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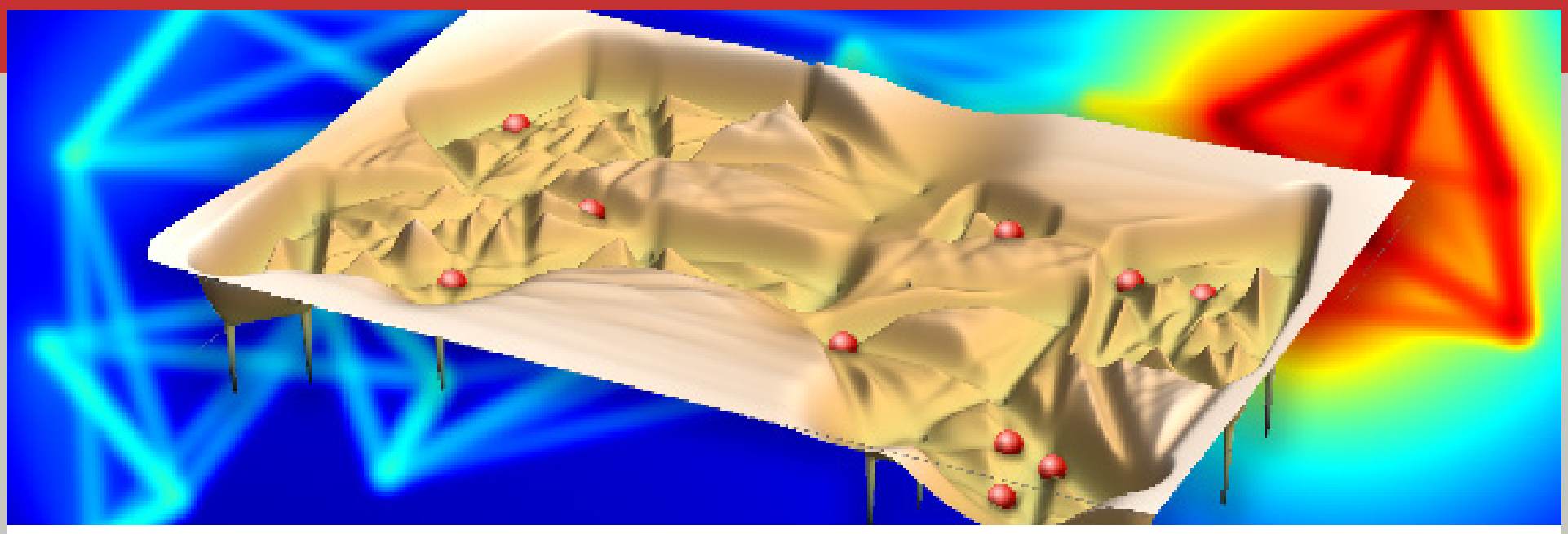

Spring 2021 Course on

Agent-Based Modelling
of Social Systems

Individuals live in groups! The weave of their dynamical and differentiated interactions results in complex societies, whose properties and ruling principles can only be fully unravelled when the underlying social system is studied from a formal standpoint.

In this course, we use agent-based modelling as a bottom-up tool to study social systems. Agents have internal states, the ability to perceive, and to change their environment and to interact with other agents. Their (inter)actions result in collective dynamics with emergent properties that need to be analysed and understood quantitatively.

We focus on a parsimonious description of the agent behaviour which relates individual interaction rules to the dynamics on the system level, and complements engineering and machine learning approaches to modelling.

Whilst the lectures focus on the theoretical foundations of agent-based modelling, they are illustrated on a more practical level in weekly exercise classes.

A detailed syllabus is available at
http://www.sg.ethz.ch/teaching/abm

Prof. Dr. Dr. Frank Schweitzer

When? Thursday, 13-15 (V), 17-18 (U)
Where? HG E 1.2 (V), HG E 33.3 (U)

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