Sixth International Joint Conference on
Natural Language Processing
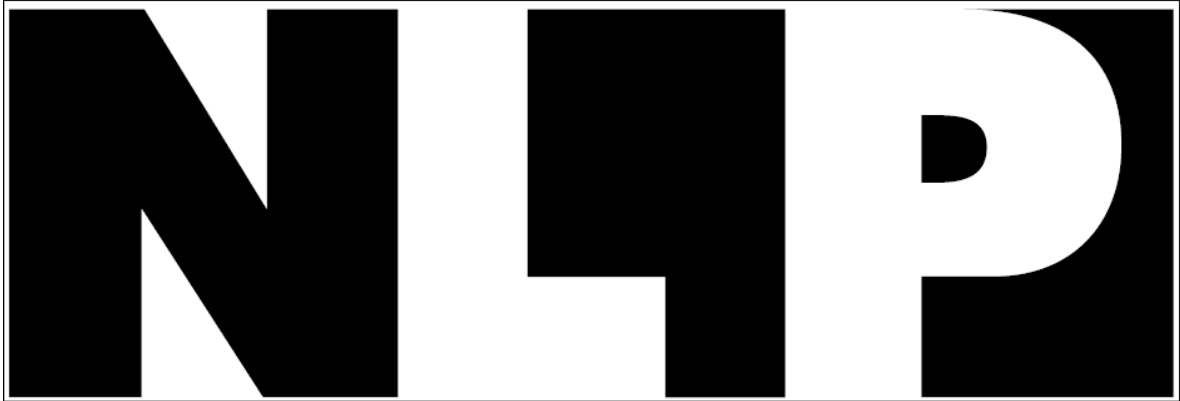

**Proceedings of the 3rd Workshop on
Sentiment Analysis where AI meets Psychology
(SAAIP 2013)**

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Preface

In recent times, research activities in the areas of Opinion, Sentiment and/or Emotion in natural language texts and other media are gaining ground under the umbrella of affect computing. Huge amount of text data are available in the Social Web in the form of news, reviews, blogs, chats and even twitter. Sentiment analysis from natural language text is a multifaceted and multidisciplinary problem. The existing reported solutions or available systems are still far from perfect or fail to meet the satisfaction level of the end users. There are many conceptual rules that govern sentiment and there are even more clues (possibly unlimited) that can map these concepts from realization to verbalization of a human being. Human psychology that relates to social, cultural, behavioral and environmental aspects of civilization may provide the unrevealed clues and govern the sentiment realization. In the present scenario we need constant research endeavors to reveal and incorporate the human psychological knowledge into machines in the best possible ways. The important issues that need attention include how various psychological phenomena can be explained in computational terms and the various artificial intelligence (AI) concepts and computer modeling methodologies that are most useful from the psychologist's point of view.

Regular research papers on sentiment analysis continue to be published in reputed conferences like ACL, EACL, NAACL, EMNLP or COLING. The Sentiment Analysis Symposiums are also drawing the attention of the research communities from every nook and corner of the world. There have been an increasing number of efforts in shared tasks such as SemEval 2007 Task 14: Affective Text, SemEval 2013 Task 14: Sentiment Analysis on Twitter, TAC 2008 Opinion Summarization task, TREC-BLOG tracks since 2006 and relevant NTCIR tracks since 6th NTCIR that have aimed to focus on different issues of opinion and emotion analysis. Several communities from sentiment analysis have engaged themselves to conduct relevant conferences, e.g., Affective Computing and Intelligent Interfaces (ACII) in 2009, 2011 and 2013 and workshops such as Sentiment and Subjectivity in Text in COLING - ACL 2006, Sentiment Analysis – Emotion, Metaphor, Ontology and Terminology (EMOT) in LREC 2008, Opinion Mining and Sentiment Analysis (WOMSA) 2009, Topic - Sentiment Analysis for Mass Opinion Measurement (TSA) in CIKM 2009, Computational Approaches to Analysis and Generation of Emotion in Text in NAACL 2010, Workshop on Computational Approaches to Subjectivity and Sentiment Analysis (WASSA) in ECAI 2010, ACL 2011, ACL 2012 and NAACL-HLT 2013, FLAIRS 2011 special track on Affect Computing, Sentiment Elicitation from Natural Text for Information Retrieval and Extraction (SENTIRE 2011 and SENTIRE 2012), EMOTION SENTIMENT and SOCIAL SIGNALS (ES3 2012) in the satellite of LREC 2012, Practice and Theory of Opinion Mining and Sentiment Analysis in conjunction with KONVENS - 2012 (PATHOS 2012, 2013), Workshop on Intelligent Approaches applied to Sentiment Mining and Emotion Analysis (WISMEA 2012), Workshop on Issues of Sentiment Discovery and Opinion Mining (WISDOM 2012, 2013) and a bunch of special sessions like Sentiment Analysis for Asian Languages (SAAL, 2012), Brain Inspired Natural Language Processing (BINLP 2012), Advances in Cognitive and Emotional Information Processing (ACEIP, 2012) and so on.

Since our previous two workshops in conjunction with the International Joint Conference on NLP (IJCNLP) in Chiang Mai, Thailand during Nov. 7-13, 2011 and with the International Conference on Computational Linguistics (COLING) in Mumbai, India during Dec. 8-15, 2012 were quite successful (with 20 and 14 submissions and more than 30 participants from many countries), we are planning to conduct our next workshop in conjunction with the International Joint Conference on NLP (IJCNLP) in Nagoya, Japan during Oct. 14-18, 2013. Inspired by the objectives we aimed at in the first two editions of the workshop, the warm responses and feedbacks we received from the participants and attendees and the final outcome, the purpose of the proposed 3rd edition of the Workshop on Sentiment Analysis where AI meets Psychology (SAAIP 2013) is to create a framework for presenting and discussing the challenges related to sentiment, opinion and emotion analysis in the ground of NLP. This workshop also aims to bring together the researchers in multiple disciplines such as computer science, psychology, cognitive science, social science and many more who are interested in developing next generation machines that

can recognize and respond to the sentimental states of the human users. This time we received only nine submissions and finally four papers have been accepted. Increasing number of workshops in similar field day-by-day may be one of the reasons for less number of submissions this time.

The lexical based polarity classification used in sentiment analysis achieved relatively good results in Czech, still classifier shows some error rate. Kateřina Veselovská and Jan Hajič, jr. provided a detailed analysis of such errors caused both by the system and by human reviewers. They have analyzed different types of classifier errors on the real evaluative data and have suggested various improvements. Yasuhide Miura, Keigo Hattori, Tomoko Ohkuma and Hiroshi Masuichi proposed a method to extract sentiment topics from a Japanese text. They utilized sentiment clues and a relaxed labeling schema to extract sentiment topics.

Nataliya Panasenko, Andrej Trnka, Dana Petranová and Slavomír Magál presented the results of GRID project which aimed at studying the semantics of 24 emotion terms in 23 languages belonging to 8 language families (Indo-European, Indo-Iranian, Afro-Asiatic, Altaic, Uralic, Japonic, Sino-Tibetan, Niger-Congo, and Unclassified). They processed large volume of information from about 5000 active project participants who live in 30 countries. The work has been carried out on two Slavic languages – Slovak and Czech and on two emotion terms – love and hatred.

Not only text, music is also a universal language to convey sentiments. Less attention has been paid to the emotion recognition in Indian songs to date. Braja Gopal Patra, Dipankar Das and Sivaji Bandyopadhyay have built a system for classifying moods of Hindi songs using different audio related features like rhythm, timber and intensity on a small dataset of 230 songs.

We thank all the members of the Program Committee for their excellent and insightful reviews, the authors who submitted contributions for the workshop and the participants for making the workshop a success. We also express our thanks to the IJCNLP 2013 Organizing Committee and Local Organizing Committee for their support and cooperation in organizing the workshop.

Organizing Committee
3rd Workshop on Sentiment Analysis where AI meets Psychology
IJCNLP 2013
October 14, 2013

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Monday, October 14, 2013

09:30–09:45   Opening Remarks

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09:45–10:15   *Why Words Alone Are Not Enough: Error Analysis of Lexicon-based Polarity Classifier for Czech*
Kateřina Veselovská and Jan Hajič, jr.

10:15–10:45   *Topic Modeling with Sentiment Clues and Relaxed Labeling Schema*
Yasuhide Miura, Keigo Hattori, Tomoko Ohkuma and Hiroshi Masuichi

10:45–11:15   *Bilingual analysis of LOVE and HATRED emotional markers (SPSS-based approach)*
Nataliya Panasenko, Andrej Trnka, Dana Petranová and Slavomír Magál

11:15–11:45   *Automatic Music Mood Classification of Hindi Songs*
Braja Gopal Patra, Dipankar Das and Sivaji Bandyopadhyay