

# Specialization: Spatial Economics

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Instructors:

**Mathias Moser**

**Franziska Disslbacher**

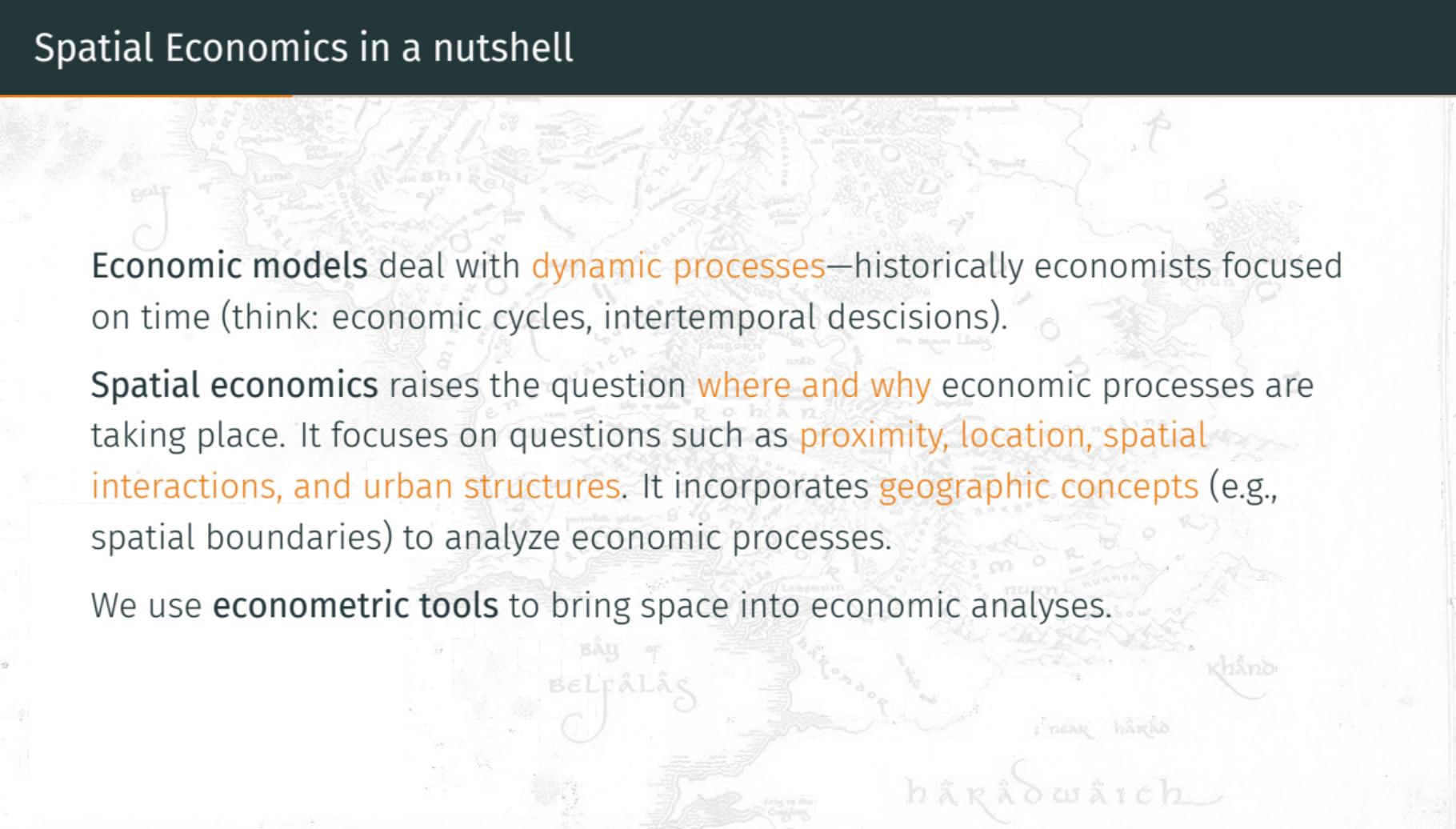
Institute for Economic Geography (WGI)

Research Institute Economics of Inequality (INEQ)



(xkcd)

# Spatial Economics in a nutshell



**Economic models** deal with **dynamic processes**—historically economists focused on time (think: economic cycles, intertemporal decisions).

**Spatial economics** raises the question **where and why** economic processes are taking place. It focuses on questions such as **proximity, location, spatial interactions, and urban structures**. It incorporates **geographic concepts** (e.g., spatial boundaries) to analyze economic processes.

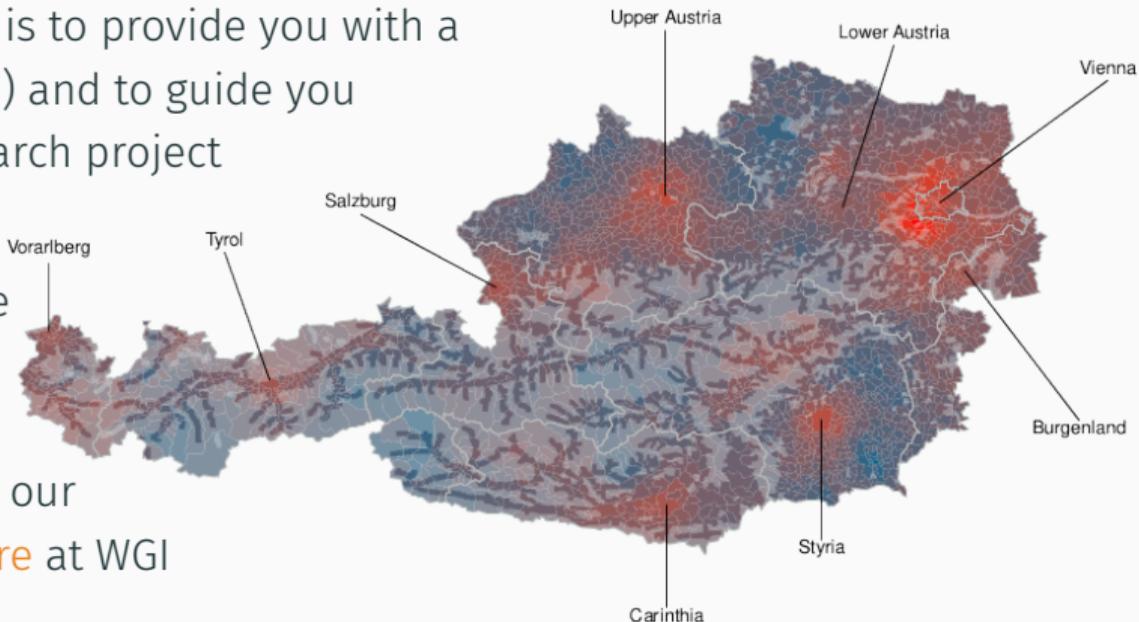
We use **econometric tools** to bring space into economic analyses.

# Topics and Outcomes

This course is structured along current debates in the scientific community, especially **inequality**, **growth convergence**, and **environmental issues**.

Our goal as instructors is to provide you with a spatial toolkit (**Course I**) and to guide you through your own research project (**Course II**).

You will learn to handle **spatial data**, **make plots** like this and have access to use our **computing infrastructure** at WGI



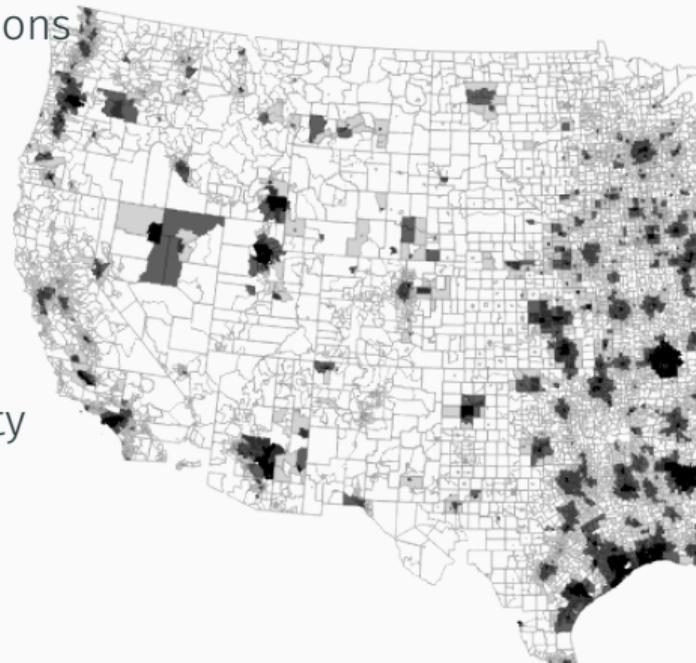
# The Spatial Economics-Package

## Specialization Seminar (I)

- Understand spatial processes, modelling
- Hands-on experience: Split theory/coding sessions
- Spatial Econometrics training using R
- Get to know current issues

## Research & Policy Seminar (II)

- Special topics in spatial econometrics
- Real data, real issues, focus on spatial inequality
- Get to know the R spatial ecosystem inside-out
- Write your own scientific paper, step-by-step



## Units | Course I / Course II

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|                 |   |
|-----------------|---|
| Thu, 10.10.2019 | Getting started: Algebra, OLS, Projections.       |
| Thu, 17.10.2019 | Spatial Basics: Borders, Weights, Shapefiles.     |
| Thu, 24.10.2019 | Visuals: Plotting, Mapping, ESDA.                 |
| Thu, 31.10.2019 | Econometrics I: Beyond OLS                        |
| Thu, 07.11.2019 | Current topics, own project                       |
| Thu, 14.11.2019 | Econometrics II: Impacts, Spatial Processes.      |
| Thu, 21.11.2019 | Advanced Spatial R Routines                       |
| Thu, 28.11.2019 | Econometrics III: Advanced Regression techniques. |
| Thu, 05.12.2019 | Special topics: GWR & friends.                    |
| Thu, 12.12.2019 | Open Classroom for both courses [optional]        |
| Thu, 19.12.2019 | Final Exam  |
| <hr/>           |   |
| Thu, 09.01.2020 | Deep-dive into R                                  |
| Thu, 16.01.2020 | Hacking Session                                   |
| Thu, 23.01.2020 | Final Presentations                               |

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# Grading & Evaluation

## Course I

Exam (65%)

Assignments (20%)

In-class discussion or  
student inputs (15%)

## Course II

Class project/paper (75%)

Presentation (15%)

Active participation (10%)

### Grading Key

≥ 90% --> Sehr gut

≥ 75% --> Gut

≥ 60% --> Befriedigend

≥ 50% --> Genügend

Questions?



SPACE IS  
LITERALLY  
THE MOST  
STUPID  
THING  
THERE IS

-SLAVOJ ŽIZEK