Complexity

Special Issue on
Cognitive Network Science: A New Frontier

WILEY | Hindawi

CALL FOR PAPERS

The convergence of cognitive science and network science, both multidisciplinary and multifaceted disciplines, is allowing researchers to study the human mind like never before. Areas in the cognitive sciences that have greatly benefited from the application of network science techniques include language development across the lifespan, structure of memory and retrieval processes, learning, cognitive search, and creativity. A complex network-based approach allows researchers to quantitatively examine the structure and dynamics of cognitive constructs. Thus, the aim of this special issue is to illustrate how network science can be applied to quantify and validate theories on human cognition.

In this special issue, we aim to gather and showcase research that represents the state of the art in the application of complex network science methodologies to cognitive science, broadly defined (language, memory, learning, personality, emotions, higher-level cognition, etc.). We are inviting authors to contribute high quality original research articles as well as review articles related to the application of complex network science methodologies to quantify cognitive theory. In line with the cross-disciplinary focus of the journal, manuscripts in this special issue should come from a range of diverse disciplines, including cognitive science, social psychology, educational psychology, computational and theoretical linguistics, computer science, and physics. However, all manuscripts submitted to this special issue must be related to and directly address human cognition. Ultimately, papers submitted to this special issue should demonstrate how the application of complex network science methodologies extends and broadens cognitive science in ways that traditional approaches cannot.

Potential topics include but are not limited to the following:

- Methodological themes
  - Estimation of language network structure from human data
  - Applying network methodologies in predicting human behavior
  - Multilayered complex networks in cognitive science
  - Complex network growth models applied to cognitive science
  - Analysis of dynamical networks
  - Diffusion of information over cognitive and social networks
  - Simulation of search and retrieval processes
  - Big data analysis
- Conceptual themes
  - Language (including its development, acquisition, and decline)
  - Memory (including its structure, e.g., knowledge representations, and processes, e.g., retrieval and search)
  - Learning
  - Personality traits
  - Emotions
  - Creativity and intelligence
  - Cognitive-social networks

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/complexity/cnsn/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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