SOURISH CHAUDHURI

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EDUCATION

Ph.D. in Language and Information Technologies *expected, 2013*
Carnegie Mellon University (CMU)
Thesis Topic: Structured Models for Audio Content Analysis
Advisor: Prof. Bhiksha Raj

M.S. in Language Technologies *2009*
Carnegie Mellon University

B.Tech. in Computer Science and Engineering *2007*
Indian Institute of Technology, Kharagpur

AWARDS AND NOMINATIONS

Best paper award, Special Interest Group on Discourse and Dialog (SIGDIAL), 2011.

Nominated for **Best Technical Design Award**, Computer Supported Collaborative Learning (CSCL), 2009.

INVITED TALKS

Invited Talk at Raytheon BBN Technologies Computer Vision Seminar on Structured Models for Audio Content Analysis, November 2011.

RESEARCH EXPERIENCE

Carnegie Mellon University *September, 2009 – Present*
Graduate Research Assistant (Ph.D.), Language Technologies Institute.
Topics: unsupervised approaches for audio analysis, spectro-temporal feature sets for small vocabulary speech recognition, conversation analysis for modeling participants.

Carnegie Mellon University *July, 2007 – May, 2009*
Graduate Research Assistant (Ph.D.), Language Technologies Institute.
Topics: Intelligent automated tutoring systems, text summarization.

Google, Inc. *May – August, 2010*
Intern
Topic: Background noise reduction techniques for voice search.

i-Lab, Carnegie Mellon University *May – August, 2009*
Intern
Topic: Demographic information-based personalized content recommendations.

Helsinki University of Technology *May – August, 2006*
Intern
Topic: Implementation of verification schemes to eliminate man-in-the-middle attacks.

Indian Institute of Technology, Kharagpur *2006 – 2007*
Department of Computer Science and Engineering
Undergraduate thesis: Transliteration from non-standard, phonetic Bengali to standard Bengali.

TEACHING EXPERIENCE

Machine Learning for Signal Processing (11-755)   *Fall, 2009 and Fall, 2010*
Teaching Assistant for Prof. Bhiksha Raj, Language Technologies Institute.

Technology for Global Development (11-755)   *Fall, 2008*
Teaching Assistant for Prof. Rahul Tongia, Jay Aronson and Joe Mertz, Heinz School, Institute for Software Research.

Guest Lecture, Machine Learning for Signal Processing.   *Fall 2012*

Mentor for the Internship Program in Technology Supported Education, New Delhi. *December, 2011*

SERVICE

- **Reviewer**:

  Speech Communication   IEEE Signal Processing Letters
  IEEE Transactions on Information Forensics and Security   CMU Sphinx Workshop (2010)

- **Lead organizer** for the Computer Science Entrepreneurship Club, Carnegie Mellon University, Fall 2011–present.

- **Student organizer** of the Student Research Symposium, Language Technologies Institute, 2009.

- **Student Representative** for MS class of 2009, Language Technologies Institute.

TECHNICAL SKILLS

Programming Languages	Java, C, C++, Matlab
Libraries and Applications	Eclipse, Weka, Sphinx

OTHER ACTIVITIES

Co-founder of (now dormant) Fanlogue.

Co-developer of Triplog, Yahoo! Hack, 2010.

PUBLICATIONS

1. **Sourish Chaudhuri** and Bhiksha Raj. *Unsupervised Structure Discovery for Semantic Analysis of Audio.* In Advances in Neural Information Processing Systems (NIPS), 2012.

2. **Sourish Chaudhuri**, Rita Singh and Bhiksha Raj. *Exploiting Temporal Sequence Structure for Semantic Analysis of Multimedia.* In Interspeech, 2012.

3. Soham De, Indradyumna Roy, Tarunima Prabhakar, Kriti Suneja, **Sourish Chaudhuri**, Rita Singh and Bhiksha Raj. *Plagiarism Detection in Polyphonic Music Using Monaural Signal Separation.* In Interspeech, 2012.

4. Anurag Kumar, Pranay Dighe, **Sourish Chaudhuri**, Rita Singh, Bhiksha Raj. *Audio event detection from acoustic unit occurrence patterns.* IEEE International Conference on Acoustics Speech and Signal Processing (ICASSP) 2012.

5. **Sourish Chaudhuri** and Bhiksha Raj. *Learning contextual relevance of audio segments using discriminative models over AUD sequences.* In IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA), 2011.

6. **Sourish Chaudhuri**, Mark Harvilla and Bhiksha Raj. *Unsupervised Learning of Acoustic Unit Descriptors for Audio Content Representation and Classification.* In Interspeech, 2011.

7. **Sourish Chaudhuri**, Bhiksha Raj and Tony Ezzat. *A paradigm for small vocabulary speech recognition based on redundant spectro-temporal feature sets.* In Interspeech, 2011.

8. **Sourish Chaudhuri** and Bhiksha Raj. *A Comparison of Latent Variable Models for Conversation Analysis.* In SIGDIAL, 2011. (**Best paper award**)

9. Bhiksha Raj, Tuomas Virtanen, **Sourish Chaudhuri**, and Rita Singh. *Non-negative matrix factorization based compensation of music for automatic speech recognition.* In Interspeech, 2010.

10. **Sourish Chaudhuri**, Naman K. Gupta, Noah A. Smith and Carolyn P. Rose. *Leveraging Structural Relations for Fluent Compressions at Multiple Compression Rates.* In Proceedings of the Annual Meeting of the Association for Computational Linguistics (ACL-IJCNLP), 2009.

11. Naman K. Gupta, **Sourish Chaudhuri** and Carolyn P. Rose. *Evaluating the Syntactic Transformations in Gold Standard Corpora for Statistical Sentence Compression.* In Proceedings of the Human Language Technologies- North American Association for Computational Linguistics (HLT-NAACL) conference, 2009.

12. Rohit Kumar, **Sourish Chaudhuri**, Iris Howley, Carolyn P. Ros. *VMT-Basilica: An Environment for Rapid Prototyping of Collaborative Learning Environments with Dynamic Support.* In the 8th International Conference on Computer Supported Collaborative Learning (CSCL), 2009.

13. **Sourish Chaudhuri**, Rohit Kumar, Iris Howley and Carolyn P. Rose. *Engaging Collaborative Learners with Helping Agents.* In Artificial Intelligence in Education(AIED),2009.

14. Iris Howley, **Sourish Chaudhuri**, Rohit Kumar and Carolyn P. Rose. *Motivation and Collaboration On-Line.* In Artificial Intelligence in Education (AIED), 2009.

15. Iris Howley, **Sourish Chaudhuri**, Rohit Kumar and Carolyn P. Rose. *Motivation and Collaborative Behavior: An Exploratory Analysis.* In the 8th International Conference on Computer Supported Collaborative Learning(CSCL), 2009.

16. **Sourish Chaudhuri**, Rohit Kumar, Mahesh Joshi, Elon Terrell, Fred Higgs, Vincent Aleven, Carolyn P. Rose. *It's Not Easy Being Green: Supporting Collaborative "Green Design" Learning.* In the 9th Intl Conf. on Intelligent Tutoring Systems(ITS),2008.

17. Moonyoung Kang, **Sourish Chaudhuri**, Rohit Kumar, Yi-Chia Wang, Eric Rose, Carolyn P. Rose. *Supporting the guide on the SIDE.* In the 9th International Conference on Intelligent Tutoring Systems(ITS), 2008.

18. Moonyoung Kang, **Sourish Chaudhuri**, Mahesh Joshi, Carolyn P. Rose. *SIDE: The Summarization Integrated Development Environment.* In Demonstrations Program at the Association for Computational Linguistics (ACL-HLT), 2008.

19. Yue Cui, Rohit Kumar, **Sourish Chaudhuri**, Gahgene Gweon and Carolyn P. Rose. *Helping Agents in VMT.* Book Chapter in Studying Virtual Math Teams, Springer CSCL Book Series, 2008.

20. GM Ravi Sastry, **Sourish Chaudhuri** and P. Nagender Reddy. *An HMM Based Part-Of-Speech Tagger and Statistical Chunker for 3 Indian Languages.* In the Workshop on Shallow Parsing for South Asian Languages, International Joint Conferences on Artificial Intelligence (IJCAI), 2007.

21. **Sourish Chaudhuri**. *Transliteration from Non-standard Phonetic Bengali to Standard Bengali.* In the Language, Artificial Intelligence and Computer Science for Natural Language Processing (LAICS-NLP) workshop, 2006.

REFERENCES

Available on request