Applying a Complex Adaptive Systems Approach to Regional Economics: big data, network analysis, and computational theory

Are the key neoclassical assumptions of perfect rationality, equilibrium, and of independent agents always facing well-defined problems too restrictive? Over the last few decades, there has been increasing attention allotted to the study of regional economies as "ecosystems," comprised of numerous, interlinked, semi-autonomous agents acting without significant central control, coming together to create emergent system outcomes. Together with the development of big-data, network analysis, and computational theory, there is an increased interest in the burgeoning of the field of "complexity economics," which emphasizes non-equilibrium, interrelatedness and algorithmic approaches.

Adopting a broad definition of complexity, this session will bring together articles that address this new line of inquiry, especially those that utilize unconventional data sources and/or methods such as big-data analysis, computation, agent-based modeling or network analysis. Possible topics include regional entrepreneurial ecosystems, economic resilience, regional social networks and economic/employment dynamics.