

Mingbo Ma

CONTACT INFORMATION	1195 Bordeaux Dr Sunnyvale, CA, 94089	Email:: cosmmb@gmail.com Web: mingboma.com Google scholar
RESEARCH INTERESTS	I am broadly interested in all kinds of NLP-related problems, including speech-related problems, e.g., Automatic Speech Recognition (ASR), Text-To-Speech synthesis (TTS), and text-based NLP problems, e.g., Machine Translation, Question Answering, Image Captioning, Summarization, etc. My goal is to build a full end-to-end system with the most advanced Machine Learning techniques to interact with users.	
EXPERIENCE	Baidu USA LLC, Sunnyvale, CA, USA	Sep 2018 – now
	Research Scientist in <i>Baidu Silicon Valley AI Lab (SVAIL)</i> Working on various neural-based structured prediction and generative models.	
	Baidu USA LLC, Sunnyvale, CA, USA	April 2018 – Sep 2018
	Research Intern in <i>Baidu Silicon Valley AI Lab (SVAIL)</i> Work on global training with beam search for Machine Translation framework. Managers: Liang Huang and Xing Li	
	Apple Inc., Cupertino, CA, USA	June 2017 – Sep 2017
	Research Intern in <i>NLP Core Technologies</i> Work on various of neural-based NLP models on IOS and MacOS systems.(details are omitted based on company's policy) Managers: Vivek Kumar Rangarajan Sridhar	
	IBM T.J. Watson Research Center, Yorktown Heights, NY, USA	June 2016 – Sep 2016
	Research Intern in <i>Cognitive Analytics and Deep Learning Group</i> Proposed a set of attention regularizations to make the attention between source and target sides more accurate for summarization. Proposed a new neural-based summarization model. Mentor: Ramesh M. Nallapati Managers: Bing Xiang & Bowen Zhou	
	Authentec Inc.(acquired by Apple Inc. in 2012), Melbourne, FL, USA	May 2010 – Jun 2011
	Algorithm Engineer Developed imaging algorithms to enhancement for finger detection, fingerprint image and reconstruction performance, The techniques relate to image processing, metric analysis, real time signal processing and filter design. Mentors: Michael Boshra & Qiang Liu	
EDUCATION	Oregon State University, Corvallis, OR, USA	Sep. 2015 – Sep. 2018
	Ph.D in Computer Science	
	The Graduate Center at CUNY, New York, NY, USA	June. 2013 – Aug. 2015
<i>Ph.D student in Computer Science</i>		
Advisor: Liang Huang		
Thesis: “ Structured Neural Models for Natural Language Processing”		
Committee: Alan Fern, Xiaoli Fern, Prasad Tadepalli and Kyle Niemeyer		

Northeastern University, Boston, MA, USA

Sep. 2012 – May 2013

Ph.D student in Electrical Engineering

State University of New York at Buffalo, Buffalo, NY, USA

Jan. 2012 – Aug. 2012

Ph.D student in Computer Science

Advisor: Yun (Raymond) Fu

Florida Institute of Technology, Melbourne, FL, USA

Aug. 2008 – May 2010

Master of Science in Electrical Engineering

Advisor: Georgios C. Anagnostopoulos

Thesis: “Kernel-based Sammon Mapping for Dimensionality Reduction & Data Visualization”

Jilin University, Changchun, Jilin, China

Aug. 2004 – July 2008

Bachelor of Science in Telecommunication Engineering

PUBLICATIONS

* equal contrib.

Mingbo Ma *, Baigong Zheng *, Kaibo Liu, Renjie Zheng, Hairong Liu, Kainan Peng, Kenneth Church and Liang Huang “Incremental Text-to-Speech Synthesis with Prefix-to-Prefix Framework”, ArXiv 2019.

Hairong Liu, Mingbo Ma and Liang Huang “Machine Translation in Pronunciation Space”, ArXiv 2019

Renjie Zheng*, **Mingbo Ma***, Baigong Zheng and Liang Huang “Speculative Beam Search for Simultaneous Translation”, EMNLP 2019.

Baigong Zheng *, Renjie Zheng *, **Mingbo Ma** and Liang Huang “Simpler and Faster Learning of Adaptive Policies for Simultaneous Translation”, EMNLP 2019.

Renjie Zheng *, Hairong Liu *, **Mingbo Ma**, Baigong Zheng and Liang Huang “Robust Machine Translation with Domain Sensitive Pseudo-Sources: Baidu-OSU WMT19 MT Robustness Shared Task System Report”, WMT 2019.

Baigong Zheng *, Renjie Zheng *, **Mingbo Ma** * and Liang Huang “Simultaneous Translation with Flexible Policy via Restricted Imitation Learning”, ACL 2019.

Mingbo Ma *, Liang Huang *, Hao Xiong, Renjie Zheng, Kaibo Liu, Baigong Zheng, Chuanqiang Zhang, Zhongjun He, Hairong Liu, Xing Li, Hua Wu and Haifeng Wang “STACL: Simultaneous Translation with Integrated Anticipation and Controllable Latency”, ACL 2019 (patent application in progress).

Hairong Liu, **Mingbo Ma**, Liang Huang, Hao Xiong and Zhongjun He “Robust Neural Machine Translation with Joint Textual and Phonetic Embedding”, ACL 2019.

Mingbo Ma *, Renjie Zheng * and Liang Huang “Learning to Stop in Structured Prediction for Neural Machine Translation”, NAACL 2019.

Renjie Zheng, **Mingbo Ma** and Liang Huang “Multi-Reference Training with Pseudo-References for Neural Translation and Text Generation”, EMNLP 2018.

Yilin Yang, Liang Huang and **Mingbo Ma** “Breaking the Beam Search Curse: A Study of (Re-)Scoring Methods and Stopping Criteria for Neural Machine Translation”, EMNLP 2018.

Renjie Zheng, Yilin Yang, **Mingbo Ma** and Liang Huang “Ensemble Sequence Level Training for Multimodal MT: OSU-Baidu WMT18 Multimodal Machine Translation System Report”, WMT 2018 (achieves 3 best performance out of 4 tasks).

Mingbo Ma, Dapeng li, Liang Huang and Kai Zhao “OSU Multimodal Machine Translation System Report”, WMT 2017 competition on multimodal translation. *We achieved the **best TER score** among 15 systems on the English+Image → German on COCO task (the hardest task in that competition, since it’s into German rather than French, and tested on out-of-domain images).*

Liang Huang, Kai Zhao and **Mingbo Ma** “When to Finish? Optimal Beam Search for Neural Text Generation”, EMNLP 2017.

Mingbo Ma, Liang Huang, Bing Xiang and Bowen Zhou “Group Sparse CNNs for Question Classification with Answer Sets”, ACL 2017.

Mingbo Ma, Kai Zhao, Liang Huang, Bing Xiang and Bowen Zhou “Joint Sequential Labeling and Classification by Sparse Attention Neural Networks”, Interspeech, 2017.

Ramesh Nallapati, Bowen Zhou and **Mingbo Ma**, “Classify or Select: Neural Architectures for Extractive Document Summarization”, arXiv, 2016.

Kai Zhao, Liang Huang and **Mingbo Ma**, “Textual Entailment with Structured Attentions and Composition”, COLING, 2016.

Mingbo Ma, Liang Huang, Bing Xiang and Bowen Zhou, “Dependency-based Convolutional Neural Networks for Sentence Embedding”, ACL, 2015.

Ming Shao, **Mingbo Ma**, and Yun Fu, “Low-Rank and Sparse Modeling for Visual Analysis”, *Sparse Manifold Subspace Learning*, Springer, 2014.

Mingbo Ma, Ming Shao, Xu Zhao and Yun Fu, “Prototype Based Feature Learning for Face Image Set Classification”, *International Conference on Automatic Face and Gesture Recognition*, 2013.

Mingbo Ma, Ryan Gonet, RuiZhi Yu and Georgios C. Anagnostopoulos, “Metric Representations of Data via the Kernel-based Sammon Mapping”, *IEEE International Joint Conference on Neural Networks (IJCNN)*, 2010.

Qian Ma and **Mingbo Ma**, “Broadband Amplifier Gain Slope Equalization Filter”, In *Proceedings of the 2008 Progress In Electromagnetics Research Symposium (PIERS)*, 2008.

TEACHING EXPERIENCE

Deep Learning, Oregon State University, Winter 2017 and Winter 2016
Algorithms, Oregon State University, Fall 2016
Theory of Computation, Oregon State University, Fall 2015

AWARDS AND HONORS

Baidu Pride, Best Individual Award, 2019
Baidu Employee of the Quarter Award, 2019
Baidu Technology Innovation Award, 2018
Graduate Center Fellowship, CUNY, 2013-2015

SERVICES

Program Committee and Paper Reviewer:
ACL (2018, 2019, 2020), EMNLP (2018, 2019), NAACL (2018, 2019),
ICML (2019), ICLR (2019, 2020), AACL (2018, 2019), AISTATS (2019),
COLING (2016, 2018), IJCAI (2018), Neurocomputing (2013), TALLIP (2018)

The 1st AutoSimTrans Workshop Organizer at ACL 2020
Simultaneous Translation Tutorial Presenter at EMNLP 2020