Jean-Daniel BOISSONNAT, professeur

Colloques

Mardi 6 juin 2017, Amphithéâtre Maurice Halbwachs

COMPUTATIONAL GEOMETRY AND TOPOLOGY IN THE SCIENCES

Jeudi 8 juin 2017, Amphithéâtre Guillaume Budé

GEOMETRY UNDERSTANDING IN HIGHER DIMENSIONS

mardi 6 juin

09h00 Jean-Daniel BOISSONNAT,
Inria and Collège de France
Welcome

09h10 Franco PREPARATA, *Brown University*
Computational Geometry: the Early Days

09h30 Bernard CHAZELLE, *Princeton University*
Geometry, Dynamics, and Natural Algorithms

10h20 Dan FELDMAN, *University of Haifa*
Computational Geometry for Robotics
and Big Data Systems

11h10 Break

11h40 Sandoy DASGUPTA, *UCSD*
Geometric algorithms for classification
and retrieval in high dimension

14h30 Micha SHARIR, *Tel Aviv University*
Incidences, Distinct and Repeated Distances, Other
Hard Erdös Problems in Geometry,
and Their Applications: The new Algebraic Era

15h20 Konstantin MISCHAIKOW, *Rutgers University*
Towards a Computational, Discrete Geometric
Foundation for Nonlinear Dynamics

16h10 Break

16h40 Uli WAGNER, *Institute for Sciences
and Technology, Vienna*
Embeddings, Combinatorics, and Algorithms

17h45 Concert de clôture : "Quatuor Rosamonde"
Ravel's string quartet

jeudi 8 juin

09h00 Jean-Daniel BOISSONNAT,
Inria and Collège de France
Welcome

09h10 Sanjoy DASGUPTA, *University California
San Diego*
Cluster trees, near neighbor graphs,
and continuum percolation

10h00 Bertrand MICHEL, *Ecole Centrale de Nantes*
A statistical approach to topological
data analysis

10h50 Break

11h20 Steve OUDOT, *Inria*
Topological Graphs for Data Analysis:
Structure, Stability and Statistics

11h50 Quentin MÉRIGOT, *Université Paris Sud*
Computational geometry, optimal transport
and applications

14h00 Berend SMIT, *EPFL*
The Materials Genome in Action

14h50 Ramsay DYER
Triangulating manifolds

15h40 Break

16h10 Clément Maria, *University of Queensland*
Zigzag persistence: New horizons in topological
data analysis

16h40 Arijit GHOSH, *Indian Statistical Institute*
Combinatorial Macbeath regions for semi-
algebraic set systems

17h10 Valerio PASCUCCI, *University of Utah*
Interactive visualization of high dimensional
data: can we deal with curse of dimentionality
and failure of intuition?