Trieste Algebraic Geometry Summer School (TAGSS) 2019 Algebraic Geometry towards Applications

ICTP

**1 – 5 July 2019
Trieste, Italy**

A growing number of researchers use algebraic geometry in industrial and applied mathematics: applications include biology, coding theory, cryptography, combustion, computational geometry, computer graphics, quantum computing, control theory, geometric design, complexity theory, machine learning, nonlinear PDE, optimization, and robotics.

Algebraic Geometry of data clouds:

- density of cloud data
- reach of a manifold and topological data analysis
- classical theory of polar classes of a variety
- the nearest points to a variety
- the EDD degree of a manifold and its properties
- the Bottleneck degree of varieties

Biochemical reaction networks modeled by mass-action kinetics:

- basics on reaction networks with mass-action kinetics: biochemical notions, algebraic notions, dynamical notions
- steady state invariants and computational algebraic geometry
- networks with toric steady states
- counting the number of positive steady states and real solutions to polynomial systems

Contributed talks:

Participants interested in giving a short communication are invited to submit an abstract.

Directors:

V. BEORCHIA, Università di Trieste
A. BORALEVI, Politecnico di Torino
B. FANTECHI, SISSA

Local Organizer:

F. RODRIGUEZ VILLEGAS, ICTP

Workshop Speakers:

A. DICKENSTEIN - Universidad de Buenos Aires
S. DI ROCCO - KTH Royal Institute of Technology Stockholm

How to apply:

Online application:
http://indico.ictp.it/event/8695/

Women are particularly encouraged to apply.

Grants:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee.

Deadline:

3 March 2019

MINISTERO DELL'ISTRUZIONE, DELL'UNIVERSITÀ E DELLA RICERCA

FOUNDATION COMPOSITIO MATHEMATICA

POLITECNICO DI TORINO
Dipartimento di Scienze Matematiche "G. L. Lagrange"

DISMA
ECCELLENZA 2018-2022

SISSA

European Mathematical Society

DMG dipartimento di matematica e geoscienze

ICTP
The Abdus Salam
International Centre for Theoretical Physics
www.ictp.it
Trieste, Italy

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