



The Delhi GIS-R school is an Indo-French collaboration between CNRS JNU and CPR designed as a programme of intensive workshops on theoretical and methodological issues in spatial modelling. This School provides a unique opportunity for scholars/researchers to learn how to analyse large spatialised datasets. The programme will combine lectures and R-tutorials in the morning sessions and participants will develop projects in small groups in the afternoon sessions to allow them to apply methods and technical skills that are introduced in the morning sessions.

## WORKSHOP PROGRAMME 9 – 12 APRIL 2019

### VENUE

Centre for the Study of Regional Development,  
Jawaharlal Nehru University, Delhi

### FACULTY

**Paul Chapron** is a researcher in computer science at the French National Mapping Agency (IGN). His themes of interest are Theoretical Geography (urban systems), Sociology of Organizations, Urban planning (right to build). He is especially interested in Agent Based Modelling, Simulation Model Analysis and Spatial Analysis methods.

**Hadrien Commenges** is an associate professor of Geography at the University Paris 1 Panthéon-Sorbonne. He has been an urban transportation expert in Barcelona and his research focuses on quantitative methods applied to urban geography, mainly in the field of urban mobility and transportation. Prof. Commenges obtained his PhD from Université Paris Diderot.

**Thomas Louail** holds a permanent research position at CNRS Institute for Humanities and Social Sciences (INSHS) and is currently posted at Géographie-cités in Paris. His work is on the use of pervasive anonymised individual data to measure, model, and hopefully better understand social dynamics. He has a PhD in computer science from the University of Evry.

### PROGRAMME

#### DAY 1:

- R as a GIS - nature of spatial information; Basic geometries (point, line, polygon, etc.) and features
- Reading, writing, manipulating spatial information in R with the SF package
- Geometrical and/or spatial operations with SF; coordinate systems and projections of geographical information

#### DAY 2:

- Point patterns analysis
- Summarising a spatial point distribution
- Comparison with classical spatial models

#### DAY 3:

- Spatial networks analysis

#### DAY 4:

- Spatial analysis of regional data

### ORGANISERS

#### Eric Denis,

CNRS Director of UMR Géographie-cités, Paris

#### Partha Mukhopadhyay,

Senior Fellow, Centre for Policy Research, Delhi

#### Milap Punia,

Professor, CSR, Jawaharlal Nehru University, Delhi

#### Olivier Telle,

Head of Territorial Dynamics, Centre de Sciences Humaines, Delhi

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**Application to be sent to  
girschool@gmail.com  
by 6pm on  
28 MARCH 2019**

Please note that this school is aimed for students familiar with R software. Please send a CV along with your application. A selection will be made prior to the school. All the teaching material (including slides, source code, exercises and their solutions) will be made publicly available in a dedicated GitHub repository.