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Call for Papers
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TextGraphs-4: Graph-based Methods for Natural Language Processing
To be held in conjunction with ACL/IJCNLP 2009, August 2-7, Suntec, Singapore

http://www.textgraphs.org/ws09/index.html

Recent years have shown an increased amount of interest in applying graph theoretic models to computational linguistics. Both graph theory and computational linguistics are well studied disciplines which have traditionally been perceived as distinct, embracing different algorithms, different applications, and different potential end-users. However, as recent research work has shown, the two seemingly distinct disciplines are in fact intimately connected, with a large variety of natural language processing applications adopting efficient and elegant solutions from graph-theoretical framework. Traditional graph theory, which is studied as a sub-discipline of mathematics, has been successfully applied in modeling and solving several applications in Natural Language Processing. More recently, complex network theory, a popular modeling paradigm in statistical mechanics and physics of complex systems, was proven to be a promising tool in understanding the structure and dynamics of languages. Complex network based models have been applied to areas as diverse as language evolution, acquisition, historical linguistics, mining and analyzing the social networks of blogs and emails, link analysis and information retrieval, information extraction, and representation of the mental lexicon. Similarly, in many NLP applications entities can be naturally represented as nodes in a graph and relations between them can be represented as edges. Recent research has shown that graph-based representations of linguistic units as diverse as words, sentences and documents give rise to novel and efficient solutions in a variety of NLP tasks, ranging from part-of-speech tagging, word sense disambiguation and parsing to information extraction, semantic role labeling, summarization, and sentiment analysis.

The TextGraphs workshop addresses a broad spectrum of research areas and brings together specialists working on graph-based models and algorithms for natural language processing and computational linguistics, as well as on the theoretical foundations of related graph-based methods. This workshop is aimed at fostering an exchange of ideas by facilitating a discussion about both the techniques and the theoretical justification of the empirical results among the NLP community members. Spawning a deeper understanding of the basic theoretical principles involved, such interaction is vital to the further progress of graph-based NLP applications. TextGraphs-4 builds on the success of the previous three TextGraphs workshops:

* TextGraphs-1 held at HLT-NAACL 2006 (http://lit.csci.unt.edu/~textgraphs/ws06/)
* TextGraphs-2 held at HLT-NAACL 2007 (http://lit.csci.unt.edu/~textgraphs/ws07/)
* TextGraphs-3 held at Coling 2008 (http://lit.csci.unt.edu/~textgraphs/ws08/)

TextGraphs-3 started the trend of having a special theme for the workshop every year. Consequently, last year the theme was "lexical representation and acquisition". Following the same trend, this year TextGraphs-4 will have a special theme on "Cognitive and Social Dynamics of Languages in the framework of Complex Networks". Cognitive dynamics of languages include topics focused primarily on language acquisition, which can be extended to language change (historical linguistics) and language evolution as well. Since the latter phenomena are also governed by social factors, we can further classify them under social dynamics of languages. In addition, social dynamics of languages also include topics such as mining the social networks of blogs and emails.

The modeling paradigm being complex networks, some of the topics covered by this special theme are:

  * Lexical acquisition and growth of the mental lexicon
  * Phonological, syntactic and semantic acquisition
  * Lexical change
  * Applications of networks in modeling language variation and dialectometry
  * Effect of social structure on language change and evolution
  * Analysis of blog and email networks for IR and IE

Apart from the special theme, TextGraphs-4 also invites submissions on the following (but not limited to) general topics:

  * Graph-based representations, acquisition and evaluation of lexicon and ontology
  * Node and edge labeling for linguistic graphs
  * Properties of lexical, semantic, syntactic and phonological graphs
  * Graph methods for morpho-syntactic annotation, word sense disambiguation, information retrieval, information extraction, summarization, text mining and understanding
  * Random walk models in NLP
  * Graph clustering algorithms
  * Application of spectral graph theory in NLP
  * Unsupervised and semi-supervised graph-based methods
  * Dynamic graph representations for NLP
  * Comparative analysis of graph-based methods and traditional machine leaning techniques for NLP applications.

Important Dates:

  * Paper submissions: May 1, 2009
  * Notification of acceptances: Jun 1, 2009
  * Camera-ready copies due: Jun 7, 2009
  * Workshop: Aug 6/7, 2009

Organizers:

  * Monojit Choudhury, Microsoft Research India
  * Samer Hassan, University of North Texas
  * Animesh Mukherjee, Indian Institute of Technology, Kharagpur
  * Smaranda Muresan, Rutgers University

Program Committee:

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  * Dragomir Radev, University of Michigan
  * Raghavendra Udupa, Microsoft Research India
  * Xiaojun Wan, Peking University, China
  * Søren Wichmann, MPI for Evolutionary Anthropology

Endorsement:

The TextGraphs-4 workshop has been endorsed by SIGLEX.

Author Instructions:

Submissions will consist of regular full papers of max. 8 pages and short papers of max. 4 pages, formatted following the ACL/IJCNLP 2009 guidelines. In order to facilitate blind reviewing, the authors should omit their names and affiliations from the paper. Furthermore, self-references that reveal the author's identity must be avoided.

Special Issue:

Some of the high quality submissions pertaining to the special theme of the workshop will be invited for publication in a special issue named "Network-based Models of Cognitive and Social Dynamics of Language" in the Computer Speech and Language journal, Elsevier (IF: 1.094). Computer Speech & Language publishes reports of original research related to the recognition, understanding, production, coding and mining of speech and language (http://www.elsevier.com/locate/csl).

Guest Editors:
        * Monojit Choudhury, Microsoft Research India
        * Samer Hassan, University of North Texas
        * Animesh Mukherjee, Indian Institute of Technology, Kharagpur
        * Smaranda Muresan, Rutgers University

Aims and Scope:

In this special issue, we would like to compose a collection of articles selected from the high-quality submissions pertaining to the special theme of TextGraphs-4. The topics of interest, therefore, are similar to those listed under the "special theme" topics of TextGraphs-4.

The important deadlines for the special issue are as follows:

  * Paper submissions: October 2009
  * Notification of acceptance: January 2010
  * Camera-ready papers: March 2010
  * Publication: July 2010

Submission Guidelines:

Some of the authors of papers appearing in TextGraphs-4 addressing the special theme will be invited to submit an extended version of their paper, e.g., by providing more details, thereby, giving an in-depth discussion of the results and the related work, by expanding upon the experimental results, and by giving a more thorough and scholarly treatment of the material (which will usually not be possible in the workshop paper due to page limits). While submitting the journal version, the authors are also requested to provide the earlier (published) version accompanied by a brief letter pointing out the developments in the new version.

For the journal version, all submissions should be formatted according to the Computer Speech and Language guidelines for writing papers (http://www.elsevier.com/wps/find/journaldescription.cws_home/622808/authorinstructio ns) and should be submitted using the Elsevier Editorial System for Computer Speech and Language (http://ees.elsevier.com/csl/).