

# Special Issue on “Parallel and Distributed Processing for Computational Social Systems”

We propose a special issue for the IEEE Transactions of Computational Social systems titled “*Parallel and Distributed Processing for Computational Social Systems*”.

## 1. Scope of Special Issue

Computational methods to represent, model and analyze problems using social information have come a long way in the last decade. Computational methods, such as social network analysis, have provided exciting insights into how social information can be utilized to better understand social processes, and model the evolution of social systems over time. Meanwhile, the emergence of parallel architectures, in the form of multi-core/many-core processors, and distributed platforms, have provided new approaches for large-scale modeling and simulation, and new tools for analysis. This special issue provides a platform to bring together interdisciplinary researchers from areas, including computer science, applied mathematics, social sciences, and computer engineering, to showcase innovative research in computational social systems that leverage the emerging trends in parallel and distributed processing, computational modeling, and high performance computing.

The major topic areas covered by the special issue are:

### 1. Large-Scale Modeling and Simulation for Social Systems.

- E.g. Social network based models, Models of social interactions/influence, Complex Adaptive System (CAS) models, Models incorporating socio-cultural factors, Agent based social modeling and simulation, Modeling with uncertain/incomplete social data, real-time social modeling, social and behavioral theories

### 2. Social Computing Algorithms for Parallel and Distributed Platforms

- E.g. Analysis of massive social data, Algorithms for dynamic social data, Analysis methods for incomplete, uncertain social data, Social computing on new and emerging parallel/distributed architectures

### 3. Applications

- E.g. Emergency management (in areas such as infrastructure resilience, natural disaster management), National security, Health science, Social media analytics

## 2. Review Process

The guest editors for the special issue are:

- Dr. Eunice E. Santos, Ron Hochsprung Endowed Chair and Professor of Computer Science, Illinois Institute of Technology, USA
- Dr. John Korah, Research Assistant Professor, Illinois Institute of Technology, USA

The guest editors will follow a rigorous process for soliciting, reviewing and selecting the papers for the issue. In order to ensure that high quality papers are selected, the guest editors will constitute the review team with renowned researchers in this domain. We estimate that the special issue will have 6 -8 papers. The guest editors are co-founders of the IEEE Workshop on Parallel and Distributed Processing for Computational Social Systems (ParSocial), held in conjunction of IEEE International Parallel & Distributed Processing Symposium (IPDPS). The guest editors will seek to leverage the ParSocial workshop by inviting selected papers from the 2017 workshop to submit to the special issue.

## 3. Tentative Schedule<sup>1</sup>

- Initiate Solicitation: July 31<sup>st</sup>, 2017
- Submission Deadline: September 30<sup>th</sup>, 2017
- First Review: November 15<sup>th</sup>, 2017

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<sup>1</sup> These are earliest dates for each step, which may change if needed.

- Second Review: February 15<sup>th</sup>, 2018
- Publication: Quarter 2, 2018