

Haolang Zhou

CONTACT INFORMATION	Haolang Zhou Center for Language and Speech Processing Johns Hopkins University 3400 North Charles Street Baltimore, MD 21218 USA	Mobile: (410) 900-0327 Fax: (410) 516-5050 E-mail: haolangzhou@jhu.edu Web: www.c1sp.jhu.edu/~hzhou
AREAS OF INTEREST	Speech Recognition, Machine Learning, Semi-supervised Learning, Dimensionality Reduction, Model Adaptations	
EDUCATION	Johns Hopkins University , Baltimore, MD USA Present Ph.D. Candidate, Department of Electrical and Computer Engineering Graduate research assistant at Center for Language and Speech Processing	
	Peking University , Beijing, China 2003 Master of Science, National Laboratory on Machine Perception and Center for Information Science	
	Peking University , Beijing, China 2000 Bachelor of Science, Department of Electronics	
RESEARCH EXPERIENCE	Johns Hopkins University , Baltimore, MD USA <i>Semi-supervised Heteroscedastic Linear Discriminant Analysis</i> (Advisor: Prof. Damianos Karakos and Prof. Andreas G. Andreou) 2008 - Present - Developed a semi-supervised version of Heteroscedastic Linear Discriminant Analysis (HLDA), allowing the use of unlabeled data in addition to labeled data.	
	Johns Hopkins University , Baltimore, MD USA <i>Participated in the DARPA Global Autonomous Language Exploitation Program (GALE)</i> (as a member of GALE IBM team) 2005 - 2007 (Advisor: Prof. Damianos Karakos and Prof. Izhak Shafran) - Research on using multiple heteroscedastic linear discriminant analysis transforms for speech recognition. - Participated in the rescoring of state-of-the-art speech recognizer outputs with different language models. - Participated in the system combination of the multiple state-of-the-art machine translation systems.	
	Johns Hopkins University , Baltimore, MD USA <i>JHU Effective Affordable Reusable Speech-to-text (EARS) Speech Recognizer</i> (Advisor: Prof. Izhak Shafran) 2005 - Implemented Vocal Tract Length Normalization (VTLN) for the JHU EARS speech recognition system, include training and decoding.	
	Johns Hopkins University , Baltimore, MD USA <i>Acoustic Model Adaptations</i> (Advisor: Prof. Izhak Shafran) 2004 - 2005 - Research on various acoustic model adaptation techniques, including speaker adaptation, Cluster Adaptive Training (CAT) and Speaker Adaptive Training (SAT).	

Johns Hopkins University, Baltimore, MD USA

Dialectal Chinese Speech Recognition

(as a member of the 2004 CLSP Summer Workshop team)

Summer 2004

- Research on employing dialect-related knowledge and training data (in relatively small quantities) to modify a non-dialect baseline system to obtain a dialectal Chinese recognizer.

Peking University, Beijing, China

Speaker Recognition and Speaker Segmentation

(Advisor: Prof. Huisheng Chi)

2000-2003

- Research on speaker recognition and speaker segmentation.
- Organized the recording of a speech database for speaker recognition (involving more than 150 people and maximum of 10 sessions).

TEACHING
EXPERIENCE

Johns Hopkins University, Baltimore, MD, USA

Teaching Assistant

July 2005, 2007, 2009

- Assisted in laboratories at the JHU Summer School on Human Language Technology.

Johns Hopkins University, Baltimore, MD, USA

Teaching Assistant

Spring of 2006 and 2009

- Information Extraction from Speech and Text, by Prof. Sanjeev Khudanpur
- Held problem sessions and graded homework for graduate level course

Johns Hopkins University, Baltimore, MD, USA

Teaching Assistant

Spring of 2005

- Fields, Matter & Waves, by Prof. Frederic M. Davidson
- Held problem sessions and graded homework

Johns Hopkins University, Baltimore, MD, USA

Teaching Assistant

Fall of 2004

- Basic Communications, by Prof. Frederic M. Davidson
- Held problem sessions and graded homework

Johns Hopkins University, Baltimore, MD, USA

Teaching Assistant

Spring of 2004

- Signals and Systems, by Prof. Wilson J. Rugh
- Held problem sessions and graded homework, also held weekly section teaching

PUBLICATIONS

[1] **Haolang Zhou**, Damianos Karakos, and Andreas G. Andreou. A Semi-supervised Version of Heteroscedastic Linear Discriminant Analysis. In *Proceedings of Interspeech 2009*. (Awarded ISCA Student Grant)

[2] **Haolang Zhou**, Damianos Karakos, Sanjeev Khudanpur, Andreas G. Andreou, and Carey E. Priebe, On Projections of Gaussian Distributions using Maximum Likelihood Criteria. In *Proceedings of the Information Theory and Applications Workshop, La Jolla, California, February 2009*.

[3] Izhak Shafran and **Haolang Zhou**, Multiple Heteroscedastic Linear Discriminant Analysis. *CLSP Research Note 54*.

[4] Yanli Zheng, Richard Sproat, Liang Gu, Izhak Shafran, **Haolang Zhou**, Yi Su, Dan Jurafsky, Rebecca Starr and Su-Youn Yoon, Accent Detection and Speech Recognition for Shanghai-Accented Mandarin. In *Proceedings of the InterSpeech 2005*.

[5] **Haolang Zhou**, Lan Wang, and Ke Chen, A Mandarin Speech Database for Speaker Recognition. In *Proceedings of NCMMSC-6, 2001* (in Chinese).

PROFESSIONAL
ACTIVITIES

Student Member of Institute of Electrical and Electronics Engineers (IEEE).
Student Member of International Speech Communication Association (ISCA).

COMPUTER
SKILLS

Languages: C, Perl, MATLAB, R, Python, Shell scripts.
Toolkits: Cambridge Hidden Markov Model (HTK) Toolkit, IBM Attila
Speech Recognition Toolkit, SRI Language Modeling Toolkit,
AT&T Finite State Machine Toolkit.

PERSONAL
DETAILS

Citizenship: P. R. China
Languages: Fluent in English, native in Mandarin Chinese.