

# Veera Venkataramani

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443-956-0580 (Cell)

- EDUCATION      Ph.D., Electrical and Computer Engineering, January 2000 - April 2005  
The Johns Hopkins University, Baltimore, MD, USA
- M.S.E., Electrical and Computer Engineering, September 1998 - January 2000  
The Johns Hopkins University, Baltimore, MD, USA
- B.E., Electronics and Communication Engineering, August 1994 - May 1998  
Regional Engineering College, Trichy, India
- RESEARCH AND EXPERIENCE      *Research Assistant*      **The Johns Hopkins University**  
Center for Language and Speech Processing      **Baltimore, MD, USA**
- 2000–2005**
- Introduced and developed a novel decoding framework for the use of Machine Learning Methods in Continuous Speech Recognition systems. Segmented the speech recognition search space into a sequence of smaller, independent problems to enable application of specialized decoders. Validated the framework on a small vocabulary continuous recognition task. Demonstrated the feasibility of framework on MALACH, a large vocabulary continuous recognition task.
  - Ported Pronunciation Modeling techniques developed for English to Mandarin Casual Speech.
  - Adapted Transform based Techniques for Pronunciation Modeling.
  - Contributed significantly to the Johns Hopkins University large vocabulary conversational speech transcription systems for the 2001 and 2002 Rich Transcription evaluations.
- Summer Intern*      **IBM - T.J. Watson Research**  
Supervisor: Dr. B. Ramabhadran      **Yorktown Heights, NY, USA**
- Summer 2002**
- Studied long-term unsupervised speaker adaptation techniques. Developed a confidence based MAP adaptation procedure to use large amounts of speech from a test speaker.
  - Studied Pronunciation and Dialect modeling approaches for elderly speech.
- Researcher*      **The Johns Hopkins University**  
Language Engineering Workshop      **Baltimore, MD, USA**
- Summer 2000**
- Ported decision tree based and finite state machine based Pronunciation Modeling techniques to Mandarin
  - Showed significant Word Error Rate (WER) improvements with the resulting probabilistic dictionary.

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## *Research Intern*

Supervisor: Dr. Drew Halberstadt

## **SPEECHWORKS**

**Boston, MA, USA**

**Summer 1999**

- Incorporated speaker normalization schemes in SpeechWorks recognizer.
- Obtained substantial WER improvements in several dialog modules of the recognizer.

## *Teaching Assistant*

*Department of Electrical and  
Computer Engineering*

**The Johns Hopkins University**

**Baltimore, MD, USA**

**1998-2000**

Lecturer and Grader for Programmable Devices Lab and for Circuits.

## SELECTED PUBLICATIONS

- Veera Venkataramani and William Byrne, *Lattice Segmentation and Support Vector Machines for Large Vocabulary Continuous Speech Recognition*, Proc. ICASSP, 2005.
- Veera Venkataramani, Shantanu Chakrabartty and William Byrne, *Gini-Support Vector Machines For Segmental Minimum Bayes Risk Decoding Of Continuous Speech*, Computer Speech and Language, Submitted.
- Veera Venkataramani, Shantanu Chakrabartty and William Byrne, *Support Vector Machines For Segmental Minimum Bayes Risk Decoding Of Continuous Speech*, Proc. ASRU 2003.
- Veera Venkataramani and William Byrne, *MLLR Adaptation Techniques for Pronunciation Modeling*, Proc. ASRU, 2001.
- W. Byrne, V. Doumpiotis, S. Kumar, S. Tsakalidis and V. Venkataramani. *The JHU 2002 RT-02 Large Vocabulary Speech Recognition System*, NIST RT-02 Workshop, 2002.
- W. Byrne, A. Gunawardana, S. Kumar and V. Venkataramani. *The JHU Hub-5 Conversational Speech Transcription System*, NIST Hub-5 LVCSR Workshop, 2001.
- William Byrne, Veera Venkataramani, et. al, *Automatic Generation of Pronunciation Lexicons for Mandarin Casual Speech*, Proc. ICASSP, 2001.

## SKILLS

- Computer Skills: C, Perl, Matlab, C++
- Toolkits: HTK (a C-based speech recognition toolkit), AT&T FSM Tools and large vocabulary decoder, Xwaves (a speech analysis tool)
- Operating Systems: Unix, Mac OS X, Windows

## HONORS AND AWARDS

- Full Tuition Fellowship and Graduate Teaching Assistant at Johns Hopkins University.
- Student member IEEE.