

# Call For Papers

## IEEE Transaction on Big Data Special Issue on “Knowledge Graphs: Techniques and Applications”

Knowledge graphs, such as Freebase (now WikiData), Yago, NELL, Probase, and Google Knowledge Graph, have attracted increasing attention recent years. Compared to traditional human annotated semantic knowledge bases such as WordNet and Cyc, recent knowledge graphs are mostly constructed by Web-scale data based information extraction or Web-scale users based crowdsourcing, which are enabled by big data processing, storage, and management infrastructures. Given the current scale of knowledge graphs with millions of entities and billions of relations, knowledge graph construction, maintenance, and inference problems are all big data problems, in terms of volume, veracity, velocity and variety.

This special issue focuses on the key techniques and killer applications related to knowledge graph. We invite the articles on novel research to address the key challenges on knowledge graph construction, representation, learning, inference, and applications. Topics of interests include, but are not limited to:

- Information extraction over big data: entities and relations
- Slot filling and validation
- Knowledge graph storage and management
- Knowledge graph embedding
- Knowledge graph completion
- Knowledge graph link prediction
- Entity linking based on big knowledge graph
- Semantic parsing grounded to knowledge graph
- Distant supervision with knowledge graph
- Indirect supervision with knowledge graph
- Text classification and clustering enabled by knowledge graph
- Information retrieval enabled by knowledge graph
- Multi-media, multi-model, and multi-task problems enabled by knowledge graph
- Information visualization based on knowledge graph
- Social media analytics enabled by knowledge graph
- Sentiment analysis with knowledge graph
- Question answering by knowledge graph
- Chatbot incorporated with knowledge graph

### Submission Instructions

Before submitting your manuscript, please ensure you have carefully read the Instructions for Authors for *IEEE Transactions on Big Data* (TBD). The complete manuscript should be submitted through TBDs submission system. To ensure that you submit to the correct special issue, please select the appropriate section in the dropdown menu upon submission. In your cover letter, please also clearly mention the title of the SI.

### Important Dates

- 04/30/2017 Paper submission due
- 06/30/2017 1st round review due
- 08/15/2017 1st revision due
- 09/15/2017 2nd round review due
- 10/15/2017 2nd revision due
- 10/30/2017 Final due

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