Sentic Computing Section
A Topical Collection of Cognitive Computation

Rationale

Sentic computing [1] is a rapidly growing multidisciplinary field that addresses typical issues of machine learning such as dependency and transparency in the context of natural language processing. It bridges the gap between statistical text analysis and many other disciplines that are necessary for understanding human language, such as linguistics, commonsense reasoning, semiotics, and affective computing.

Sentic computing, whose term derives from the Latin sensus (as in commonsense) and sentire (root of words such as sentiment and sentience), enables the analysis of text not only at document, page or paragraph level, but also at sentence, clause, and concept level. This is enabled by sentic computing encapsulating both top-down and bottom-up analysis: top-down for the fact that sentic computing leverages symbolic models such as semantic networks and conceptual dependency representations to encode meaning; bottom-up as sub-symbolic methods such as deep neural networks and multiple kernel learning can be exploited to infer syntactic patterns from data.

In the past ten years [2], sentic computing positioned itself as a horizontal technology that served as a back-end to many different applications in the areas of e-business, e-commerce, e-health, e-governance, e-security, e-learning, e-tourism, e-mobility, e-entertainment, and more. Some examples of such applications include financial forecasting, recommendation systems, cyber-issue detection, social media monitoring, and dialogue systems.

In this light, this Section of Cognitive Computation focuses on the introduction, presentation, and discussion of novel approaches that further develop and apply sentic computing models (such as the Hourglass of Emotions [3] and Sentic Patterns [4]), resources (such as AffectiveSpace [5] and SenticNet [6]), algorithms (such as Sentic LDA [7] and Sentic GCN [8]), and applications (such as Sentic PROMs [9] and Sentic Album [10]).

[1] https://sentic.net/sentic-computing.pdf
[2] https://sentic.net/ten-years-of-sentic-computing.pdf
[3] https://sentic.net/hourglass-model-revisited.pdf
[4] https://sentic.net/sentic-patterns.pdf
[5] https://sentic.net/affectivespace.pdf
[6] https://sentic.net/senticnet-7.pdf
[7] https://sentic.net/sentic-lda.pdf
[8] https://sentic.net/sentic-gcn.pdf
[9] https://sentic.net/sentic-proms.pdf
[10] https://sentic.net/sentic-album.pdf

Topics of Interest

Topics of interest for this Section include, but are not limited to:

Sentic Computing for Human-Computer Interaction
- *dialogue systems*
- *multimodal interaction*
- *affective robots*

Sentic Computing for Business Intelligence
- *social media marketing*
- *recommendation systems*
- *customer experience management*

Sentic Computing for Finance
- *market trend prediction*
- *portfolio management*
- *asset allocation*

Sentic Computing for Healthcare
- *outbreak management*
- *patient-reported outcome measures*
- *mental disorder detection*

Sentic Computing for Social Media Monitoring
- *cyber issue detection*
- *political forecasting*
- *public opinion mining*

Sentic Computing for Social Good
- *sexual harassment detection*
- *discrimination prevention*
- *suicidal ideation detection*

Sentic Computing for the Arts
- *emotion visualization*
- *ethnography*
- *emotional design in digital media*

Composition and Review Procedures

Paper submissions should follow the submission format and guidelines for COGN regular papers and be submitted at www.editorialmanager.com/cogn. All papers will be peer-reviewed following COGN reviewing procedures. The Section Editor will make an initial assessment of its quality before the submission is sent out for peer review. Papers that either lack originality and/or clarity in presentation will likely be rejected by reviewers. Papers that fall outside the scope of the Section but fall within the scope of COGN will be diverted to the normal track in COGN. Authors should select **"Topical Collection: Sentic Computing"** when they reach the "Article Type" step in the submission process. The submitted papers must propose original research that has not been published nor currently under review in other venues. Previously published conference papers should be clearly identified by the authors at the submission stage and an explanation should be provided about how such papers have been extended.

Section Editor

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