

# Alex Stupakov

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## OBJECTIVE

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A position in audio, speech, or language technology development

## SKILLS

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Technical: Digital signal processing, speech recognition, language processing, machine learning  
Programming: C, C++, Matlab, Perl, Bash, Java, Assembly  
Software: Sox, Adobe Audition, Praat, HTK, Sphinx, SRILM, GMTK  
Hardware: Microcontrollers, DSPs, FPGAs/PLDs, analog and digital circuits, schematic capture  
Foreign languages: Russian, Spanish, and Portuguese

## EDUCATION

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2006-2009 **UNIVERSITY OF WASHINGTON** Seattle, WA  
*Master of Science in Electrical Engineering*

- Emphasis on Signal Processing and Speech Recognition Technology
- GPA: 3.74/4.00

**Relevant Coursework:**

- Computer Speech Processing
- Digital Signal Processing I & II & Lab
- Stochastic Analysis
- Statistical Learning
- Data Structures and Algorithms
- Statistical Language Processing

2001-2005 **UNIVERSITY OF CALIFORNIA, DAVIS** Davis, CA  
*Bachelor of Science in Electrical Engineering, with High Honors*

- GPA: 3.72/4.00

## EXPERIENCE

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2006-Present **SIGNAL, SPEECH, AND LANGUAGE INTERPRETATION LAB, U. OF WASHINGTON E.E.** Seattle, WA  
*Graduate Student / Research Assistant*

Research areas:

- noise-robust speech recognition
- low-power speech recognition technology for mobile devices
- locating keywords in speech recordings using spoken queries
- acoustic model training and adaptation
- pitch and formant detection in speech

Half of a team that designed and managed the creation and public release of a 150-hour corpus of multi-microphone recordings of conversational speech in noisy environments. Prototyped and built custom wearable microphone arrays and recording devices. Designed transcription methodology and supervised a group of 10 linguists who transcribed the corpus.

2005-2006 **NATIONAL SEMICONDUCTOR** Santa Clara, CA  
*Application Engineering Co-op (Data Converters Group)*

- Designed A/D converter evaluation board with FPGA and USB-based microcontroller.
- Wrote microcontroller firmware (C and Assembly).
- Designed communication protocol and FPGA configuration for high-speed data capture.
- Measured A/D converter performance in laboratory environment.

Summer 2004 **STANFORD LINEAR ACCELERATOR CENTER** Menlo Park, CA  
*Research Assistant*

- Developed algorithms, interface, and testing techniques for a solver for systems of nonlinear equations.
- Implemented artificial neural networks for optimization problems.

## PUBLICATIONS

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- A. Stupakov, E. Hanusa, J. Bilmes, and D. Fox, "COSINE - A Corpus of Multi-Party Conversational Speech In Noisy Environments," in Proceedings of ICASSP, 2009.
- H. Lin, A. Stupakov, and J. Bilmes, "Improving Multi-Lattice Alignment Based Keyword Spotting," in Proceedings of ICASSP, 2009.
- H. Lin, A. Stupakov, and J. Bilmes, "Spoken Keyword Spotting via Multi-lattice Alignment," in Proceedings of Interspeech, 2008.