

Special Issue on Concept-Level Opinion and Sentiment Analysis

Submission deadline: 1 July 2012

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Opinions play a primary role in decision-making processes. Whenever people need to make a choice, they are naturally inclined to hear others' opinions. In particular, when the decision involves consuming valuable resources, such as time and/or money, people strongly rely on their peers' past experiences. Just a few years ago, the main sources for collecting such information were friends, acquaintances and, in some cases, specialized magazines or websites.

The passage from a read-only to a read-write Web has provided people with new tools that allow them to create and share, in a timely and cost-efficient way, their own contents, ideas, and opinions with virtually millions of people connected to the World Wide Web. The opportunity to capture the opinions of the general public about social events, political movements, company strategies, marketing campaigns, and product preferences has raised more and more interest both in the scientific community, for the exciting emergent challenges, and in the business world, for the remarkable fallouts in marketing and financial market prediction.

Mining opinions and sentiments from natural language, however, is an extremely difficult task: it involves a deep understanding of most of the explicit and implicit, regular and irregular, syntactical and semantic rules of a language. Existing approaches mainly rely on parts of text in which opinions and sentiments are explicitly expressed such as polarity terms, affect words, and their co-occurrence frequencies. However, opinions and sentiments are often conveyed implicitly through latent semantics, which make purely syntactical approaches ineffective.

In this light, this special issue focuses on the introduction, presentation, and discussion of novel approaches to opinion mining and sentiment analysis that are not entirely based on domain-dependent corpora but also on general-purpose semantic knowledge bases. The main motivation for the issue, in particular, is to go beyond a mere word-level analysis of text and provide novel concept-level approaches to opinion mining and sentiment analysis that allow a more efficient passage from (unstructured) textual information to (structured) machine-processible data, in potentially any domain.

Articles are thus invited in areas such as AI, the Semantic Web, knowledge-based systems, and adaptive and transfer learning for research on opinion and sentiment retrieval and analysis. Potential topics include

- * Opinion and sentiment summarization and visualization
- * Explicit and latent semantic analysis for opinion and sentiment mining
- * Knowledge base construction and integration with opinion and sentiment analysis
- * Transfer learning of opinion and sentiment with knowledge bases
- * Time-evolving opinion and sentiment analysis
- * Corpora and resources for opinion and sentiment analysis
- * Multimodal sentiment analysis
- * Multidomain and cross-domain evaluation
- * Multilingual sentiment analysis and reuse of knowledge bases

Guest Editors

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Submission Guidelines

The special issue will consist of papers on novel methods and techniques for building and using semantic knowledge bases in the field of opinion mining and sentiment analysis. Besides the specified topics of interest, the special issue also welcomes papers on specific application domains of sentiment analysis—for example,

social data mining, influence networks, customer experience management, computer-mediated human-human communication, social media marketing, multimedia management, personalization and persuasion, enterprise feedback management, human-agent, -computer and -robot interaction, intelligent user interfaces, patient opinion mining, surveillance, and art.

Submissions should be 3,000 to 5,400 words (counting a standard figure or table as 200 words) and should follow *IEEE Intelligent Systems* style and presentation guidelines (www.computer.org/intelligent/author). The manuscripts cannot have been published or be currently submitted for publication elsewhere.

We strongly encourage submissions that include audio, video, and community content, which will be featured on the IEEE Computer Society Web site along with the accepted papers.

Questions?

- For general information about the special issue, contact Erik Cambria (include the keyword “concept-level sentiment analysis” in the subject line) at cambria@nus.edu.sg.
- For general author guidelines, see www.computer.org/intelligent/author.
- For submission details, see intelligent@computer.org.
- To submit an article, go to <https://mc.manuscriptcentral.com/is-cs> (log in and then select “Special Issue on Concept-Level Sentiment Analysis”).

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