Soujanya **Poria**

PRESIDENTIAL FELLOW · NLP RESEARCHER
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Highlights

- 66 publications: 1 book, 20 journal papers, 2 book chapters, 43 conference papers
- Highly Cited Papers (in 1% most cited in Computer Science in year): 3
- Area chair of conferences: Sentiment analysis track, NAACL 2019
- Publicity chair of conferences: *SEM 2019
- Guest Editor of journals: CIM
- Reviewer for 11 journals with impact factor from 1.0 to 6.3
- PC member of conferences: EMNLP, AAAI (Senior PC), IJCAI (Senior PC), NAACL, ACMMM, etc.
- Emerald Citation Award
- Keynote speaker at CICLing 2018
- Conference papers: ACL, EMNLP, NAACL, AAAI, ICDM, COLING, WWW, etc.
- Journal papers: CIM, KBS, NEUNET, NEUCOMP IEEE IS, etc.
- Co-organizer of workshops in ACL, ICDM
- Total amount of grants as (co-)PI: US$ 230,000
- Within top 15 cited researchers in AI related areas i.e., sentiment analysis and multimodal interaction on Google scholar
- Presidential Postdoctoral Fellowship Award, NTU (12 awardees out of 600 applicants from different disciplines)
- Adjunct Faculty at IIITD, India
- Adjunct Scientist, ASTAR, Singapore
- 3500+ Google Scholar citations and 1500+ Scopus citations

Research interests

- Natural language processing.
- Multimodal sentiment analysis and emotion recognition.
- Understanding affect in conversations.
- Personalized, empathetic dialogue generation.
- Sarcasm detection.

Education

University of Stirling — *Scotland, UK*
PH.D. IN COMPUTER SCIENCE AND MATHEMATICS — *Feb. 2014 - Jun. 2017*
- Thesis: Novel symbolic and machine-learning approaches for text-based and multimodal sentiment analysis

Jadavpur University — *Kolkata, India*
BACHELOR OF ENGINEERING (B.E.) IN COMPUTER SCIENCE AND ENGINEERING — *Aug. 2009 - Dec. 2013*
- Thesis: Novel symbolic and machine-learning approaches for text-based and multimodal sentiment analysis

Work Experience

Nanyang Technological University — *Singapore*
PRESIDENTIAL POSTDOCTORAL FELLOW — *Sept. 2018 - PRESENT*
- PI of the Multimodal Personalized Affective Dialogue System project.
- Supervising PhD students and a team of 2 research assistants, 2 interns.

A*STAR Artificial Intelligence Programme (A*AI) — *A*STAR, Singapore*

Research Scientist II — *May 2018 - Sept 2018*

- Co-PI of the multimodal dialogue agent project.
- Leading research in NLP and multimodal sentiment analysis, advising students, researchers

Nanyang Technological University — *Singapore*

Research Scientist — *Feb 2017 - April 2018*

- Leading the design and development of complex NLP algorithms.
- Ontology creation in Singlish language.
- Concept extraction and mapping in the ontology.
- Developing state-of-the-art sentiment and emotion detection tools for Singapore local language.
- Guiding PhD students, research assistants and interns.

Honorific Position

A*STAR Artificial Intelligence Programme (A*AI) — *A*STAR, Singapore*

Adjunct Scientist — *Oct. 2018 - PRESENT*

- PI of the Commonsense-based Question Answering project.
- Supervising 2 research assistants.
- Organizing a regular reading group on NLP.
- Participate in grant writing and bring funding to the team.

Indraprastha Institute of Information Technology (IIITD) — *Delhi, India*

Adjunct Faculty — *Aug. 2018 - PRESENT*

- Collaboration with the faculties.
- Co-PI of the projects.
- Co-guiding students.
- Teaching NLP courses

Honors & Awards

2018	**Presidential Postdoctoral Fellowship**, 600 applicants, 12 total fellowships, $150,000 funding from the Government for *Multimodal Affective Dialogue System* project	*NTU, Singapore*
2017	**Emerald Citations of Excellence**, `tinyurl.com/2017citationsofexcellence` for the paper - Sentic patterns: Dependency-based rules for concept-level sentiment analysis	*U.S.A*
2014	**IMPACT International Research Scholarship Award**, For outstanding academic achievements	*U. Stirling, UK*
2013	**Tata Consultancy Gold Medal**, For best undergraduate software project	*Kolkata, India*
2012	**Best Student Paper Award**, MICAI 2012	*Micai, Mexico*

Recognition & Achievements

2018	**Senior Member**, Brain Science Foundation	*MA, USA*
2016	**Research Fellowship Award**, PhD sponsorship by Brain Science Foundation	*MA, USA*
2017	**Emerald Citations of Excellence**, `tinyurl.com/2017citationsofexcellence`) for the paper - Sentic patterns: Dependency-based rules for concept-level sentiment analysis	*U.S.A*
2015	**Honorary Member**, NDS lab, University of Oxford	*U. Oxford, London*
2014	**First Place**, the best performing system for semantic parsing at the SemWebEval Concept-Level Sentiment Analysis Challenge at ESWC 2014	*Crete, Greece*
2014	**Invited Paper**, A rule-based approach to aspect extraction from product reviews, SocialNLP at COLING 2014	*Dublin, Ireland*
2014	**Research Fellowship Award**, Behavioral Media Networks	*MA, USA*
2013	**Honorary Member**, Brain Science Foundation	*MA, USA*

Keynote & Invited Talks

Research Seminar — *NTU Symposium, Singapore*

Invited talk — *March 2019*

- Evolving Sentiment Analysis

Research Seminar — *SUTD, Singapore*

Invited talk — *Jan 2019*

- Evolving Sentiment Analysis

Ministry of Health and Transmission (MOHT) — *Singapore*

Invited talk — *June 2018*

- Sentiment analysis for healthcare

CICLing 2018 — *Hanoi, Vietnam*

Keynote Speaker — *March 2018*

- Multimodal sentiment analysis

Research Seminar on AI — *IIT Patna, India*
Invited Talk — *Feb. 2018*
- State-of-the-art in Multimodal sentiment analysis

Deep Learning Finance Summit — *Singapore*
Invited Speaker — *Nov. 2016*
- Aspect extraction from product reviews

Area Chair & Program Committee Member of Conferences

2019	**Area Chair, sentiment analysis track**, NAACL 2019	*Minneapolis, USA*
2019	**Senior PC Member**, AAAI 2019	*Hawaii, USA*
2019	**Senior PC Member**, IJCAI 2019	*Macau, USA*
2018	**PC Member**, NAACL 2018	*New Orleans, USA*
2018	**PC Member**, EMNLP 2018	*Brussels, Belgium*
2018	**PC Member**, COLING 2018	*New Mexico, USA*
2017	**PC Member**, IJCAI 2017	*Melbourne, Australia*
2017	**PC Member**, EMNLP 2017	*Copenhagen, Denmark*
2017	**PC Member**, IJCNLP 2017	*Taipei, Taiwan*

Apart from the aforementioned top-tier venues I had served as PC member at many other conferences e.g., ICMI 2017 and 2018, ICCI*CC 2018, MCPR 2017 and 2018, CICLing 2017 and 2018, FLAIRS 2015, 2016, MICAI 2016.

Reviewer of Journals

- Computational Linguistics
- Knowledge and Information Systems (**Impact Factor: 2.24**)
- IEEE Transactions on Neural Networks and Learning Systems (**Impact Factor: 6.1**)
- Expert Systems with Applications (**Impact Factor: 3.7**)
- Knowledge Based Systems (**Impact Factor: 4.3**)
- Natural Language Engineering (**Impact Factor: 1.0**)
- IEEE Intelligent Systems (**Impact Factor: 2.3**)
- IEEE Computational Intelligence Magazine (**Impact Factor: 6.3**)
- IEEE Transaction on Affective Computing (**Impact Factor: 3.1**)
- Information Processing & Management (**Impact Factor: 3.4**)
- Cognitive Computation (**Impact Factor: 3.4**)
- Artificial Intelligence Review (**Impact Factor: 3.8**)
- Information Fusion (**Impact Factor: 6.63**)
- Many others e.g., SciTechnol, International Journal of Computational Linguistics and Applications, Research in Computing Science, Polibits, Computación y Sistemas

Editorial & Organizational Activities

2019	**Co-guest editor**, Affect Recognition in Multimodal Language	*Cognitive Computation*
2019	**Co-guest editor**, Social Media Research and the Role of AI	*IPM*
2019	**Co-guest editor**, Computational Intelligence for Affective Computing and Sentiment Analysis (CIACSA)	*IEEE CIM*
2019	**Publicity chair**, The Eighth Joint Conference on Lexical and Computational Semantics (*SEM 2019)	**SEM*
2018	**Co-chair**, Advancing Artificial Intelligence Understanding of Human Multimodal Language workshop	*ACL*
2018	**Co-chair**, 2nd MR^2AMC workshop	*ISM*
2018	**Co-chair**, MR^2AMC workshop	*ICMR*

News Coverage

Jan 2019	**News coverage by mlreview.com**, for our work - www.nlpoverview.com bit.ly/2Gqt1BF	*MLReview*
Sept 2018	**News coverage by Kdnuggets**, for our paper titled "Recent Trends in Deep Learning Based NLP". https://www.kdnuggets.com/2018/09/deep-learning-nlp-overview-recent-trends.html	*Kdnuggets*
Jun. 2018	**News coverage by Kdnuggets**, for our paper titled "A Deeper Look into Sarcastic Tweets Using Deep Convolutional Neural Networks" – https://www.kdnuggets.com/2018/06/detecting-sarcasm-deep-convolutional-neural-networks.html	*Kdnuggets*
Sept. 2017	**News coverage by Datanami**, for our paper titled "Deep Learning-Based Document Modeling for Personality Detection from Text" – https://www.datanami.com/2017/09/21/deep-learning-reveals-new-insights-people/	*Datanami*

Technical Skills

Github	https://github.com/soujanyaporia
Major contribution	https://github.com/senticnet
Programming	Python, Java, C/C++ (Prior Exp), LaTeX
Deep learning proficiency	Pytorch, Keras, Tensorflow
Packages	Numpy, Scikit-learn, NLTK, OpenCV

Collaborators

- MultiComp Lab, CMU, USA
- Language and Information Technologies, University of Michigan, USA
- Multimedia Research Lab, NUS, Singapore
- Adobe Research Lab, Bangalore, India
- NDS Lab, Oxford University, UK
- NLP Lab, CIC, IPN, Mexico
- NLP Lab, IITB, Mumbai, India

Bibliometrics

- One of the most productive authors in sentiment analysis research from 2000 to 2015 (tinyurl.com/kwmboyy)
- One of the most prolific and impactful authors in sentiment analysis from 2003 to 2016 (tinyurl.com/y8yj7974)

Grants

NTU Presidential Postdoctoral Research Grant — *NTU, Singapore*

Multimodal personalized affective dialogue systems. — *Sept. 2018 - Sept. 2020*

- Role: PI
- Amount: $150,000

Adobe-e Research Corporate Funding — *Adobe-e, USA*

Multimodal Emotion Recognition in Dialogues — *May 2018 – May 2020*

- Role: PI
- Amount: $80,000

Teaching & Supervision

Courses

- Information Retrieval (CZ4034) for CS undergraduates, NTU, Singapore.
- Web intelligence, Singapore Armed Forces (SAF), Singapore.

Supervision

- Qian Chen, SCSE, NTU.
- Navonil Majumder, CIC, IPN.
- Devamanyu Hazarika, SoC, NUS.

Impacts

Demos

- Developed several text and multimedia demos each of which got worldwide attention and all together have been accessed by over 1 million users. Please visit this link - `http://sentic.net/demos/`.

Publications

- Three publications are listed as **Web of Science highly cited papers**.

Publications

Citations

- **Google Scholar citations**: 3681, H-index: 35, Publications: 65
- **Scopus citations**: 1819, H-index: 25, Publications: 43

Journal Papers

1. S., Poria, N., Majumder, D., Hazarika, E., Cambria, A., Hussain and A., Gelbukh. Multimodal Sentiment Analysis: Addressing Key Issues and Setting up Baselines. **Cognitive Computation** (2018).
2. R., Sukthanker, S., Poria, E., Cambria. and R., Thirunavukarasu, 2018. Anaphora and Coreference Resolution: A Review. **Submitted to Artificial Intelligence Review** (2018).
3. Majumder N, Hazarika D, Gelbukh A, Cambria E, Poria S. Multimodal Sentiment Analysis using Hierarchical Fusion with Context Modeling. **Knowledge Based Systems**. (2018).
4. M. Dragoni, S. Poria and E. Cambria. OntoSenticNet: A Commonsense Ontology for Sentiment Analysis. **IEEE Intelligent Systems**, 33(2) (2018)
5. Young, T., Hazarika, D., Poria, S. and Cambria, E. Recent Trends in Deep Learning Based Natural Language Processing. **IEEE Computational Intelligence Magazine** (2018).
6. Cambria, E., Poria, S., Gelbukh, A., Thelwall, M. Sentiment analysis is a big suitcase. **IEEE Intelligent Systems** 32 (6) (2017)
7. N. Majumder, S. Poria, A. Gelbukh, E. Cambria. Deep learning-based document modeling for personality detection from text. **IEEE Intelligent Systems** 32(2), pp. 74-79 (2017).
8. S. Poria, E. Cambria, R. Bajpai and A. Hussain. A review of affective computing: From unimodal analysis to multimodal fusion. In: **Information Fusion** (2017).
9. S. Poria, H. Peng, E. Cambria, A. Hussain, N. Howard. Ensemble Application of Convolutional Neural Networks and Multiple Kernel Learning for Multimodal Sentiment Analysis **Neurocomputing** (2016).
10. Poria, S., Cambria, E., Howard, N., Huang, G.B., Hussain, A. Fusing audio, visual and textual clues for sentiment analysis from multimodal content. **Neurocomputing** 174, 50-59 (2016).
11. Dashtipour, K., Poria, S., Hussain, A., Cambria, E., Hawalah, A.Y., Gelbukh, A. and Zhou, Q., Multilingual Sentiment Analysis: State of the Art and Independent Comparison of Techniques. **Cognitive Computation**, pp.1-15, (2016).
12. S. Poria, E. Cambria and Gelbukh, A., Aspect extraction for opinion mining with a deep convolutional neural network. **Knowledge-Based Systems**, 108, pp.42-49, (2016).
13. S. Poria, A. Hussain, E. Cambria. Fusing Audio, Visual and Textual Clues for Big Social Data Analysis. **Neurocomputing** (2016).
14. N. Ofek, S. Poria, L. Rokach, E. Cambria, A. Hussain, A. Shabtai. Unsupervised Commonsense Knowledge Enrichment for Domain-Specific Sentiment Analysis. **Springer Cognitive Computation**, (2016).
15. S. Poria, E. Cambria, F. Bisio, A. Gelbukh, A. Hussain. Sentiment Data Flow Analysis by Means of Dynamic Linguistic Patterns for Concept-Based Opinion Mining. **IEEE Computational Intelligence Magazine**, in press (2015).
16. S. Poria, E. Cambria, A. Hussain, G.-B. Huang. Towards an Intelligent Framework for Multimodal Affective Data Analysis. **Neural Networks** (2015).
17. B. Agarwal, S. Poria, E. Cambria, N. Mittal, A. Gelbukh, A. Hussain. Concept Level Sentiment Analysis using Dependency-based Semantic Parsing. **Cognitive Computation** (2015).
18. S. Poria, A. Gelbukh, E. Cambria, A. Hussain, G.-B. Huang. EmoSenticSpace: A Novel Framework for Affective Commonsense Reasoning. **Knowledge-Based Systems**, Special Issue on Big Data for Social Analysis (2014).
19. S. Poria, E. Cambria, G. Winterstein, G.-B. Huang. Sentic patterns: Dependency-based Rules for Concept-level Sentiment Analysis. **Knowledge-Based Systems**, Special Issue on Big Data for Social Analysis (2014).
20. S. Poria, A. Gelbukh, A. Hussain, D. Das, S. Bandopadhyay. Enhanced SenticNet with Affective Labels for Concept-based Opinion Mining. **IEEE Intelligent Systems**, ISSN 15411672, (2013)

21. Pakray, P., Poria, S., Bandyopadhyay, S., Gelbukh, A. Semantic textual entailment recognition using UNL. **Polibits**, 23-27 (2011)

Book

22. Poria S., Hussain A., Cambria E.. Multimodal Sentiment Analysis. **Socio-Affective Computing, Springer International Publishing**. ISBN: 978-3-319-95018-1. (2018).

Book Chapters

22. Chaturvedi, I., Poria, S., Cambria, E. Basic tasks of sentiment analysis. Book chapter. In: **Encyclopedia of Social Network Analysis and Mining**, **Springer**, ISVBN 978-1-4614-7163-9, (2017)

23. E. Cambria, M. Grassi, S. Poria, A. Hussain. Sentic Computing for Social Media Analysis, Representation, and Retrieval. Book chapter. In: **Social Media Retrieval**. Network and Communication book series, **Springer**, ISBN 978-1-4471-4555-4, (2013).

Conference Papers

24. N. Majumder*, S. Poria*, D. Hazarika, R. Mihalcea, A. Gelbukh, E. Cambria. DialogueRNN: An Attentive RNN for Emotion Detection in Conversations. In: **AAAI**, Hawaii (2019). [**Equal contribution**]

25. S. Poria, D. Hazarika, N. Majumder, G. Naik, E. Cambria, R. Mihalcea. MELD: A Multimodal Multi-Party Dataset for Emotion Recognition in Conversations. In: **Arxiv**.

26. N. Majumder*, S. Poria*, A. Gelbukh, Md. S. Akhtar, E. Cambria, A. Ekbal. IARM: Inter-Aspect Relation Modeling with Memory Networks in Aspect-Based Sentiment Analysis. In: **EMNLP**, Brussels (2018). [**Equal contribution**]

27. D. Hazarika*, S. Poria*, R. Mihalcea, E. Cambria, R. Zimmermann. ICON: Interactive Conversational Memory Network for Multimodal Emotion Detection. In: **EMNLP**, Brussels (2018). [**Equal contribution**]

28. D. Ghosal, Md S. Akhtar, D. Chauhan, S. Poria, A. Ekbal, P. Bhattacharyya. Contextual Inter-Modal Attentions for Multimodal Sentiment Analysis. In: **EMNLP**, Brussels (2018).

29. D. Hazarika*, S. Poria*, S. Gorantla, E. Cambria, R. Zimmermann, R. Mihalcea. CASCADE: Contextual Sarcasm Detection in Online Discussion Forums. In: **COLING**, New Mexico (2018). [**Equal contribution**]

30. A. Zadeh, P. Liang, S. Poria, E. Cambria, LP. Morency. Human Multimodal Language in the Wild: A Novel Dataset and Interpretable Dynamic Fusion Model. In: **ACL**, Melbourne (2018).

31. D. Hazarika*, S. Poria*, P. Vij, G. Krishnamurthy, E. Cambria, R. Zimmermann. Modeling Inter-Aspect Dependencies for Aspect-Based Sentiment Analysis. In: **NAACL**, New Orlans (2018). [**Equal contribution**]

32. D. Hazarika, S. Poria, A. Zadeh, LP. Morency, E. Cambria, R. Zimmermann. Conversational Memory Network for Emotion Recognition in Dyadic Dialogue Videos. In: **NAACL**, New Orlans (2018).

33. A. Zadeh, S. Poria, E. Cambria, LP. Morency. Memory Fusion Network for Multi-view Sequential Learning. In: **AAAI**, New Orlans (2018).

34. A. Zadeh, S. Poria, E. Cambria, LP. Morency. Multimodal Communication Decoder Network for Human Communication Comprehension. In: **AAAI**, New Orlans (2018).

35. E. Cambria*, S. Poria*, D. Hazarika, K. Kwok. SenticNet 5: Discovering Conceptual Primitives for Sentiment Analysis by Means of Context Embeddings. In: **AAAI**, New Orlans (2018). [**Equal contribution**]

36. S. Poria and A. Hussain. A deep learning framework for deception detection in videos. In: **CICLing** (2018).

37. A. Zadeh, M. Chen, S. Poria, E. Cambria and L-P. Morency. Tensor Fusion Network for Multimodal Sentiment Analysis. In: **EMNLP**, Copenhagen (2017).

38. Poria, S., Cambria, E., Hazarika, D., Mazumder, N., Zadeh, A., Morenc, L.P. Multi-level Multiple Attentions for Contextual Multimodal Sentiment Analysis. In: IEEE International Conference on Data Mining series (**ICDM**) (2017)

39. S Poria, E Cambria, D Hazarika, N Mazumder, A Zadeh, L Morency. Context-dependent sentiment analysis in user-generated videos. In: **ACL**, Vancouver (2017).

40. S Poria, E Cambria, D Hazarika, N Mazumder, A Zadeh, LP Morency. Multi-level multiple attentions for context-aware multimodal sentiment analysis. In: **ICDM**, New Orleans (2017).

41. E. Cambria, D. Hazarika, S. Poria, A. Hussain and R.B.V. Subramaanyam. Benchmarking Multimodal Sentiment Analysis. In: **CICLing**, Budapest (2017).

42. S. Poria, E. Cambria, D. Hazarika, and P. Vij. A deeper look into sarcastic tweets using deep convolutional neural networks. In: **COLING**, Osaka (2016).

43. I. Chaturvedi, E. Cambria, S. Poria, R. Bajpai. Bayesian Deep Convolution Belief Networks for Subjectivity Detection. In: Data Mining Workshops (**ICDMW**), IEEE 16th International Conference (2016).

44. S. Poria, I. Chaturvedi, E. Cambria, and A. Hussain. Convolutional MKL based multimodal emotion recognition and sentiment analysis. In: **ICDM**, Barcelona (2016).

45. E. Cambria, S. Poria, R. Bajpai, and B. Schuller. SenticNet 4: A semantic resource for sentiment analysis based on conceptual primitives. In: **COLING**, Osaka (2016).

46. S. Poria, I. Chaturvedi, E. Cambria, and F. Bisio. Sentic LDA: Improving on LDA with semantic similarity for aspect-based sentiment analysis. In: **IJCNN**, Vancouver (2016).

47. S. Poria, E. Cambria, and A. Gelbukh. Deep Convolutional Neural Network Textual Features and Multiple Kernel Learning for Utterance-Level Multimodal Sentiment Analysis. **EMNLP**. Lisbon (2015).

48. E. Cambria, J. Fu, F. Bisio, and S. Poria. AffectiveSpace 2: Enabling affective intuition for concept level sentiment analysis. **AAAI**. Austin (2015).

49. P. Chikersal, S. Poria, E. Cambria. SeNTU: Sentiment Analysis of Tweets by Combining a Rule-based Classifier with Supervised Learning. In: SemEval@ **NAACL-HLT**, 647-651 (2015).

50. Cambria, E., Poria, S., Bisio, F., Bajpai, R., Chaturvedi, I. The CLSA Model: A Novel Framework for Concept-Level Sentiment Analysis. In: **CICLing** (2), 3-22 (2015).

51. P. Chikersal, S. Poria, E. Cambria, A. Gelbukh, C. E. Siong. Modelling Public Sentiment in Twitter: Using Linguistic Patterns to Enhance Supervised Learning. **CICLing 2015**, Cairo, Egypt. **Springer LNCS**.

52. Poria, S., Cambria, E., Ku, L.W., Gui, C., Gelbukh, A. A rule-based approach to aspect extraction from product reviews. In: **SocialNLP@COLING** (2014).

53. Poria, S., Ofek, N., Gelbukh, A., Hussain, A., Rokach, L. Dependency tree-based rules for concept-level aspect-based sentiment analysis. In: **Semantic Web Evaluation Challenge**, 41-47 (2014).

54. Poria, S., Agarwal, B., Gelbukh, A., Hussain, A., Howard, N. Dependency-based semantic parsing for concept-level text analysis. In: **CICLing** (2014).

55. Cambria, E., Poria, S., Gelbukh, A., Kwok, K. Sentic API: a common-sense based API for concept-level sentiment analysis. In: **Microposts workshop, WWW** (2014).

56. Poria, S., Gelbukh, A., Agarwal, B., Cambria, E., Howard, N. Sentic Demo: A hybrid concept-level aspect-based sentiment analysis toolkit. In: **ESWC** (2014).

57. Poria, S., Gelbukh, A., Agarwal, B., Cambria, E., Howard, N. Common sense knowledge based personality recognition from text. In: **MICAI**, 484-496 (2013).

58. Poria, S., Gelbukh, A., Hussain, A., Bandyopadhyay, S., Howard, N. Music genre classification: A semi-supervised approach. In: **MCPR**, 254-263 (2013).

59. Minhas, S., Poria, S., Hussain, A., Hussainey, K. A review of artificial intelligence and biologically inspired computational approaches to solving issues in narrative financial disclosure. In: **BICS**, 317-327 (2013).

60. S. Poria, A. Gelbukh, D. Das, S. Bandyopadhyay. Fuzzy Clustering for Semi-Supervised Learning—Case study: Construction of an Emotion Lexicon. **MICAI 2012**. Mexico City, Mexico, **Springer LNCS**. **Best student paper award**.

61. Poria, S., Gelbukh, A., Cambria, E., Das, D., Bandyopadhyay, S. Enriching SenticNet Polarity Scores Through Semi-Supervised Fuzzy Clustering. In: Data Mining Workshops (**ICDMW**), IEEE 12th International Conference on Data Mining (2012).

62. Poria, S., Gelbukh, A., Cambria, E., Yang, P., Hussain, A., Durrani, T. Merging SenticNet and WordNet-Affect emotion lists for sentiment analysis. In: Signal Processing (**ICSP**), IEEE 11th International Conference on 2, 1251-1255 (2012).

63. Das, D., Poria, S., Bandyopadhyay, S. A Classifier Based Approach to Emotion Lexicon Construction. In: **NLDB**, 320-326 (2012).

64. Das, D., Poria, S., Dasari, C.M., Bandyopadhyay, S. Building resources for multilingual affect analysis–a case study on hindi, bengali and telugu. In: ES^3**, LREC**, 54 (2012).

65. Poria, S., Gelbukh, A., Das, D., Bandyopadhyay, S. Fuzzy clustering for semi-supervised learning—Case study: Construction of an emotion lexicon. In: Proceedings of **MICAI** (2012).

66. Pakray, P., Neogi, S., Bhaskar, P., Poria, S., Bandyopadhyay, S., Gelbukh, A.F. A Textual Entailment System using Anaphora Resolution. In: **TAC** (2011).

67. Pakray, P., Pal, S., Poria, S., Bandyopadhyay, S., Gelbukh, A.F. JU_CSE_TAC: Textual Entailment Recognition System at TAC RTE-6. In: **TAC** (2010).

68. Pakray, P., Pal, S., Poria, S., Bandyopadhyay, S., Gelbukh, A. Smsfr: Sms-based faq retrieval system. In: Proceedings of **MICAI** (pp. 36-45). Springer, Berlin, Heidelberg.