Potential attendants:

- Preferably, students should have completed—or be doing—graduate/postgraduate studies and/or research in topics related with SPATIAL ANALYSIS: Regional Science, Urban Economics, Local Planning, International Economics, Geopolitics, Transport, Networks, Geomarketing, Epidemiology, Geology, etc.

- Experts working in regional/urban research and local planning in Governmental Agencies and Research Institutes are welcome.

- Exceptionally, undergraduate students: > 200 ECTS credits.

REGISTRATION FEES:

<table>
<thead>
<tr>
<th>Category</th>
<th>Before February 4, 2019</th>
<th>After February 4, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinary fees</td>
<td>250 €</td>
<td>400 €</td>
</tr>
<tr>
<td>UAM students</td>
<td>150 €</td>
<td>250 €</td>
</tr>
<tr>
<td>UAM former students ('Alumni')</td>
<td>200 €</td>
<td>320 €</td>
</tr>
</tbody>
</table>

A STATA 15 free temporary license will be provided if needed.

For PREREGISTRATION, send an email to econres@uam.es

SPATIAL ECONOMETRIC ANALYSIS WITH STATA AND R

Place: FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION, UNIVERSIDAD AUTÓNOMA DE MADRID

Duration: From February 11 to 15, 2019 (26 hours, 2.5 ECTS)

Faculty:

Prof. Coro Chasco (UAM, Spain)
Prof. Ludo Peeters (Hasselt University, Belgium)
Prof. Andrés Vallone (UCN, Chile)

Maximum: 25 students
The GOAL of the Seminar is to provide the participants with a sound understanding of basic and more advanced principles of spatial econometrics and to offer tools for practical application of the methodology. Commonly available software products (STATA and RStudio) will be introduced and practiced in the PC training sessions.

Program:

I PART: How to use R for spatial analysis (10 hours).

1st Session: Monday 11th of February, 15:30 – 19:30 (4 hours)
   I.1. Introduction to R.
   I.2. Treating data with R.
   I.3. Using R

2nd Session: Tuesday 12th of February, 10:00 – 13:00 (3 hours)
   II.1. Think as a computer
   II.2. Conditionals
   II.3. Loops: how to build own functions

3rd Session: Tuesday 12th of February, 14:30 – 17:30 (3 hours)
   III.1. Use of pre-programming functions
   III.2. Basic statistics in R
   III.3. Packages: installation and usage

II PART: Spatial Autoregressive Models with R (9 hours).

4th Session: Wednesday 13th of February, 10:00 – 13:00 (3 hours)
   IV.1. Exploratory spatial data analysis (ESDA).

5th Session: Wednesday 13th of February, 14:30 – 17:30 (3 hours)
   V.1. Specification strategies in spatial cross-sectional regression models.
   V.2. Example of specification and estimation strategies in cross-sectional regression models in R.

6th Session: Thursday 14th of February, 10:00 – 13:00 (3 hours)
   VI.1. Spatial panel data models in R.

III PART: Exploratory spatial data analysis and spatial econometrics using STATA (7 hours).

7th Session: Thursday 14th of February, 14:30 – 18:30 (4 hours)
   VII.1. Old STATA commands prior to STATA 15.
   VII.2. New STATA commands in STATA 15.

8th Session: Friday 15th February, 10:00 – 13:00 (3 hours)
   VIII.1. EXTENDED ‘REAL WORLD’ APPLICATION.
INFORMATION ABOUT THE COURSE:

- Workshop daily activities will be taking place at the Faculty of Economics and Business Administration (module 14, 2nd floor), which is located in the Campus of Cantoblanco, Francisco Tomás y Valiente 5, Universidad Autónoma de Madrid.

- **How to arrive to the Campus of Cantoblanco, Universidad Autónoma de Madrid:**

  **A. From the Adolfo Suárez Madrid-Barajas Airport:**

  - By the “Cercanías” commuting train: first, line C-1 and stop in “Chamartín” station; second, take C-4 and stop in “Cantoblanco Universidad” station.

  **B. From the city by the “Cercanías” commuting train:**
  Destination: “Cantoblanco Universidad”. There are two lines:
  - Line C4a (Parla-Atocha-Alcobendas/San Sebastián de los Reyes).
  - Line C4b (Parla-Atocha-Tres Cantos/Colmenar Viejo).
  In this website, for example, from the “Atocha” station, select:
  - Departure point: “Atocha”
  - Destination: “Cantoblanco Universidad”
  - Date: 11/02/2019

  **C. From the city by bus:**
  - Destination: “Cantoblanco (Univ. Autónoma)”. There are two lines:
    - Line 714 (Plaza Castilla – Cantoblanco (Univ. Autónoma) – Comillas).
    - Destination: “Road M-607”. There is one line:
      - Line 828 (Campo de las Naciones – Aeropuerto – Cantoblanco (Universidad Autónoma).

  **D. By car:** To get to Campus by car, you should take the highway from Madrid to Colmenar Viejo (M-607) and exit at Km. 15. You may access the Campus through both the North and South entrances, though the Erasmo Residence is closer to the North entrance.

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**Organized and sponsored by:**

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