

# Ius Commune Conference 2019

## Workshop: Empirical Legal Studies (I)

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Friday, 29 November (09.00 - 12.00)

Building: Oude Valk

Room: Bronnenlokaal

### Participants

**Chairs:** Prof. Gijs van Dijck and Dr. Matthias Van Der Haegen (Maastricht University)

The purpose of this workshop is to familiarize the audience with innovative empirical methods which can be applied to the field of law and law enforcement, in order to contribute to the increase of technology literacy skills among legal scholars. This hands-on workshop is built around two parts: (i) case network analysis with Gephi (morning session); and (ii) machine learning in Python (afternoon session).

### Case Network Analysis with Gephi

Complex systems are all around us. Until recently, their understanding, mathematical description, prediction, and control were out of reach. The emergence of network science at the beginning of the 21<sup>st</sup> century has changed that. A complex system can be represented as a network and studied with network analysis methods and techniques. Building upon these developments, legal scholars have started applying network analysis to a variety of long-standing legal problems. Examples of legal research questions that network analysis can help answer include, but are not limited to:

1. What are the most important precedents?
2. How does case importance change over time?
3. Have certain legal topics or legal concepts gained or lost importance over time?
4. Which clusters of decisions can be distinguished?

The objective of this workshop is to introduce participants to the growing field of network science and legal network analysis with Gephi, a network analysis and visualisation software package.

During the workshop the participants will:

1. Learn about network analysis.
2. Learn why centrality measures and community detection are relevant to analyse networks.
3. Get a tour of Gephi.
4. Apply their new knowledge to investigate a network of the most important precedents of the Court of Justice of the European Union.

In order to have a quick start, participants are kindly requested to make sure that they [download](#) and install Gephi on their laptop. In case of an error when opening Gephi, a [Java update](#) may be necessary. If Gephi still returns a Java error, participants are advised to [check this video](#) (Windows).