

Yang Shao

Department of Computer Science and Engineering
The Ohio State University
2015 Neil Avenue
Columbus, OH 43210-1277

shaoy@cse.ohio-state.edu
<http://www.cse.ohio-state.edu/~shaoy>
Phone: (614) 439-5362
Fax: (614) 292-2911

Objective	Full-time position.
Summary	<ul style="list-style-type: none">• Machine Learning and Artificial Intelligence• Pattern classification and recognition• Automatic speech and speaker recognition• Statistical signal processing• Statistical analysis and modeling of large database• Data modeling and classification using neural networks
Work Experience	<p>Intern, <i>GE Global Research</i>, Niskayuna, NY. June-Sept. 2005</p> <ul style="list-style-type: none">- Design and develop a fault detection system for a world-leading GE product.- Design and develop a real-time speaker recognition system for audio stream processing. <p>Research Associate, Dept. of Computer Science and Engineering, <i>The Ohio State University</i>. Sept. 2001-Present</p> <ul style="list-style-type: none">- Design and develop a robust speaker recognition system that outperforms the state-of-the-art system.- Participate in the speech separation and recognition challenge competition, and our system is one of the best auditory-based systems.- Design and develop a generalized sequential grouping algorithm to organize human voices across time in various adverse environments.- Design and develop usable speech extraction and model-based sequential organization methods for robust speaker recognition in cochannel speech.- Explore neural network techniques for visual and auditory scene segmentation.- Construct a large vocabulary continuous speech recognition system on Wall Street Journal corpus using HTK and obtain state-of-the-art recognition performance.- Enhance an articulatory speech synthesizer for educational purpose. <p>Teaching Associate, Dept. of Computer Science and Engineering, <i>The Ohio State University</i>. Sept. 2003-June 2004</p> <ul style="list-style-type: none">- Teach computer science 100, class size of 45, and full teaching responsibilities. <p>Research Assistant, Dept. of Computer Science, <i>Fudan University</i>, Shanghai, China. 1998-2001</p> <ul style="list-style-type: none">- Construct a Chinese large vocabulary continuous speech recognition system. Developed a home banking system based on the constructed speech recognizer using telephony technique. (sponsored by NTT DATA Co., Japan)
Education	<p>Ph.D. candidate, Computer Science and Engineering 2001-Present The Ohio State University, Columbus, Ohio Major: Artificial Intelligence, Minor: Signal Processing and Computer Networking.</p> <p>M.S. in Computer Science 1998-2001 Fudan University, Shanghai, China</p> <p>B.E. in Computer Science 1994-1998 Nanjing University of Aeronautics & Astronautics, Nanjing, China</p>

- Honors & Awards**
- NSF travel award to attend the Mathematics of the Ear and Sound Signal Processing Workshop in Los Angeles, USA. 2005
 - The William James Award for Best Graduate Presentation at CogFest-2005 presented by the Center for Cognitive Science of The Ohio State University. 2005
 - Member of Upsilon Pi Epsilon. 2002

- Publications**
- Journal Articles**
- Y. Shao and D.L. Wang, "Model-based sequential organization in cochannel speech," *IEEE Transactions on Audio, Speech and Language Processing [see also IEEE Transactions on Speech and Audio Processing]*, vol. 14, no. 1, pp. 289-298, 2006.
 - Y. Shao and Z.G. Li, "A speaker recognition system using MFCC features and weighted vector quantization," *Computer Engineering and Applications*, China, 2001.
 - Y. Shao and Z.G. Li, "Home banking service system using HMM framework," *Computer Engineering*, China, 2001.

Conference Papers

- Y. Shao, S. Srinivasan and D.L. Wang, "Incorporating auditory feature uncertainties in robust speaker identification," to appear at *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Honolulu, USA, 2007.
- S. Srinivasan, Y. Shao, Z. Jin and D.L. Wang, "A computational auditory scene analysis system for robust speech recognition," *Proc. Interspeech*, Pittsburgh, USA, 2006.
- Y. Shao and D.L. Wang, "Robust speaker recognition using binary time-frequency masks," *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Toulouse, France, 2006.
- Y. Shao and D.L. Wang, "Model-based sequential organization for cochannel speaker identification," *Proc. International Conference on Spoken Language Processing (ICSLP)*, Jeju, Korea, 2004.
- Y. Shao and D.L. Wang, "Co-channel speaker identification using usable speech extraction based on multi-pitch tracking," *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, vol. 2, pp. 205-208, Hong Kong, China, 2003.

Others

- Y. Shao and D.L. Wang, "Model-based sequential organization in cochannel speech," *Technical Report, OSU-CISRC-05/04-TR30*, Dept. of Computer Science and Engineering, The Ohio State University, 2004.
- Y. Shao, A study on speaker recognition systems, *Master thesis*, Department of Computer Science, Fudan University, 2001.

- Presentations**
- For the conference papers listed above except the 2nd one, I will or have presented them at the corresponding conferences.
 - "On building large vocabulary speech recognition systems." The Computational Linguistics Discussion Group at The Ohio State University, February 2005, Columbus, Ohio, USA.

Professional Activities Active reviewer for: *IEEE Transactions on Neural Networks, ICASSP, IJCNN, WCCI*.
Student Member, Institute of Electrical and Electronics Engineers (IEEE).

Computer Skills Programming Languages: Matlab, C, C++, Java, and Perl.
Operating Systems: Windows, Linux, Unix. Others: HTML, ASP.

References Available upon request.