

Evandro Bacci Gouvêa

Please email me for my address

egouvea@cs.cmu.edu

- EDUCATION**
- ◇ **Ph.D., Electrical and Computer Engineering**
Carnegie Mellon University, USA, 1999
Thesis: *Acoustic-Feature-Based Frequency Warping for Speaker Normalization.*
 - ◇ **M.S., Electrical Engineering**
Universidade de São Paulo, Brazil, 1993
Dissertation: *Speech Synthesis in Portuguese.*
 - ◇ **B.S., Electrical Engineering**
Instituto Tecnológico de Aeronáutica, Brazil, 1990
Thesis: *System Requirements for Secondary Surveillance Radars.*
 - ◇ **Scientific initiation**
Instituto Tecnológico de Aeronáutica, Brazil, 1988
Studies in Mathematics, on *topology, functional analysis, and numerical analysis.*
- EXPERIENCE**
- ◇ **Carnegie Mellon University, Pittsburgh, PA, 2002 - present**
Research Associate
 - Research on better listening capabilities for the Project Listen. Responsibilities include building and evaluating acoustic models for children's speech; evaluation of task specific metrics; and building tools to improve analysis of collected data.
 - Development of Sphinx-4, a speech recognition system in the Java (TM) programming language, jointly with Sun Microsystems, Inc., and Mitsubishi Electric Research Labs. Responsibilities include to provide expertise about speech recognition to Sun's software engineers; and to code implementation.
 - Maintenance of CMU Sphinx, an open source project. Responsibilities include releases, bug fixes, web page maintenance, and project administration at the site sourceforge.net, using CVS (Concurrent Versions System) and SVN (Subversion).
 - Maintenance of local linux computer cluster, which includes keeping up the PBS (Portable Batch System) queuing mechanism, for resource allocation.
 - ◇ **Vocollect, Inc., Pittsburgh, PA, 1999 - 2001**
Research Scientist
 - Development of a Hidden Markov Model-based speech recognition system. Usage requirements included noisy environments, language independence, small amount of training data, and hardware limitations, running on an embedded system with limited speed and memory.
 - Responsibilities included full development of the acoustic model trainer; revamping the front end, converting from imelda coefficients to cepstra and adding a vector quantization (VQ) stage; design and collection of databases to test and benchmark speech recognition performance.
 - ◇ **Carnegie Mellon University, Pittsburgh, PA, 1994 - 1998**
Research Assistant
 - Designed, implemented, and evaluated algorithms for speaker normalization. Participated in several ARPA-sponsored speech recognition systems evaluations, including Hub 3 and Hub 4.
 - ◇ **Carnegie Mellon University, Pittsburgh, PA, 1996**
Teaching Assistant

- Graded homework and held office hours for Digital Signal Processing class of 30 students.

- COMPUTER SKILLS
- ◇ **Operating systems:** Unix/Linux, Windows
 - ◇ **Languages:** C, Java, Perl, Unix/Linux Shell (bash, tcsh, csh), MySQL
 - ◇ **Version control:** CVS, Subversion, SourceSafe
 - ◇ **Compilers:** ant, gcc, Microsoft .NET, Microsoft C++ Development Studio, Microsoft Windows CE Platform Builder
 - ◇ **Productivity Tools:** Microsoft Office (Outlook, Excel, PowerPoint, Word), Microsoft Project, LaTeX, XEmacs, FrameMaker
 - ◇ **Scientific Tools:** Matlab, Entropic's XWaves
- PUBLISHED RESEARCH
- ◇ Singh, R., Gouvêa, E.B., Raj, B., "Probabilistic Deduction of Symbol Mappings for Extension of Lexicons", to appear in *Proc. Interspeech*, Antwerp, 2007.
 - ◇ Stern, R.M., Gouvêa, E.B., Thattai, G., "Polyaural Array Processing for Automatic Speech Recognition in Degraded Environments", to appear in *Proc. Interspeech*, Antwerp, 2007.
 - ◇ Mostow, J., et al., "An Educational Data Mining Tool to Browse Tutor-Student Interactions: Time Will Tell!", *Proc. Workshop on Educational Data Mining*, Pittsburgh, 2005.
 - ◇ Mostow, J., et al., "A Generic Tool to Browse Tutor-Student Interactions: Time Will Tell!", *Proc. AIED*, Amsterdam, 2005.
 - ◇ Lamere, P., et al., "Design of the CMU Sphinx-4 decoder", *Proc. Eurospeech*, Genebra, 2003.
 - ◇ Gouvêa, E.B., "Acoustic-Feature-Based Frequency Warping for Speaker Normalization", Ph.D. Thesis, Carnegie Mellon University, Pittsburgh, 1999.
 - ◇ Gouvêa, E.B., Stern, R.M., "Speaker Normalization Through Formant-Based Warping of the Frequency Scale", *Proc. Eurospeech*, Rhodes, 1997.
 - ◇ Raj, B., Gouvêa, E.B., Stern, R.M., "Vector Polynomial Approximations for Robust Speech Recognition", *Proc. ETRW*, Pont-a-Mousson, 1997.
 - ◇ Campos, G.L., Gouvêa, E.B., "Speech Synthesis using the CELP Algorithm", *Proc. ICSLP*, Philadelphia, 1996.
 - ◇ Raj, B., Gouvêa, E.B., Stern, R.M., "Cepstral Compensation by Polynomial Approximation for Environment-Independent Speech Recognition", *Proc. ICSLP*, Philadelphia, 1996.
 - ◇ Gouvêa, E.B., Moreno, P.J., Raj, B., Sullivan, T.M., Stern, R.M., "Adaptation and Compensation: Approaches to Microphone and Speaker Independence in Automatic Speech Recognition", *Proc. DARPA Speech Recognition Workshop*, Harriman, 1996.
 - ◇ Jain, U., et al., "Recognition of Continuous Broadcast News With Multiple Unknown Speakers And Environments", *Proc. DARPA Speech Recognition Workshop*, Harriman, 1996.
 - ◇ Moreno, P.J., Raj, B., Gouvêa, E.B., Stern, R.M., "Multivariate-Gaussian-Based Cepstral Normalization for Robust Speech Recognition", *Proc. ICASSP*, Detroit, 1995.
 - ◇ Gouvêa, E.B., "Speech Synthesis in Portuguese", Master's Thesis, Universidade de São Paulo, São Paulo, 1993.
- AWARDS & ACTIVITIES
- ◇ Reviewer for conferences, journals, book publishers, including the NSF, ASRU, IEEE, Springer, Elsevier.
 - ◇ Scholarship for the Ph.D. program by CNPq (Brazilian funding agency), January 1994 - July 1998.
 - ◇ Scholarship for the M.S. program by FAPESP (Brazilian funding agency), August 1992 - December 1993.

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- ◇ **S**cholarship for scientific initiation by CNPq, March 1986 - December 1988.
- ◇ **P**articipation in the XXII International Mathematics Olympiad, Poland, 1986.
- ◇ **F**irst Prize in the VIII Brazilian Mathematics Olympiad, 1985.
- ◇ **F**ifth Prize in the I Physics Olympiad of the State of São Paulo, 1985.
- ◇ **T**hird Prize in the VI Mathematics Olympiad of the State of São Paulo, 1982.
- ◇ **F**irst Prize in the IV Mathematics Olympiad of the State of São Paulo, 1980.

LANGUAGES ◇ **N**ative: Portuguese.
◇ **F**luent: English, Spanish.
◇ **B**asic notions: German (Goethe Institut's *Zertifikat Deutsch als Fremdsprache*) and Italian.

EXTRA ◇ **C**o-hosted the "Brazilian Radio Hour" on WRCT-FM, 1999 to 2006.

CURRICULAR ◇ **C**o-produced slide presentation celebrating Brazil's 500 years.

REFERENCE Available upon request