TextGraphs-10

**Graph-Based Methods for
Natural Language Processing**

Proceedings of the Workshop

June 17, 2016
San Diego, California, USA

Introduction to TextGraphs-10

Welcome to TextGraphs, the workshop on Graph-based Methods for Natural Language Processing. The tenth edition of the workshop is being organized on June 17, 2016, in conjunction with the 15th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT), being held in San Diego, California, USA.

For the past ten years, the series of TextGraphs workshops has exposed and encouraged the synergy between the field of Graph Theory and Natural Language Processing (NLP). The mix between the two started small, with graph theoretical framework providing efficient and elegant solutions for NLP applications that focused on single documents for part-of-speech tagging, word sense disambiguation and semantic role labeling, got progressively larger with ontology learning and information extraction from large text collections, and has reached web scale through the new fields of research that focus on information propagation in social networks, rumor proliferation, e-reputation, multiple entity detection, language dynamics learning, and future events prediction to name a few.

The tenth edition of the TextGraphs workshop is the latest step in the series, focusing on issues and solutions for large-scale graphs, such as those derived for web-scale knowledge acquisition or social networks. This edition includes papers describing novel NLP problems and applications that have emerged in recent years, and are being tackled using novel graph-based methods and solutions. In this edition, we add a new focus area on the usage of graph-based methods and NLP techniques to connect to resources and applications in the Semantic Web, and present research works about graph-based methods in the field of Semantic Web that are associated with NLP related problems and applications. Bringing together researchers interested in Graph Theory applied to Natural Language Processing and Semantic Web, this workshop provides an environment for further integration of graph-based solutions into different research fields. We believe that this will lead to a deeper understanding of new theories of graph-based algorithms, create new approaches, and widen the usage of graphs.

We are lucky to have two excellent invited speakers for this year's event. We thank Eduard Hovy and Ivan Titov for their enthusiastic acceptance of our invitation. We also thank Graphiq for agreeing to sponsor a student registration and for accepting our invitation to demonstrate a practical application of graph-based methods for information retrieval and natural language processing tasks. Finally, we are thankful to the members of the program committee for their valuable and high quality reviews. All submissions have benefited from their expert feedback. Their timely contribution was the basis for accepting an excellent list of papers and making this edition of TextGraphs a success.

Tanmoy Chakraborty, Martin Riedl, and V.G.Vinod Vydiswaran
TextGraphs-10 Organizers
May 2016

Organizers:

Tanmoy Chakraborty, University of Maryland, USA
Martin Riedl, TU Darmstadt, Germany
V.G.Vinod Vydiswaran, University of Michigan, USA

Program Committee:

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Amarnag Subramanya, Google, USA
Partha Pratim Talukdar, Indian Institute of Science, Bangalore, India
Aline Villavicencio, Federal University of Rio Grande do Sul, Brazil
Piek Vossen, University Amsterdam, Netherlands
Fabio Massimo Zanzotto, University of Rome, Italy

Invited Speaker and Demo Presentation:

Eduard Hovy, Carnegie Mellon University, USA
Ivan Titov, Universiteit van Amsterdam, Netherlands
Graphiq, USA

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Ivan Titov

10:15–10:30   *Embedding Senses for Efficient Graph-based Word Sense Disambiguation*
Luis Nieto Piña and Richard Johansson

10:30–11:00   ***Coffee Break***

11:00–11:25   *Context Tailoring for Text Normalization*
Seniz Demir

11:25–11:40   *Cross-Lingual Question Answering Using Common Semantic Space*
Amir Pouran Ben Veyseh

11:40–12:05   *Network Motifs May Improve Quality Assessment of Text Documents*
Thomas Arnold and Karsten Weihe

12:05–12:20   *Better Together: Combining Language and Social Interactions into a Shared Representation*
Yi-Yu Lai, Chang Li, Dan Goldwasser and Jennifer Neville

12:20–12:40   *Invited Demo: General purpose semantic platform as an information retrieval system*
Graphiq

12:40–14:00   ***Lunch***

14:00–14:15   *Visualization of Dynamic Reference Graphs*
Ivan Rodin, Ekaterina Chernyak, Mikhail Dubov and Boris Mirkin

14:15–15:15   *Invited Talk: To be finalized*
Eduard Hovy

15:15–15:30   ***Conclusion***

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