan
General co-chair

Gabriel Peyré
CNRS, ENS, France
Prize committee, President

The 5th international conference on Geometric Science of Information

Learning geometric structures

GSI 2021

July 21st-23rd 2021

Paris-Sorbonne University

Best Paper Award

PRESENTED TO

Thomas Bendokat and Ralf Zimmermann

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AUTHORS OF THE PAPER

Endpoint Quasi-geodesics on the Stiefel Manifold

Frédéric Barbaresco
Thales, France
General co-chair

Frank Nielsen
Sony Computer Science Laboratories, Japan
General co-chair

Gabriel Peyré
CNRS, ENS, France
Prize committee, President

BLAISE PASCAL
ALEA GEOMETRIA

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- In 1654, Blaise Pascal submitted a paper to « *Celeberrimae matheseos Academiae Parisiensi* » entitled « ***ALEAE GEOMETRIA : De compositione aleae in ludis ipsi subjectis*** »
  - « … *et sic matheseos demonstrationes cum aleae incertitudine jugendo, et quae contraria videntur conciliando, ab utraque nominationem suam accipiens, stupendum hunc titulum jure sibi arrogat:* ***Aleae Geometria*** »
  - « … *par l'union ainsi réalisée entre les démonstrations des mathématiques et l'incertitude du hasard, et par la conciliation entre les contraires apparents, elle peut tirer son nom de part et d'autre et s'arroger à bon droit ce titre étonnant:* ***Géométrie du Hasard*** »
  - « … *by the union thus achieved between the demonstrations of mathematics and the uncertainty of chance, and by the conciliation between apparent opposites, it can take its name from both sides and arrogate to right this amazing title:* ***Geometry of Chance*** »