MASTER SCHOOL
GEOMETRY AND DATA SCIENCE

ABOUT OUR SUMMER SCHOOL

The aim of this summer school is to provide an insightful overview of two very actual mathematical topics: Geometry and Data Science. The two themes will first be developed separately and then will merge through the study of highly efficient recent algorithm developed to handle complex data.

WHO IS IT FOR?

> This program is open to participants with a level which vary from the end of the third undergraduate year of mathematics to the end of the first master year.

INSTITUT de MATHÉMATIQUES de TOULOUSE

UNIVERSITÉ TOULOUSE III PAUL SABATIER

CAMPUS FRANCE campusfrance.org

Liberté • Égalité • Fraternité RÉPUBLIQUE FRANÇAISE AMBASSADE DE FRANCE EN CHINE

Université Fédérale

Toulouse Midi-Pyrénées

PROGRAM

> **6 modules of 10h of and 1 module of 20h on Geometry and Statistics:**

  - An introduction to Riemannian Geometry (10h)
  - Probability background for statistical learning (10h)
  - Analysis on manifolds (10h)
  - Statistical Learning (10h)
  - Wasserstein geometry and Optimal transport (10h)
  - Using the geometry of the Wasserstein space in statistical learning (10h)
  - Implementation and projects.
    Both in Python using the Anaconda distribution (20h)

> **3h of intercultural workshop**

> **A program of excursions:**

  - Toulouse and its fascinating heritage
  - World heritage sites by UNESCO (Cordes sur Ciel, Albi and Carcassonne…)
  - Day trip to the sea (Narbonne and Gruissan)
  - Visit of the Space City
  - Visit of the Halles aux Machines
  - Cruise on the Garonne river
  - Visit of Airbus and Aeroscopia Museum

HOW TO APPLY?

Please contact:

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PRACTICAL INFORMATION

ACCOMMODATION

Students will be housed in an individual room with private bathroom and shared kitchen in one of the University's hall of residence located near the Campus.

PROGRAM FEES

25 000 CNY including*:

> all teaching and tutorials
> accommodation in single room
> lunches (from Monday to Friday)
> all activities and excursions
> welcome breakfast
> farewell cocktail

* The cost does not include flights, insurances (medical insurance), visa, breakfasts, dinners and all extra costs.

TIMETABLE

The summer school will be held from July, 1st to 26th, 2019.

PARIS

TOULOUSE

MAXIMUM NUMBER OF ENROLMENTS : 20

Participation diploma will be delivered

en.univ-toulouse.fr

#MakeItHappenTogether