



Social Simulation Conference 2022

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Overcoming barriers in Computational Social Science Education

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In this workshop, we intend to discuss the problems related to teaching computational methods to the students of social sciences, exchange experiences and ideas related to this problem. We would then like to share **educational materials we have prepared within the [ACTISS project](#) that help overcome the barriers in computational social science education on an introductory level** (CSS for absolute beginners) and gather ideas for further applications of the materials and for the best ways to make them most useful for academic teachers.

The workshop programme

Part1 - EXCHANGE OF TEACHING EXPERIENCES

With an increasingly turbulent society, the demand for people who understand the social processes and at the same time are capable of analysing behavioural dynamics using computational methods is rising. However, educating these people can be a challenge. Many students of social sciences do not feel capable enough to study subjects which require competences in mathematics and/or ICT. It is correlated with gender composition of this population, as girls are often conditioned from an early childhood to doubt their STEM related abilities. In a typical social studies curriculum students attend obligatory courses in statistics and quantitative methods. These are usually perceived as difficult and computational sociology is often associated with bad experiences with those courses. The problem is described in the literature as mathematics and statistics anxiety.

In this part of the workshop we will be talking about our experiences in teaching computational social sciences. We will discuss the challenges we encounter and think of what makes a good teaching/learning experience.

Part2 – PRESENTATION OF EXEMPLARY TEACHING MATERIALS

We started a project called **ACTiSS – Action for Computational Thinking in Social Sciences - an educational project aimed at fostering the development of computational thinking among social science students and young professionals**. The University of Warsaw together with the University of Groningen and the Alexander von Humboldt Institute for Internet and Society has developed a series of Massive Open Online Courses (MOOCs) that introduce the basic concepts of CSS for beginners, in an engaging and accessible way. The developed digital educational materials are freely available to learners and teachers (on Futurelearn and on the projects website).

→ [People, Networks and Neighbours: understanding social dynamics](#) (main introductory course)

→ [Social Network Analysis: The networks connecting people](#)

→ [Understanding Human Behaviour: Introduction to Game Theory and Shared Resources](#)

→ [Decision Making in a Complex World: Using Computer Simulations to Understand Human Behaviour](#)

→ Why do ghettos form in a tolerant society? Introduction of cellular automata (website course only)

In this part of the workshop we will guide you through some examples of teaching materials we prepared within the project. These will include:

1. Videos
2. Quiz
3. Introductory text
4. Simple simulation exercise
5. Discussion step

Part3 – BRAINSTORMING SESSION

In this part of the workshop we will try to think of some class ideas for our teaching. We will start with the classical first step which is to define a teaching goal and an audience of the class. We will discuss the potential usefulness of presented materials and work on additional ideas for materials that could be supportive for teaching social computation

We are looking forward to meeting you!

More info: <https://actiss-edu.eu>