

## Associate Professor Alan W Black

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## Education

- Ph.D, University of Edinburgh, UK, 1993.
- M.Sc in Knowledge Based Systems, University of Edinburgh, UK, 1986
- B.Sc (Hons) in Computer Science, Coventry University, UK, 1984.

## Professional Experience

2008-present	Associate Professor (with tenure) LTI, Carnegie Mellon University.
2003-2008	Associate Research Professor, LTI, Carnegie Mellon University.
1999-2003	Research Computer Scientist (faculty), Language Technologies Institute, Carnegie Mellon University.
1996-1999	Research Fellow, Centre for Speech Technology Research, University of Edinburgh, UK
1993-1996	Invited Researcher, ATR, Japan.

## Selected Recent Publications

- [1] Zen, H., Tokuda, K. and Black A. (2009) "Statistical Parametric Speech Synthesis", *Speech Communications*, Vol 51(11), Elsevier 2009.
- [2] Kominek, J., Schultz, T., and Black, A. "Synthesizer voice quality on new languages calibrated with mel-cepstral distortion" SLTU 2008, Hanoi, Vietnam 2008.
- [3] Schultz, T., Black, A., Badaskar, S., Hornyak, M. and Kominek, J. "SPICE: Web-based Tools for Rapid Language Adaptation in Speech Processing Systems" Interspeech 2007, Antwerp, Belgium, 2007.
- [4] Black, A. "CLUSTERGEN: A statistical parametric synthesizer using trajectory modeling" Interspeech 2006, Pittsburgh, PA.
- [5] Black, A. and Tokuda K. 2005 "The Blizzard Challenge 2005: Evaluating corpus based speech synthesis on common datasets", Interspeech 2005, Portugal, 2005.

**Prof. Alan W Black** is a world leader in the area of speech synthesis. He is a principal author of the Festival Speech Synthesis System (<http://festvox.org/festival>), a free software system which has been used by a large number of academic and industrial groups through out the world. He is also the author of the FestVox Voice Building tools (<http://festvox.org/>) which have been used to create speech synthesizers in over 40 different languages. He also wrote and distributes the small-footprint speech synthesizer Flite (<http://cmuflite.org>). With Prof Tanja Scultz he has produced a web-based system for building recognizers and speech synthesizers in new languages (<http://cmuspice.org>). With Dr Maxine Eskenazi, he has developed real spoken dialog system platforms through the NSF funded Dialog Research Center (<http://dialrc.org>) and he is the organizer for the Spoken Dialog Challenge 2010 (<http://dialogrc.org/sdc>). In addition to speech synthesis he also carries out research in voice conversion and portable speech-to-speech translation systems. He was the pioneer if developing unit selection speech synthesis, where appropriate sub-word units are automatically selected from large databases of natural speech. This helped move the field of speech synthesis from a rule driven approach to a data driven approach.

Prof. Black has over 150 refereed published papers in many aspects of speech and language

technologies and has served on the committees of many international conferences and workshops. He has acted as area chair for Speech Synthesis ICASSP (2004-2007), program chair for the 5th ISCA Workshop on Speech Synthesis, and General co-chair for Interspeech 2006 -- ICSLP in Pittsburgh, 2006. With Prof Tokuda (Nagoya Institute of Technology) initiated the annual Blizzard Challenge evaluation for corpus based synthesis techniques, this is largest speech synthesis evaluation forum and involves academia and industry around the world. He was an elected member of the IEEE Speech and Language Technical Committee and is currently an elected member of the ISCA Board. He also serves on the board of the Speech Communications Journal.

## **Teaching**

Director of Undergraduate Minor in Language Technologies

15-492 Speech Processing

11-752 Phonetics, Prosodics, Perception and Synthesis (with Maxine Eskenazi)

11-754 Spoken Dialog Systems Lab (with Alex Rudnicky)

11-733 Multilingual Speech to Speech Translation Systems (with Stephan Vogel and Tanja Schultz)

11-722 Grammar Formalisms (with Lori Levin)

11-291 Computational Intelligence Lab (with Anatole Girshman)

## **Colaborators:**

Antonio Bonafonte, (University Polytechnic Catalonia), Robert Clark, (University of Edinburgh), Luisa Coheur (INESC, Portugal), Maxine Eskenazi, (CMU), Robert Frederking, (CMU), Julia Hirschberg, (Columbia), Simon King, (University of Edinburgh), Kevin Lenzo, (Apple), Luis Caldas de Oliveira (INESC, Portugal), Rohit Prasad (BBN), Kristen Precoda, (SRI International), Alex Rudnicky, (CMU), Jan van Santen, (Oregon Health & Science University), Tanja Schultz, (CMU/U. Karlsruhe), Noah Smith (CMU), Richard Sproat, (Oregon Health & Science University), Richard Stern, (CMU), Tomoki Toda, (Nara Advanced Institute of Science and Technology), Keiichi Tokuda, (Nagoya Institute of Technology), Isabel Trancoso (INESC, Portugal), Stephan Vogel, (CMU), Alex Waibel, (CMU), Monika Woszczyna (Multimodal Inc).

## **Current Advisees:**

SP Kishore, CMU PhD (ABD).

Brian Langner, CMU PhD (ABD).

Gopala Anumachipalli, CMU/Portugal PhD.

Alok Parlikar, CMU PhD.

João Miranda, CMU/Portugal PhD.

Prasannakumar Muthukumar, CMU MLT.

## **Former Advisees:**

Tina Bennett, CMU MLT (graduated 2003, now CMU PhD candidate),

Ariadna Font Llitjos, CMU MLT (graduated 2001, now graduated CMU PhD),

Craig Olinsky, CMU MLT (graduated 2001, now RA Media Lab, Dublin),

Tomoki Toda, CMU postdoc 2003-2004, (now faculty at NAIST, Japan),

Jason Zhang, CMU MLT, (graduated 2004, now grad student at JHU).

Arthur Toth, CMU PhD, (graduated 2009)

John Kominek, CMU PhD (graduated 2009)