



# Sustainable Regional Development Academy

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## Module 4

Spatial Econometrics

## Goals

Acquire understanding of the need for, and the consequences of, employing spatial econometric models in the impact assessment of local and regional policies.

## Competencies

- Understanding how Spatial Econometric specifications differ from standard linear models
- Getting a hands-on introduction to some of the main Spatial Econometric models on a widely used statistical software
- Interpreting results

## Contents

- Theoretical introduction to Spatial Econometrics: why do we use it? When is it needed?
- Implementation of some of the main Spatial Econometric models on R

## Applications

Spatial Econometrics can be widely applied to problems whose outcomes are spatially bounded, and, therefore, subject to distance decay effects. Fields of applications are vast, including local policy impact assessments, analysis of political preferences, growth regressions, and many more.

## References

Pace, R Kelley, and JP LeSage. 2009. "Introduction to Spatial Econometrics." *Boca Raton, FL: Chapman & Hall/CRC*.

## Lecturer



### Andrea Caragliu

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## Biographical note (max. 200 words)

Andrea Caragliu is Associate Professor of Regional and Urban Economics at Politecnico di Milano since 2018. He holds a Ph.D. in Spatial Economics, from VU University Amsterdam, 2015, and a Ph.D. in Management, Economics and Industrial Engineering, Politecnico di Milano, 2010. The dissertation has been awarded the Merit Prize of the EU Committee of the Regions Prize for the Best Doctoral Dissertation and Diploma d'Onore AISRe for the best doctoral thesis in Regional Science "Giorgio Leonardi" 2010.

From 2019 to 2024, he was the Executive Director of the Regional Science Association International, for which he previously edited the Newsletter. He now acts as Editor-in-Chief of *Regional Science, Policy and Practice*, while previously he acted as associate Editor for *Global Challenges and Regional Science*. Since 2025, he is the Coordinator of the PhD programme in Architecture, Built Environment and Construction Engineering at Politecnico di Milano.

He is a member and, for the 2013-2016 term, auditor of the Italian Regional Science Association (AISRe), and he is also a member of the European Regional Science Association (ERSA), and the American Economic Association (AEA).

He was a visiting scholar at the Spatial Economics Department of the Free University of Amsterdam from 2008 to 2009. He has been involved in several research projects, especially at the European level, financed by the ESPON programme, FP7 and FP6, and the European Commission directly.