



**UNIVERSITÀ  
DI PARMA**

**DIPARTIMENTO DI INGEGNERIA  
E ARCHITETTURA**

**DOTTORATO DI RICERCA IN INGEGNERIA CIVILE E ARCHITETTURA – XXXIII CICLO**

PhD Course on “Introduction to Geostatistics” (6 CFU)

9-26 April 2018

Lecturer : prof. J. Jaime Gómez-Hernández <http://jgomez.webs.upv.es/> from the Universitat Politècnica de València.

Program of the course (36 hours)

April 9, 2018, 10:00-12:00; 13:00-15:00

Introduction. Recall of univariate and bivariate statistics. The need of spatial statistics.

April 11, 2018, 10:00-12:00; 13:00-15:00

Characterization of spatial continuity. The variogram. Variogram models.

April 13, 2018, 10:00-12:00; 13:00-15:00

Introduction to SGeMS. Practical exercise on basic statistics calculation and variogram modeling.

April 16, 2018, 10:00-12:00; 13:00-15:00

Modeling spatial continuity. The random function model. Stationarity and ergodicity. The multiGaussian random function model.

April 18, 2018, 10:00-12:00; 13:00-15:00

Estimation. Ordinary kriging. Other flavors of kriging.

April 20, 2018, 10:00-12:00; 13:00-15:00

Estimation exercise.

April 23, 2018, 10:00-12:00; 13:00-15:00

Modeling local uncertainty. MultiGaussian kriging. Indicator kriging.

April 24, 2018, 10:00-12:00; 13:00-15:00

Modeling global uncertainty. Stochastic simulation. Sampling from a random function model. Sequential simulation.

April 26, 2018, 10:00-12:00; 13:00-15:00

Simulation exercise.

The course will comprise theoretical lessons and practices. Students are requested to bring with them their laptop.

Location of the course is the Engineering Scientific Building (Plesso Ingegneria Scientifica), Parco Area delle Scienze 181/A, Parma.

**There is no registration fee for the course, but participants must cover their own travel and subsistence costs and an adhesion is required by mailing to [mariagiovanna.tanda@unipr.it](mailto:mariagiovanna.tanda@unipr.it) before March 30th, 2018.**

For more information please contact prof. Maria Giovanna Tanda at [mariagiovanna.tanda@unipr.it](mailto:mariagiovanna.tanda@unipr.it).

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