

# Curriculum Vitae

**Yang Liu**

Principal Scientist

Alexa AI, Amazon

Email: yangliud@amazon.com

## **Brief Bio:**

Dr. Yang Liu is currently a principal scientist at Alexa AI, Amazon. She received her BS and MS from Tsinghua University, and Ph.D from Purdue University in 2004. She was a researcher at International Computer Science Institute (ICSI) at Berkeley from 2002-2005, and then a faculty member at the University of Texas at Dallas from 2005 to 2018. She was a visiting research scientist at Google Research from 2015 to 2016, a research scientist at Facebook Applied Machine Learning from 2016 to 2017, and then the Head of LAIX's Silicon Valley AI Lab (LAIX is a leading AI+education company that is focused on language learning). She received NSF CAREER award and Air Force Young Investigator Program (YIP) award. She has published 170 papers in speech and language processing journals and conferences. She has been actively involved in professional activities (journal editorial service, conference organization, and committee members). She was or has been an associate editor for IEEE Transactions on Audio, Speech and Language Processing, Speech Communication, ACM Transactions on Speech and Language Processing, ACM Transactions on Asian and Low-Resource Language Information Processing. She is currently an IEEE SLTC member. She is one of Program Chairs for EMNLP 2020, sponsorship chairs for Interspeech 2020 and ASRU 2019, special session and demo chairs for SLT 2020, and was the general co-chair for IEEE SLT 2012, Demo co-chair for NAACL 2018, area/session chair for ICASSP, Interspeech, ACL, EMNLP, and NAACL in different years. She is an IEEE Fellow (effective 2021).

## **Educational History:**

Ph.D, 2004, Purdue University, West Lafayette, IN, USA, Electrical and Computer Engineering

MS, 2000, Tsinghua University, Beijing, China, Electrical Engineering

BS, 1997, Tsinghua University, Beijing, China, Electrical Engineering

## **Employment History:**

Principal Scientist, 2019/09-present, Amazon, Alexa AI, Sunnyvale, CA, USA

Head of AI Lab, 2017/08-2019/09, LAIX Inc, San Mateo, CA, USA

Research Scientist, 2016/08-2017/08, Facebook, Applied Machine Learning, Menlo Park, CA, USA

Visiting Scientist, 2015/08-2016/08, Google Research, Mountain View, CA, USA

Associate Professor, 2011/09-2018/08, Computer Science department, The University of Texas at Dallas, Richardson, TX, USA

Assistant Professor, 2005/08-2011/08, Computer Science department, The University of Texas at Dallas, Richardson, TX, USA

Postdoc, 2004/12-2005/08, International Computer Science Institute (ICSI), Berkeley, CA, USA

Research Associate, 2002/07-2004/12, International Computer Science Institute (ICSI), Berkeley, CA, USA

Research Assistant, 2000/08-2002/07, Purdue University, West Lafayette, IN, USA

## **Professional recognition and honors:**

NSF CAREER Award, 2009, NSF

Air Force Young Investigator Program Award, 2010, U.S. Air Force, Office of Scientific Research

**Professional memberships:**

Institute of Electrical and Electronics Engineers (IEEE), Fellow (starting from 2021)

Association for Computing Machinery (ACM)

Association for Computational Linguistics (ACL)

International Speech Communication Association (ISCA)

**Articles in refereed journals (in reverse chronological order):**

- J1. Naimeh Sadoughi, Yang Liu, and Carlos Busso, "Meaningful head movements driven by emotional synthetic speech," *Speech Communication*, vol. 95, pp. 87-99, December 2017.
- J2. Mohammad Hadi Bokaei, Hossein Sameti and Yang Liu. Summarizing Meeting Transcripts based on Functional Segmentation. *IEEE Transactions on Audio, Speech and Language Processing*. V24(10), pages 1831-1841.
- J3. Rui Xia and Yang Liu. A Multi-task Learning Framework for Emotion Recognition Using 2D Continuous Space. *IEEE Transactions on Affective Computing*. Accepted, 2015.
- J4. Mohammad Hadi Bokaei, Hossein Sameti, and Yang Liu. Linear Discourse Segmentation of Multi-party Meetings based on Local and Global Information. *IEEE Transactions on Audio, Speech and Language Processing*. Volume 23 Issue 11, November 2015, Pages 1879-1891.
- J5. Dong Wang and Yang Liu. Opinion Summarization on Spontaneous Conversations. *Computer Speech and Language*. Volume 34 Issue 1, November 2015, Pages 61-82.
- J6. Mohammad Hadi Bokaei, Hossein Sameti, and Yang Liu. Extractive Summarization of Multi-party Meetings Through Discourse Segmentation. *Natural Language Engineering*, published online, 2015 (Volume 22, Issue 01, January 2016, pp 41-72)
- J7. Xian Qian and Yang Liu. 2-Slave Dual Decomposition for Generalized High Order CRFs. *Transactions of the Association for Computational Linguistics (TACL)*. 2014.
- J8. Je Hun Jeon, Rui Xia, and Yang Liu. Level of Interest Sensing in Spoken Dialog Using Decision-level Fusion of Acoustic and Lexical Evidence. *Computer Speech and Language*, V28(3), pages 420-433, 2014.
- J9. Deana Pennell and Yang Liu. Normalization of Informal Text. *Computer Speech and Language*, V28(1), pages 256-277, 2014.
- J10. Khairun-Nisa Hassanali, Yang Liu, Aquiles Iglesias, Tamar Solorio, and Christine Dollaghan. Automatic Generation of Index of Productive Syntax for Child Language Transcripts. *Behavior Research Methods*. 2014 Mar; 46(1):254-62. doi: 10.3758/s13428-013-0354-x.
- J11. Fei Liu and Yang Liu. Towards Abstractive Speech Summarization: Exploring Unsupervised and Supervised Approaches for Spoken Utterance Compression. *IEEE Transactions on Audio, Speech and Language Processing*, V21(7), Pages 1469-1480, 2013.
- J12. Xian Qian and Yang Liu. Branch and Bound Algorithm for Dependency Parsing with Non-local Features. *Transactions of the Association for Computational Linguistics*. March. 2013.
- J13. Je Hun Jeon and Yang Liu. Automatic Prosodic Event Detection Using Novel Labeling Method in Co-Training Algorithm. *Speech Communication*, Volume 54, Issue 3, Pages 445-458, 2012.
- J14. Keyur Gabani, Tamar Solorio, Khairun Nisa Hassanali, Yang Liu, and Christine Dollaghan. Exploring a Corpus-based Approach for Detecting Language Impairment in Children. *Artificial Intelligence in Medicine*, V53(3), pages 161-170, 2011.
- J15. Dong Wang and Yang Liu. A Cross-corpus Study of Subjectivity Detection Using Semi-supervised Learning. *Natural Language Engineering*, published online, 2011.
- J16. Shasha Xie and Yang Liu. Using N-best Lists and Confusion Networks for Meeting Summarization. *IEEE Transactions on Acoustic, Speech and Language Processing*, V19(5), pages 1160-1169, 2011.

- J17. Fei Liu, Feifan Liu, and Yang Liu. A Supervised Framework for Keyword Extraction from Meeting Transcripts. *IEEE Transactions on Audio, Speech and Language Processing*, V19(3), pages 538-548, 2011.
- J18. Tamar Solorio, Melissa Sherman, Yang Liu, Lisa Bedore, Elizabeth D. Pena, and Aquiles Iglesias. Analyzing Language Samples of Spanish-English Bilingual Children for the Automated Prediction of Language Dominance. *Natural Language Engineering*, published online, 2010.
- J19. Jachym Kolar, Yang Liu, and Elizabeth Shriberg. Speaker Adaptation of Language and Prosodic Models for Automatic Dialog Act Segmentation of Speech. *Speech Communication*, V52(3), pages 236-245, 2010.
- J20. Feifan Liu and Yang Liu. Identification of Soundbite and Its Speaker Name Using Transcripts of Broadcast News Speech. *ACM Transactions on Asian Language Information Processing*, V9(1), 2010.
- J21. Shasha Xie and Yang Liu. Improving Supervised Learning for Meeting Summarization Using Sampling and Regression. *Computer Speech and Language*, V24, pages 495-514, 2010.
- J22. Feifan Liu and Yang Liu. Exploring Correlation between ROUGE and Human Evaluation on Meeting Summaries. *IEEE Transactions on Audio, Speech and Language Processing*, V18(1), pages 187-196, 2010.
- J23. Mari Ostendorf, Benoit Favre, Ralph Grishman, Dilek Hakkani-Tür, Mary Harper, Dustin Hillard, Julia Hirschberg, Heng Ji, Jeremy Kahn, Yang Liu, Sameer Maskey, Evgeny Matusov, Hermann Ney, Andrew Rosenberg, Elizabeth Shriberg, Wen Wang, and Chuck Wooters. Speech Segmentation and Spoken Document Processing. *IEEE Signal Processing Magazine*, V25(3), pages 59-69, 2008.
- J24. Yang Liu, Elizabeth Shriberg, Andreas Stolcke, Dustin Hillard, Mari Ostendorf, and Mary Harper. Enriching Speech Recognition with Automatic Detection of Sentence Boundaries and Disfluencies. *IEEE Transactions on Audio, Speech and Language Processing*, V14(5), pages 1526-1540, 2006.
- J25. Yang Liu, Nitesh Chawla, Mary Harper, Elizabeth Shriberg, and Andreas Stolcke. A Study in Machine Learning from Imbalanced Data for Sentence Boundary Detection in Speech. *Computer Speech and Language*, V20(4), pages 468-494, 2006.
- J26. Yang Liu, Mary Harper, Michael Johnson, and Leah Jamieson. The Effect of Pruning and Compression on Graphical Representations of the Output of a Speech Recognizer. *Computer Speech and Language*, V7, pages 329-356, 2003.

**Articles appearing in proceedings of conferences:**

- C1. Ting-Yun Chang, Yang Liu, Karthik Gopalakrishnan, Behnam Hedayatnia, Pei Zhou, Dilek Hakkani-Tur. Go Beyond Plain Fine-tuning: Improving Pretrained Models for Social Commonsense. To appear, SLT, 2021.
- C2. Behnam Hedayatnia, Karthik Gopalakrishnan, Seokhwan Kim, Yang Liu, Mihail Eric, Dilek Hakkani-Tur. Policy-Driven Neural Response Generation for Knowledge-Grounded Dialogue Systems. INLG, 2020.
- C3. Ting-Yun Chang, Yang Liu, Karthik Gopalakrishnan, Behnam Hedayatnia, Pei Zhou and Dilek Hakkani-Tur, Incorporating Commonsense Knowledge Graph in Pretrained Models for Social Commonsense Tasks. EMNLP 2020 workshop, DeeLIO (workshop best paper award).
- C4. Wei Chu, Yang Liu, Jianwei Zhou. Recognize Mispronunciations to Improve Non-native Acoustic Modeling Through a Phone Decoder Built from One Edit Distance Finite State Automaton. Interspeech, 2020.
- C5. Karthik Gopalakrishnan, Behnam Hedayatnia, Longshaokan Wang, Yang Liu, Dilek Hakkani-Tur. Are Neural Open-Domain Dialog Systems Robust to Speech Recognition Errors in the Dialog History? An Empirical Study. Interspeech, 2020.

- C6. Yelin Kim, Joshua Levy, Yang Liu, Speech Sentiment and Customer Satisfaction Estimation 557 in Socialbot Conversations. Interspeech, 2020.
- C7. Binxuan Huang, Han Wang, Tong Wang, Yue Liu, Yang Liu, Entity Linking for Short Text Using Structured Knowledge Graph via Multi-grained Text Matching. Interspeech, 2020.
- C8. Haoyu Wang, Shuyan Dong, Yue Liu, James Logan, Ashish Agrawal, Yang Liu, ASR Error Correction with Augmented Transformer for Entity Retrieval. Interspeech, 2020.
- C9. Jiahong Yuan, Hui Lin, and Yang Liu. Detection and Analysis of t/d Deletion in Librispeech. ICASSP, 2020.
- C10. Trang Tran, Jiahong Yuan, Yang Liu, and Mari Ostendorf. On the Role of Style in Parsing Speech with Neural Models. Interspeech, 2019.
- C11. Jiahong Yuan, Hui Lin, and Yang Liu. Nasal Coarticulation in L1 and L2 English Speech: A Large-scale Study. ICPHS, 2019.
- C12. Lei Chen, Qianyong Gao, Qiubing Liang, Jiahong Yuan and Yang Liu. Automatic Scoring Minimal-Pair Pronunciation Drills by Using Recognition Likelihood Scores and Phonological Features, 8<sup>th</sup> Workshop on Speech and Language Technology in Education (SLaTE), 2019.
- C13. Farah Nadeem, Huy Nguyen, Yang Liu, and Mari Ostendorf. Automated Essay Scoring with Discourse-Aware Neural Models. 14th Workshop on Innovative Use of NLP for Building Educational Applications, ACL, 2019.
- C14. Ruobing Li, Chuan Wang, Yefei Zha, Yonghong Yu, Shiman Guo, Qiang Wang, Yang Liu, and Hui Lin. The LAIX Systems in the BEA-2019 GEC Shared Task. 14th Workshop on Innovative Use of NLP for Building Educational Applications, ACL, 2019.
- C15. Jiahong Yuan, Zhengqiang Rao, Hui Lin, and Yang Liu. Classification of Chinese Dialect Regions from L2 English Speech. ICASSP, 2019.
- C16. Lei Chen, Cheng Chang, Cheng Zhang, Huan Luan, Jiawen Luo, Ge Guo, Xiaofei Yang, and Yang Liu. L2 Learners' Emotion Production in Video Dubbing Practices. ICASSP, 2019.
- C17. Siyuan Wang, Zhongyu Wei, Zhihao Fan, Yang Liu, and Xuanjing Huang. A Multi-Agent Communication Framework for Question-Worthy Phrase Extraction and Question Generation. AAAI, 2019.
- C18. Huy Nguyen, Lei Chen, Ramon Prieto, Chuan Wang, and Yang Liu. Liulishuo's System for the Spoken CALL Shared Task 2018. Interspeech, 2018 [Challenge award]
- C19. Jiahong Yuan, Qiusi Dong, Fei Wu, Huan Luan, Xiaofei Yang, Hui Lin, and Yang Liu. Pitch Characteristics of L2 English Speech by Chinese Speakers: A Large-scale Study. Interspeech, 2018.
- C20. Cheng Chang, Lei Chen, and Yang Liu. An Ensemble Model Using Face and Body Tracking for Engagement Detection, ICMI 2018 EmotiW Challenge, ICMI, 2018.
- C21. Cheng Zhang, Cheng Chang, Lei Chen, Yang Liu. Online Privacy-safe Engagement Tracking System. Demo paper. ICMI, 2018.
- C22. Zhihao Fan, Zhongyu Wei, Siyuan Wang, Yang Liu, and Xuanjing Huang. A Reinforcement Learning Framework for Natural Question Generation. COLING, 2018.
- C23. Lu Ji, Zhihao Fan, Zhongyu Wei, Siyuan Wang, Yang Liu, and Xuanjing Huang. Incorporating Argument-level Interactions for Persuasion Comments Evaluation using Co-attention Model. COLING, 2018.
- C24. Xian Qian and Yang Liu. A non-DNN Feature Engineering Approach to Dependency Parsing – FBAML at CONLL 2017 Shared Task. COLING, 2017.
- C25. Yang Liu, Kun Han, Zhao Tan, and Yun Lei. Using Context Information for Dialog Act Classification in DNN Framework. EMNLP, Copenhagen, Denmark, 2017.
- C26. Chen Li, Zhongyu Wei, Yang Liu, Yang Jin, and Fei Huang. Using Relevant Public Posts to Enhance News Article Summarization. COLING, Osaka, Japan. 2016.
- C27. Rui Xia and Yang Liu. DBN-IVector Framework for Acoustic Emotion Recognition. Interspeech, San Francisco, 2016.

- C28. Zhongyu Wei, Yang Liu, and Yi Li. Is This Post Persuasive? Ranking Argumentative Comments in Online Forum. Annual Meeting of the Association for Computational Linguistics (ACL), Berlin, Germany, 2016.
- C29. Yandi Xia, Zhongyu Wei, and Yang Liu. An Efficient Cross-Lingual Model for Sentence Classification Using Convolutional Neural Network. Annual Meeting of the Association for Computational Linguistics (ACL), Student Research Workshop, Berlin, Germany, 2016.
- C30. Zhongyu Wei, Yandi Xia, Chen Li, Yang Liu, Zachary Stallbohm, Yi Li, and Yang Jin. A Preliminary Study of Disputation Behavior in Online Debating Forum. Annual Meeting of the Association for Computational Linguistics (ACL), 3<sup>rd</sup> Workshop on Argumentation Mining, Berlin, Germany, 2016.
- C31. Zachary Stallbohm, Yang Liu, and Zhongyu Wei. Negation Effect on Emotion Analysis in Twitter. International Joint Conference on Artificial Intelligence (IJCAI), Social NLP Workshop, New York, 2016.
- C32. Taufiq Hasan, Mohammed Abdelwahab, Srinivas Parthasarathy, Carlos Busso, and Yang Liu. Automatic Composition of Broadcast News Summaries Using Rank Classifiers. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Shanghai, China, 2016.
- C33. Mohammad Hadi Bokaei, Hossein Sameti, and Yang Liu. Extractive Meeting Summarization through Speaker Zone. Interspeech, Dresden, Germany, 2015.
- C34. Zhongyu Wei, Yang Liu, Chen Li, and Wei Gao. Using Tweets to Help Sentence Compression for News Highlights Generation. Annual Meeting of the Association for Computational Linguistics (ACL), Beijing, China, 2015.
- C35. Chen Li and Yang Liu. Improving Named Entity Recognition in Tweets via Detecting Non-standard Words. Annual Meeting of the Association for Computational Linguistics (ACL), Beijing, China, 2015.
- C36. Xian Qian and Yang Liu. Feature Selection in Kernel Space: A Case Study on Dependency Parsing. Annual Meeting of the Association for Computational Linguistics (ACL), Beijing, China, ACL 2015.
- C37. Chen Li and Yang Liu. Joint POS Tagging and Text Normalization for Informal Text. International Joint Conference on Artificial Intelligence (IJCAI), Buenos Aires, Argentina, 2015.
- C38. Chen Li, Yang Liu, and Lin Zhao. Improving Update Summarization via Supervised ILP and Sentence Reranking. Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL), Denver, 2015.
- C39. Chen Li, Yang Liu, and Lin Zhao. Using External Resources and Joint Learning for Bigram Weighting in ILP-Based Multi-Document Summarization. Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL), Denver, 2015.
- C40. Rui Xia and Yang Liu. Leveraging Valence and Activation Information via Multi-task Learning for Categorical Emotion Recognition. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Brisbane, Australia, 2015.
- C41. Najmeh Sadoughi, Yang Liu, and Carlos Busso. Speech-driven Animation Constrained by Appropriate Discourse Functions. International conference on multimodal interaction (ICMI), Istanbul, Turkey, 2014.
- C42. Chen Li, Yang Liu, Fei Liu, Lin Zhao, and Fuliang Weng. Improving Multi-document Summarization by Sentence Compression based on Expanded Constituent Parse Tree. Empirical Methods for Natural Language Processing (EMNLP), Doha, Qatar, 2014.
- C43. Xian Qian and Yang Liu. Polynomial Time Joint Structural Inference for Sentence Compression. Annual Meeting of the Association for Computational Linguistics (ACL), Baltimore, 2014.

- C44. Chen Li and Yang Liu. Improving Text Normalization via Unsupervised Model and Discriminative Reranking. Student Research Workshop at Annual Meeting of the Association for Computational Linguistics (ACL), Baltimore, 2014.
- C45. Rui Xia, Jun Deng, Yang Liu, and Bjeorn Schuller. Modeling Gender Information for Emotion Recognition Using Denoising Autoencoder. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Florence, Italy, 2014.
- C46. Jun Deng, Rui Xia, Zixing Zhang, Yang Liu, and Bjeorn Schuller. Introducing Shared-Hidden-Layer Autoencoders for Transfer Learning and their Application in Acoustic Emotion Recognition. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Florence, Italy, 2014.
- C47. Xian Qian and Yang Liu. Fast Joint Compression and Summarization via Graph Cuts. Empirical Methods for Natural Language Processing (EMNLP), Seattle, 2013.
- C48. Chen Li, Fei Liu, Fuliang Weng, and Yang Liu. Document Summarization via Guided Sentence Compression. Empirical Methods for Natural Language Processing (EMNLP), Seattle, 2013.
- C49. Khairun-nisa Hassanali, Yang Liu, and Tamar Solorio. Using Latent Dirichlet Allocation for Child Narrative Analysis. BioNLP, Sofia, Bulgaria, 2013.
- C50. Gabriela Ramirez-de-la-Rosa, Tamar Solorio, Manuel Montes, Yang Liu, Lisa Bedore, Elizabeth Pena and Aquiles Iglesias. Exploring Word Class N-grams to Measure Language Development in Children. BioNLP, Sofia, Bulgaria, 2013.
- C51. Rui Xia and Yang Liu. Using Denoising Autoencoder for Emotion Recognition. Interspeech, Lyon, France, 2013.
- C52. Je Hun Jeon, Duc Le, Rui Xia, and Yang Liu. A Preliminary Study of Cross-lingual Emotion Recognition from Speech: Automatic Classification versus Human Perception. Interspeech, Lyon, France, 2013.
- C53. Benoit Favre, Kyla Cheung, Siavash Kazemian, Adam Lee, Yang Liu, Cosmin Munteanu, Ani Nenkova, Dennis Ochei, Gerald Penn, Stephen Tratz, Clare Voss, and Frauke Zeller. Automatic Human Utility Evaluation of ASR Systems: Does WER Really Predict Performance? Interspeech, Lyon, France, 2013.
- C54. Chen Li, Xian Qian, and Yang Liu. Using Supervised Bigram-based ILP for Extractive Summarization. Annual Meeting of the Association for Computational Linguistics (ACL), Sofia, Bulgaria, 2013.
- C55. Xian Qian and Yang Liu. Disfluency Detection Using Multi-step Stacked Learning. Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL), Atlanta, Georgia, 2013.
- C56. Deana Pennell and Yang Liu. Evaluating the Effect of Normalizing Informal Text on TTS Output. IEEE Workshop on Spoken Language Technology (SLT) 2012, Miami, Florida, 2012.
- C57. Chen Li and Yang Liu. Improving Text Normalization Using Character-blocks based Models and System Combination. International Conference on Computational Linguistics (COLING), Mumbai, India, 2012.
- C58. Rui Xia and Yang Liu. Using i-Vector Space Model for Emotion Recognition. Interspeech, Portland, Oregon, 2012.
- C59. Chen Li and Yang Liu. Normalization of Text Messages Using Character- and Phone-based Machine Translation Approaches. Interspeech, Portland, Oregon, 2012.
- C60. Khairun-nisa Hassanali, Tamar Solorio, and Yang Liu. Evaluating NLP Features for Automatic Prediction of Language Impairment Using Child Speech Transcripts. Interspeech, Portland, Oregon, 2012.
- C61. Khairun-nisa Hassanali, Yang Liu, and Tamar Solorio. Child Language Narratives: A Case Study of Annotation and Automatic Prediction. Workshop on Child, Computer and Interaction (WOCCI), Portland, Oregon, 2012.
- C62. Xian Qian and Yang Liu. Joint Chinese Word Segmentation, POS Tagging and Parsing. Empirical Methods for Natural Language Processing (EMNLP), Jeju, Korea, 2012.

- C63. Dong Wang, Xian Qian, and Yang Liu. A Two-step Approach to Sentence Compression of Spoken Utterances. Annual Meeting of the Association for Computational Linguistics (ACL), Jeju, Korea, 2012.
- C64. Zhonghua Qu and Yang Liu. Sentence Dependency Tagging in Online Question Answering Forums. Annual Meeting of the Association for Computational Linguistics (ACL), Jeju, Korea, 2012.
- C65. Xian Qian and Yang Liu. Sequence Labeling with Non-Negative Weighted Higher Order Features. AAAI Conference on Artificial Intelligence (AAAI), Toronto, Canada, 2012.
- C66. Zhonghua Qu and Yang Liu. User Participation Prediction in Online Forums. Conference of the European Chapter of the Association for computational Linguistics (EACL), Avignon, France, 2012.
- C67. Feifan Liu, Fei Liu, and Yang Liu. Learning from Chinese-English Parallel Data for Chinese Tense Prediction. International Joint Conference on Natural Language Processing (IJCNLP), Thailand, 2011.
- C68. Deana Pennell and Yang Liu. A Character-Level Machine Translation Approach for Normalization of SMS Abbreviations. International Joint Conference on Natural Language Processing (IJCNLP), Thailand, 2011.
- C69. Zhonghua Qu and Yang Liu. Finding Problem Solving Threads in Online Forum. International Joint Conference on Natural Language Processing (IJCNLP), Thailand, 2011.
- C70. Je Hun Jeon, Wen Wang, and Yang Liu. N-Best Rescoring Based on Pitch-accent Patterns. Annual Meeting of the Association for Computational Linguistics: Human Language Technologies (ACL-HLT), Portland, 2011.
- C71. Dong Wang and Yang Liu. A Pilot Study of Opinion Summarization in Conversations. Annual Meeting of the Association for Computational Linguistics: Human Language Technologies (ACL-HLT), Portland, 2011.
- C72. Zhonghua Qu and Yang Liu. Interactive Group Suggesting for Twitter. Annual Meeting of the Association for Computational Linguistics: Human Language Technologies (ACL-HLT), Portland, 2011.
- C73. Fei Liu, Fuliang Weng, Bingqing Wang, and Yang Liu. Insertion, Deletion, or Substitution? Normalizing Text Messages without Pre-categorization nor Supervision. Annual Meeting of the Association for Computational Linguistics: Human Language Technologies (ACL-HLT), Portland, 2011.
- C74. Fei Liu, Fuliang Weng, and Yang Liu. Why is “SXSW” trending? Exploring Multiple Text Sources for Twitter Topic Summarization. Workshop on Language in Social Media. Workshop at ACL-HLT 2011.
- C75. Khairun-nisa Hassanali and Yang Liu. Measuring Language Development in Early Childhood Education: A Case Study of Grammar Checking in Child Language Transcripts. 6th Workshop on Innovative Use of NLP for Educational Applications. Workshop at ACL-HLT 2011.
- C76. Dong Wang and Yang Liu. A Cross-corpus Study of Unsupervised Subjectivity Identification based on Calibrated EM. 2nd Workshop on Computational Approaches to Subjectivity and Sentiment Analysis. Workshop at ACL-HLT 2011.
- C77. Je Hun Jeon, Rui Xia, and Yang Liu. Sentence Level Emotion Recognition based on Decisions from Subsentence Segments. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Prague, Czech Republic, 2011.
- C78. Deana Pennell and Yang Liu. Toward Text Message Normalization: Modeling Abbreviation Generation. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Prague, Czech Republic, 2011.
- C79. Fei Liu and Yang Liu. Using Spoken Utterance Compression for Meeting Summarization: A Pilot Study. IEEE Workshop on Spoken Language Technology (SLT), Berkeley, 2010.

- C80. Je Hun Jeon, Rui Xia, and Yang Liu. Level of Interest Sensing in Spoken Dialog Using Multi-level Fusion of Acoustic and Lexical Evidence. Interspeech, Makuhari, Japan, 2010. [Interspeech Paralinguistic Challenge Award – The Affect Subchallenge Prize]
- C81. Shasha Xie, Hui Lin, and Yang Liu. Semi-Supervised Extractive Speech Summarization via Co-Training Algorithm. Interspeech, Makuhari, Japan, 2010.
- C82. Fei Liu and Yang Liu. Exploring Speaker Characteristics for Meeting Summarization. Interspeech, Makuhari, Japan, 2010.
- C83. Je Hun Jeon and Yang Liu. Syllable-Level Prominence Detection with Acoustic Evidence. Interspeech, Makuhari, Japan, 2010.
- C84. Dan Gillick and Yang Liu. Non-Expert Evaluation of Summarization Systems Is Risky. Workshop: Creating Speech and Language Data with Amazon’s Mechanical Turk, at Human Language Technologies: The 11th Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL HLT), Los Angeles, 2010.
- C85. Shasha Xie and Yang Liu. Using Confusion Networks for Speech Summarization. Human Language Technologies: The 11th Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL HLT), Los Angeles, 2010.
- C86. Feifan Liu, Dong Wang, Bin Li, and Yang Liu. Improving Blog Polarity Classification via Topic Analysis and Domain Adaptation. Human Language Technologies: The 11th Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL HLT), Los Angeles, 2010.
- C87. Jachym Kolar and Yang Liu. Comparing and Combining Modeling Techniques for Sentence Segmentation of Spoken Czech Using Textual and Prosodic Information. Speech Prosody, Chicago, 2010.
- C88. Yang Liu, Shasha Xie, and Fei Liu. Using N-best Recognition Output for Extractive Summarization and Keyword Extraction in Meeting Speech. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Dallas, 2010.
- C89. Deana Pennell and Yang Liu. Normalization of Text Messages for Text-to-speech. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Dallas, 2010.
- C90. Jachym Kolar and Yang Liu. Automatic Sentence Boundary Detection in Conversational Speech: A Cross-lingual Evaluation on English and Czech. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Dallas, 2010.
- C91. Shasha Xie, Dilek Hakkani-Tür, Benoit Favre, and Yang Liu. Integrating Prosodic Features in Extractive Meeting Summarization. IEEE Workshop on Automatic Speech Recognition and Understanding (ASRU), Merano, Italy, 2009.
- C92. Je Hun Jeon and Yang Liu. Automatic Accent Detection: Effect of Base Units and Boundary Information. Interspeech, Brighton, U.K., 2009.
- C93. Shasha Xie, Benoit Favre, Dilek Hakkani-Tür, and Yang Liu. Leveraging Sentence Weights in a Concept-based Optimization Framework for Extractive Meeting Summarization. Interspeech, Brighton, U.K., 2009.
- C94. Fei Liu and Yang Liu. From Extractive to Abstractive Meeting Summaries: Can It Be Done by Sentence Compression?. Annual Meeting of the Association for Computational Linguistics (ACL-IJCNLP), short paper, Singapore, 2009.
- C95. Je Hun Jeon and Yang Liu. Semi-supervised Learning for Automatic Prosodic Event Detection Using Co-training Algorithm. Annual Meeting of the Association for Computational Linguistics (ACL-IJCNLP), Singapore, 2009.
- C96. Feifan Liu, Deana Pennell, Fei Liu, and Yang Liu. Unsupervised Approaches to Automatic Keyword Extraction Using Meeting Transcripts. Human Language Technologies: Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL HLT), Boulder, 2009.
- C97. Keyur Gabani, Melissa Sherman, Tamar Solorio, Yang Liu, Lisa M. Bedore, and Elizabeth D. Pena. A Corpus-Based Approach for the Prediction of Language Impairment in Monolingual



- English and Spanish-English Bilingual Children. Human Language Technologies: Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL HLT), Boulder, 2009.
- C98. Feifan Liu, Bin Li, and Yang Liu. Finding Opinionated Blogs Using Statistical Classifiers and Lexical Features. International Conference on Weblogs and Social Media (ICWSM), San Jose, 2009.
- C99. Je Hun Jeon and Yang Liu. Automatic Prosodic Events Detection Using Syllable-based Acoustic and Syntactic Features. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Taiwan, 2009.
- C100. Jachym Kolar, Yang Liu, and Elizabeth Shriberg. Genre Effects on Automatic Sentence Segmentation of Speech: A Comparison of Broadcast News and Broadcast Conversations. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Taiwan, 2009.
- C101. Shasha Xie, Yang Liu, and Hui Lin. Evaluating the Effectiveness of Features and Sampling in Extractive Meeting Summarization. IEEE Workshop on Spoken Language Technology (SLT), Goa, India, 2008.
- C102. Fei Liu, Feifan Liu, and Yang Liu. Automatic Keyword Extraction for the Meeting Corpus Using Supervised Approach and Bigram Expansion. IEEE Workshop on Spoken Language Technology (SLT), Goa, India, 2008.
- C103. Melissa Sherman and Yang Liu. Using Hidden Markov Models for Topic Segmentation of Meeting Transcripts. IEEE Workshop on Spoken Language Technology (SLT), Goa, India, 2008.
- C104. Tamar Solorio and Yang Liu. Part-of-Speech Tagging for English-Spanish Code-Switched Text. Conference on Empirical Methods in Natural Language Processing (EMNLP), Hawaii, 2008.
- C105. Tamar Solorio and Yang Liu. Learning to Predict Code-Switching Points. Conference on Empirical Methods in Natural Language Processing (EMNLP), Hawaii, 2008.
- C106. Feifan Liu and Yang Liu. Correlation between ROUGE and Human Evaluation of Extractive Meeting Summaries. Annual Meeting of the Association for Computational Linguistics (ACL), short paper, Columbus, Ohio, 2008.
- C107. Fei Liu and Yang Liu. What are Meeting Summaries? An Analysis of Human Extractive Summaries in Meeting Corpus. SIGdial Workshop on Discourse and Dialogue, Columbus, Ohio, 2008.
- C108. Tamar Solorio and Yang Liu. Using Language Models to Identify Language Impairment in Spanish-English Bilingual Children. Workshop on Current Trends in Biomedical Natural Language Processing, at ACL, Columbus, Ohio, 2008.
- C109. Yang Liu and Shasha Xie. Impact of Automatic Sentence Segmentation on Meeting Summarization. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Las Vegas, 2008.
- C110. Yang Liu and Feifan Liu. Unsupervised Language Model Adaptation via Topic Modeling Based on Named Entity Hypotheses. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Las Vegas, 2008.
- C111. Shasha Xie and Yang Liu. Using Corpus and Knowledge-based Similarity Measure in Maximum Marginal Relevance for Meeting Summarization. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Las Vegas, 2008.
- C112. Feifan Liu and Yang Liu. Soundbite Identification Using Reference and Automatic Transcripts of Broadcast News Speech. IEEE Workshop on Automatic Speech Recognition and Understanding (ASRU), Kyoto, Japan, 2007.
- C113. Jachym Kolar, Yang Liu, and Elizabeth Shriberg. Speaker Adaptation of Language Models for Automatic Dialog Act Segmentation of Meetings. Interspeech, Antwerp, Belgium, 2007.

- C114. Matthew Benton, Liz Dockendorf, Wenhua Jin, Yang Liu, and Jerry Edmondson. The Continuum of Speech Rhythm: Computational Testing of Speech Rhythm of Large Corpora from Natural Chinese and English Speech. International Congress of Phonetic Sciences (ICPhS), Saarbrücken, Germany, 2007.
- C115. Feifan Liu and Yang Liu. Unsupervised Language Model Adaptation Incorporating Named Entity Information. Annual Meeting of the Association for Computational Linguistics (ACL), Prague, Czech Republic, 2007.
- C116. Feifan Liu and Yang Liu. Look Who is Talking: Soundbite Speaker Name Recognition in Broadcast News Speech. Joint Human Language Technology Conference and Annual Meeting of North American Chapter of Association for Computational Linguistics (HLT-NAACL), Rochester, 2007.
- C117. Yang Liu and Elizabeth Shriberg. Comparing Evaluation Metrics for Sentence Boundary Detection. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Hawaii, 2007.
- C118. Yang Liu. Using SVM and Error-correcting Codes for Multiclass Dialog Act Classification in Meeting Corpus. Interspeech, Pittsburgh, 2006.
- C119. Matthias Zimmermann, Dilek Hakkani-Tür, James Fung, Nikki Mirghafori, Luke Gottlieb, Elizabeth Shriberg, and Yang Liu. The ICSI+ Multi-Lingual Sentence Segmentation System. Interspeech, Pittsburgh, 2006.
- C120. Jachym Kolar, Elizabeth Shriberg, and Yang Liu. On Speaker-Specific Prosodic Models for Automatic Dialog Act Segmentation of Multi-Party Meetings. Interspeech, Pittsburgh, 2006.
- C121. Jachym Kolar, Elizabeth Shriberg, and Yang Liu. Using Prosody for Automatic Sentence Segmentation of Multi-Party Meetings. International Conference on Text, Speech, and Dialogue (TSD), Brno, Czech Republic, 2006.
- C122. John Hale, Izhak Shafran, Lisa Yung, Bonnie Dorr, Mary Harper, Anna Krasnyanskaya, Matthew Lease, Yang Liu, Brian Roark, Matthew Snover, and Robin Stewart. PCFGs with Syntactic and Prosodic Indicators of Speech Repairs. Annual Meeting of the Association for Computational Linguistics (ACL), Sidney, Australia, 2006.
- C123. Yang Liu. Initial Study on Speaker Role Detection in Broadcast News Speech. Human Language Technology Conference - North American chapter of the Association for Computational Linguistics annual meeting (HLT-NAACL), New York, 2006.
- C124. Robin Stewart, Andrea Danyluk, and Yang Liu. Off Topic Detection in Conversational Speech. Workshop on Analyzing Conversations in Text and Speech, at HLT-NAACL, New York, 2006.
- C125. Brian Roark, Yang Liu, Mary Harper, Robin Stewart, Matthew Lease, Matthew Snover, Izhak Shafran, Bonnie Dorr, John Hale, Anna Krasnyanskaya, and Lisa Yung. Reranking for Sentence Boundary Detection in Conversational Speech. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Toulouse, France, 2006.
- C126. Brian Roark, Mary Harper, Eugene Charniak, Bonnie Dorr, Mark Johnson, Jeremy Kahn, Yang Liu, Mari Ostendorf, John Hale, Anna Krasnyanskaya, Matt Lease, Izhak Shafran, Matt Snover, Robin Stewart, and Lisa Yung. SParseval: Evaluation Metrics for Parsing Speech. International Conference on Language Resources and Evaluation (LREC), Genoa, Italy, 2006.
- C127. Ann Bies, Stephanie Strassel, Haejoong Lee, Kazuaki Maeda, Seth Kulick, Yang Liu, Mary Harper, and Matthew Lease. Linguistic Resources for Speech Parsing. International Conference on Language Resources and Evaluation (LREC), Genoa, Italy, 2006.
- C128. Yang Liu, Elizabeth Shriberg, Andreas Stolcke, and Mary Harper. Comparing HMM, Maximum Entropy, and Conditional Random Fields for Disfluency Detection. Interspeech, Lisbon, Portugal, 2005.
- C129. Anand Venkataraman, Yang Liu, Elizabeth Shriberg, and Andreas Stolcke. Does Active Learning Help Automatic Dialog Act Tagging in Meeting Data?. Interspeech, Lisbon, Portugal, 2005.

- C130. Matthias Zimmermann, Yang Liu, Elizabeth Shriberg, and Andreas Stolcke. A\* Based Segmentation and Classification of Dialog Acts in Multiparty Meetings. IEEE Workshop on Automatic Speech Recognition and Understanding (ASRU), Puerto Rico, 2005.
- C131. Yang Liu, Andreas Stolcke, Mary Harper, and Elizabeth Shriberg. Using Conditional Random Fields for Sentence Boundary Detection in Speech. Annual Meeting of the Association for Computational Linguistics (ACL), Ann Arbor, Michigan, 2005.
- C132. Matthias Zimmermann, Yang Liu, Elizabeth Shriberg, and Andreas Stolcke. Toward Joint Segmentation and Classification of Dialog Acts in Multiparty Meetings. Joint Workshop on Multimodal Interaction and Related Machine Learning Algorithms (MLMI), Edinburgh, UK, 2005.
- C133. Yang Liu, Elizabeth Shriberg, Andreas Stolcke, Barbara Peskin, Jeremy Ang, Dustin Hillard, Mari Ostendorf, Marcus Tomalin, Phil Woodland, and Mary Harper. Structural Metadata Research in the EARS Program. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Philadelphia, Pennsylvania, 2005.
- C134. Jeremy Ang, Yang Liu, and Elizabeth Shriberg. Automatic Dialog Act Segmentation and Classification in Multiparty Meetings. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Philadelphia, Pennsylvania, 2005.
- C135. Yang Liu, Andreas Stolcke, Mary Harper, and Elizabeth Shriberg. Comparing and Combining Generative and Posterior Probability Models: Some Advances in Sentence Boundary Detection in Speech. Conference on Empirical Methods in Natural Language Processing (EMNLP), Barcelona, Spain, 2004.
- C136. Yang Liu, Elizabeth Shriberg, Andreas Stolcke, Dustin Hillard, Mari Ostendorf, Barbara Peskin, and Mary Harper. The ICSI-SRI-UW Metadata Extraction System. Interspeech/ICSLP, Jeju Island, Korea, 2004.
- C137. Yang Liu, Elizabeth Shriberg, Andreas Stolcke, and Mary Harper. Using Machine Learning to Cope with Imbalanced Classes in Natural Speech: Evidence from Sentence Boundary and Disfluency Detection. Interspeech/ICSLP, Jeju Island, Korea, 2004.
- C138. Lei Chen, Yang Liu, Mary Harper, and Elizabeth Shriberg. Multimodal Model Integration for Sentence Unit Detection. International Conference on Multimodal Interfaces (ICMI), State College, Pennsylvania, 2004.
- C139. Lei Chen, Yang Liu, Eduardo Maia, and Mary Harper. Evaluating Factors Impacting the Accuracy of Forced Alignments in a Multimodal Corpus. International Conference on Language Resources and Evaluation (LREC), Lisbon, Portugal, 2004.
- C140. Dustin Hillard, Mari Ostendorf, Andreas Stolcke, Yang Liu, and Elizabeth Shriberg. Improving Automatic Sentence Boundary Detection with Confusion Networks. Human Language Technology conference / North American Chapter of the Association for Computational Linguistics Annual meeting (HLT/NAACL), Boston, Massachusetts, 2004.
- C141. Yang Liu, Elizabeth Shriberg, and Andreas Stolcke. Automatic Disfluency Identification in Conversational Speech Using Multiple Knowledge Sources. Interspeech/EuroSpeech, Geneva, Switzerland, 2003.
- C142. Yang Liu. Word Fragment Identification Using Acoustic-Prosodic Features in Conversational Speech. Student Workshop in Human Language Technology Conference / North American Chapter of the Association for Computational Linguistics (HLT/NAACL), Edmonton, Canada, 2003.
- C143. Wen Wang, Yang Liu, and Mary Harper. Rescoring Effectiveness of Language Models Using Different Levels of Knowledge and Their Integration. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Orlando, Florida, 2002.
- C144. Yang Liu, Jiasong Sun, and Zuoying Wang. Comparisons of Smoothing Methods in Chinese Language Model. International Symposium on Chinese Spoken Language Processing (ISCSLP), Beijing, China, 2000.

- C145. Jiasong Sun, Xiaodong Cui, Zuoying Wang, and Yang Liu. A Language Model Adaptation Approach Based on Text Classification. International Conference on Spoken Language Processing (ICSLP), Beijing, China, 2000.

**Book chapters:**

- BC1. Yang Liu and Dilek Hakkani-Tür. Speech Summarization. In *Spoken Language Understanding*, edited by Gokhan Tur, publisher: John Wiley and Sons.

**(Invited) talks:**

- T1. “Normalization of Informal Text”. University of California at Santa Cruz, October, 2015.  
T2. “Normalization of Informal Text”. Apple Inc. September, 2015.  
T3. “Recent Advances in Extractive and Abstractive Summarization”. SRI International, July, 2015.  
T4. “A Cross-corpus Study of Subjectivity Identification Using Unsupervised Learning”. Keynote talk at Sentiment Elicitation from Natural Text for Information Retrieval and Extraction (SENTIRE) Workshop, at ICDM, Dallas, December, 2013.  
T5. “Using Natural Language Processing for Child Language Analysis”. Callier Center, University of Texas at Dallas, November, 2013.  
T6. “Recent Advances in Automatic Summarization”. University of Maryland, October, 2013.  
T7. “Exploring New Applications Using Language Processing and Machine Learning: Normalization of Text Messages for TTS, Language Impairment Detection”. Oregon Health and Science University, April, 2010.  
T8. “Processing Natural Language: Recent Research on Text Messages and Meeting Recordings”. University of Alabama at Birmingham, February, 2010.  
T9. “Extractive Meeting Summarization and Keyword Extraction Using Meeting Transcripts”. University of Toronto, Canada, April, 2009.  
T10. “Extractive Meeting Summarization and Keyword Extraction Using Meeting Transcripts”. University of North Texas, February, 2009.  
T11. “Towards Meeting Understanding – Extractive Summarization, Topic Segmentation, and Keyword Extraction”. IDIAP Research Institute, Switzerland, May, 2008.  
T12. “Towards Meeting Understanding – Extractive Summarization, Keyword Extraction, and Topic Segmentation”. University of Edinburgh, UK, May, 2008.  
T13. “Bridging the Gap of Speech Processing and Natural Language Processing”. University of Texas at El Paso, July, 2007.  
T14. “Prosody in Speech Processing”. Joint meeting of Acoustic Society of America and Acoustic Society of Japan (ASA/ASJ), Hawaii, November, 2006.  
T15. “Speech and Language Processing: Perspective and Practice in Engineering and Computer Science”. University of Texas at Arlington, April, 2006.  
T16. “Structural Event Detection in Speech”. Brown University, April, 2005.

**Grants/contracts awarded (about \$2.8M):**

1. Title: Automated Annotation in NIGHTINGALE (Novel Information Gathering and Harvesting Techniques for Intelligence in Global Autonomous Language Environments)  
PI: Yang Liu at UTD (subcontract from SRI International)  
Funding organization: DARPA (GALE program)  
2005/09-2009/06, \$181,910
2. Title: Aspects of Prosody as Used in Chinese and English  
PI: Yang Liu, co-PI: Jerry Edmondson (UTA)

- Funding organization: UTD-UTA Joint Research Program  
2006/04-2007/04, \$10,000
3. Title: A Study on Definition of Speech Summarization in Meetings and Its Evaluation Metrics  
PI: Yang Liu  
Funding organization: NSF  
2007/01-2008/09, \$76,555
  4. Title: Prediction of Language Status in Monolingual Children  
PI: Thamar Solorio, co-PI: Yang Liu  
Funding organization: UTSW National Center for Research Resources (funds from NIH)  
2008/09-2009/08, \$36,000
  5. Title: HCC-Small: Collaborative Research: Statistical Methods for Learning to Diagnose Specific Language Impairment in Bilingual Children  
PI: Thamar Solorio, co-PI: Yang Liu  
Funding organization: NSF  
2008/09-2010/08, \$110,493
  6. Title: Text-to-speech for Text Messages  
PI: Yang Liu  
Funding organization: UTD Internal, Dr. Anson Clark Research Initiation Fund  
2009/06-2010/08, \$40,000
  7. Title: CAREER: Using Rich Information from Speech and Text for Meeting Summarization  
PI: Yang Liu  
Funding organization: NSF  
2009/07-2015/06, funded \$408,077
  8. Title: Workshop on Speech Summarization  
PI: Yang Liu  
Funding organization: NSF  
2009/08-2011/07, \$17,980
  9. Title: Computational Modeling for Emotion and Affect in Social-cultural Interaction  
PI: Yang Liu  
Funding organization: U.S. Air Force Young Investigator Research Program (YIP)  
2010/07-2013/07, \$359,334
  10. Title: HCC: Small: Collaborative Research: Analysis of Language Samples for Detecting Language Impairment in Monolingual and Bilingual Children  
PI: Yang Liu (collaborative proposal with Thamar Solorio at UAB/UH)  
Funding organization: NSF  
2010/09-2014/08, \$195,726
  11. Title: Text Normalization  
PI: Yang Liu  
Funding organization: Research and Technology Center, Robert Bosch LLC (gift fund)  
2010/11, \$18,000
  12. Title: CI-P: Summarizing Opinion and Speaker Attitude in Speech  
PI: Yang Liu (collaborative proposal with Ani Nenkova at Univ. of Pennsylvania, Julia Hirschberg at Columbia University)  
Funding organization: NSF  
2011/02-2014/01, \$37,046
  13. Title: THUnderBOLT: Toward Human-like Understanding in Breakthrough Operational Language Technologies  
PI: Yang Liu (Subcontract to SRI International)  
Funding organization: DARPA (BOLT program)  
2011/09-2013/03, \$102,189
  14. Title: ACL 2012 Student Research Workshop

- PI: Yang Liu  
 Funding organization: NSF  
 2012/02-2016/01, \$19,500
15. Title: Extended Visit to Asian Research Labs for Selected Students Attending ACL 2012 Student Research Workshop  
 PI: Yang Liu  
 Funding organization: NSF  
 2012/04-2016/04, \$44,000
  16. Title: Automatic Summarization  
 PI: Yang Liu  
 Funding organization: Research and Technology Center, Robert Bosch LLC (gift fund)  
 2012/05-present, \$60,000
  17. Title: SPARKLER: Scalable Prosodic, Anomaly and Relational & Knowledge exploration of Language with Enhanced Robustness  
 PI: Yang Liu  
 Funding organization: DARPA (DEFT program), subcontract to CUNY/Queens College  
 2012/11-2017/4, \$396,891
  18. Title: Compression for Automatic Summarization  
 PI: Yang Liu  
 Funding organization: Research and Technology Center, Robert Bosch LLC (gift fund)  
 2013/09-present, \$40,000
  19. Title: EAGER: Investigating the Role of Discourse Context in Speech-Driven Facial Animations  
 PI: Yang Liu (co-PI: Carlos Busso, UTD)  
 Funding organization: NSF  
 2013/9-2016/4, \$82,551
  20. Title: Algorithm Comparison for Various Natural Language Processing Tasks  
 PI: Yang Liu  
 Funding organization: Research and Technology Center, Robert Bosch LLC (gift fund)  
 2014/03-present, \$50,000
  21. Title: User Profiling for More Effective Online User Experience  
 PI: Yang Liu  
 Funding organization: Research and Technology Center, Robert Bosch LLC (gift fund)  
 2014/09, \$50,000
  22. Title: Audio Event Detection  
 PI: Yang Liu  
 Funding organization: Robert Bosch LLC (gift fund)  
 2014/09-present, \$40,000
  23. Title: Recognizing and Modeling Influence in Social Media Language  
 PI: Yang Liu  
 Funding organization: Air Force Office of Scientific Research  
 2015/9-2018/8, \$424,148
  24. Title: Opinion Summarization for Reviews  
 PI: Yang Liu  
 Funding organization: Research and Technology Center, Robert Bosch LLC (gift fund)  
 2015/09, \$50,000

**Doctoral students:**

Shasha Xie, graduated in 2010/12. Thesis: Automatic Extractive Summarization on Meeting Corpus  
 Fei Liu, graduated in 2011/05. Thesis: Identifying the Gist of Conversational Text: Automatic Keyword Extraction and Summarization

Deana Pennell, graduated in 2011/12. Thesis: Normalization of Informal Text for Text-to-Speech  
Je Hun Jeon, graduated in 2011/12. Thesis: Prosody Modeling in Spoken Language Systems  
Dong Wang, graduated in 2013/05. Thesis: Opinion Summarization for Spontaneous Conversations  
Khairun-nisa Hassanali, graduated in 2013/12. Thesis: Using Natural Language Processing for Child  
Language Analysis  
Rui Xia, graduated in 2015/12. Thesis: Emotion Recognition in Speech  
Chen Li, graduated in 2016/05. Thesis: Automatic summarization

### **Postdoc supervision:**

Thamar Solorio, 2007/08-2009/06. Current: Associate professor, University of Houston  
Feifan Liu, 2006/08-2009/08. Current: Assistant Professor, University of Massachusetts Medical School  
Xian Qian, 2011/08-2014/09. Current: Bytedance  
Zhongyu Wei, 2014/12-2016/08. Current: Assistant Professor, Fudan University, China.

### **Professional service:**

IEEE Speech and Language Technical Committee (SLTC) member, 2019-2021  
Area chair, NAACL 2021  
Area chair, ACL 2021  
Special session and demo chairs, IEEE SLT 2021

Associate editor, ACM Transactions on Asian and Low-Resource Language Information Processing, 2013-2019  
Associate editor, IEEE/ACM Transactions on Audio, Speech and Language Processing, 2012-2016  
Subject editor, Speech Communication, 2013-2015  
Associate editor, ACM Transactions on Speech and Language Processing, 2011-2013

Program Chairs, EMNLP 2020  
Sponsorship co-chair, Interspeech 2020  
Sponsorship co-chair, ASRU 2019  
Area co-chair, EMNLP 2019  
Area co-chair, NAACL 2019  
Demo co-chair, NAACL 2018  
Organizing committee, Workshop for Young Female Researchers in Speech Science & Technology, at Interspeech 2018  
Sponsorship co-chair, International Conference on Affective Computing and Intelligent Interaction (ACII), 2017  
Area chair, ACL 2016  
Tutorial co-chair, NAACL 2015  
Panel chair, IEEE Workshop on Spoken Language Technology (SLT) 2014  
Area chair, ACL 2014  
Area co-chair, EMNLP 2013  
General co-chair, IEEE Workshop on Spoken Language Technology (SLT) 2012  
Student Research Workshop Faculty advisor, ACL 2012  
Organizer, Workshop for Automatic Summarization for Different Genres, Media, and Languages, held at ACL-HLT, 2011  
Organizer, Special session on Spoken Language Processing of Human Conversations, Interspeech 2011  
Tutorial: Automatic Summarization, at ACL-HLT 2011 and Interspeech 2011  
Area co-chair (Summarization and Generation), Annual Meeting of the Association for Computational Linguistics (ACL), 2011

Demo co-chair, International Conference on Computational Linguistics (COLING), 2010  
Publication chair, IEEE Workshop on Spoken Language Technology (SLT), 2010  
Publicity co-chair, International Conference on Multimodal Interfaces and Workshop on Machine Learning for Multi-modal Interaction (ICMI-MLMI), 2009  
Area chair, program committee, Joint Workshop on Multimodal Interactions and Related Machine Learning Algorithms (MLMI), 2007, 2008  
Publication co-chair, Joint Human Language Technology Conference and Annual Meeting of North American Chapter of the Association for Computational Linguistics (NAACL-HLT), 2007

Session chair: MLMI 2007, ACL 2009, ICASSP 2010, SLT 2010, NAACL 2013, ACL 2014, Interspeech 2016, NAACL 2018, NAACL 2019, EMNLP 2019  
NSF panelist, 2005, 2008, 2010, 2012, 2013, 2015, 2016, 2018, 2019  
NSF ad-hoc review, 2008, 2009, 2013, 2014  
US-Israel BIRD Foundation proposal review, 2014  
Canada NSERC Discovery Grant proposal, 2014  
Air Force Office of Scientific Research, external review, 2011  
Maryland Industrial Partnerships Program proposal review, 2009

#### **Reviewer (program committee) for conferences:**

International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2006-present  
IEEE Workshop on Automatic Speech Recognition and Understanding (ASRU), 2005-present  
International Symposium on Chinese Spoken Language Processing (ISCSLP), 2006-2010  
IEEE Workshop on Spoken Language Technology (SLT), 2006, 2010, 2012, 2014, 2016, 2018  
Human Language Technology: Annual Meeting of North American Chapter of the Association for Computational Linguistics (NAACL-HLT), 2007-present  
Interspeech, 2007-present  
Annual Meeting of the Association for Computational Linguistics (ACL), 2008-present  
Conference on Empirical Methods in Natural Language Processing (EMNLP), 2005-present  
Conference of the European Chapter of the Association for computational Linguistics (EACL) 2012, 2014  
AAAI Conference on Artificial Intelligence (AAAI), 2015, 2016, 2019  
World Wide Web Conference (WWW), 2016  
International Joint Conference on Natural Language Processing (IJCNLP), 2011  
International Conference on Multimodal Interfaces (ICMI), 2008  
International Conference on Semantic Computing (ICSC), 2008  
International Joint Conference on Artificial Intelligence (IJCAI), 2009, 2013  
International Conference on Computational Linguistics (COLING), 2010, 2012, 2020  
Neural Information Processing Systems (NIPS), 2012  
Building Education Applications Workshop, 2018, 2019

#### **Reviewer for journals:**

IEEE Transactions on Audio, Speech and Language Processing, 2005-present  
Speech Communication, 2006-present  
Computer Speech and Language, 2009-present  
Transactions of the Association for Computational Linguistics, 2012-present  
International Journal on Document Analysis and Recognition, 2007  
IEEE Transactions on Multimedia, 2008, 2015  
ACM Transactions on Asian Language Information Processing, 2008-2009  
ACM Transactions on Speech and Language Processing, 2008-2009  
IEEE Journal of Selected Topics in Signal Processing, 2009, 2012



Natural Language Engineering, 2009  
EURASIP Journal on Audio, Speech, and Music Processing, 2009  
IEEE Transactions on Affective Computing, 2010  
Knowledge-Based Systems, 2010-present  
Knowledge and Information Systems, 2011, 2015  
Information Processing and Management, 2011  
Language Resources and Evaluation, 2012  
IEEE Signal Processing Letters, 2013  
Journal of Acoustical Society of America, 2012  
Proceedings of IEEE, 2012  
Multimedia systems. 2013  
ACM Transactions on Information Systems. 2013