

Alan W Black

Education

1993 PhD in AI, University of Edinburgh. Thesis title: “A situation theoretic approach to computational semantics”. Supervised by Robin Cooper and Graeme Ritchie.

1986 MSc in Knowledge Based Systems in the Dept of AI, University of Edinburgh,

1984 BSc (first class honours) in Computer Science at Coventry University, England.

Appointments

7/03 - Associate Research Professor, LTI, Carnegie Mellon University.

9/99 - **6/03** Research Computer Scientist (Faculty), LTI, Carnegie Mellon University.

7/00 - Chief Scientist and co-founder, Cepstral, LLC.

4/96 - **6-99** Research Fellow, CSTR, University of Edinburgh. Statistical language processing for TTS.

4/93 - **3/96** Invited Researcher, ATR, Kyoto. CHATR speech synthesis system.

10/89 - **3/93** PhD Student. Dept of AI, Edinburgh. Computational semantics.

10/88 - **10/89** Research Associate. CSTR, Edinburgh. Language modeling for ASR.

10/87 - **9/88** Visiting Researcher. Osaka University of Foreign Studies (learning Japanese) and Kyoto University, Prof. Nagao’s Laboratory.

7/84 - **10/87** Research Associate. Department of Artificial Intelligence, University of Edinburgh. Morphological analysis.

Selected publications

Dr Black is the author or co-author of around 100 refereed publications. All papers (where copyright permits) are available from <http://www.cs.cmu.edu/~awb/>

- [1] Black, A., and Tokuda, K., 2005 “Blizzard Challenge – 2005: Evaluating corpus-based speech synthesis on common datasets”, Interspeech 2005, Lisbon, Portugal.
- [2] Waibel, A., Badran, A., Black, A., Frederking, R., Gates, D., Lavie, A., Levin, L., Lenzo, K., Mayfield Tomokiyo, L., Reichert, J., Schultz, T., Wallace, D., Woszczyna, M., and Zhang, J. 2003, “Speechalator: two-way speech-to-speech translation on a consumer PDA”, Eurospeech 2003, Geneva, Switzerland.
- [3] Black, A, and Lenzo, K, (forthcoming), “Building Synthetic Voices” O’Reilly Associates. <http://festvox.org>
- [4] Sproat, R., Black, A., Chen, S., Kumar, S. Ostendorf, M. and Richards, C. 2001, “Normalization of Non-standard Words”, Computer Speech and Language 15(3) pp 287-333.

- [5] Black, A, and Lenzo, K, 2001, “Flite: a small fast run-time synthesis engine” ISCA, 4th Speech Synthesis Workshop, Scotland.
- [6] Black, A., Taylor, P. and Caley, R. 1999 “The Festival Speech Synthesis System.” <http://festvox.org/festival/>.
- [7] Taylor, P. and Black, A. 1998, “Assigning Phrase Breaks from part-of-speech Sequences”, in Computer Speech and Language 12, pp 99-117.
- [8] Black, A. and Taylor, P. 1997. “Automatically clustering similar units for unit selection in speech synthesis” Proceedings of Eurospeech97, vol2 pp 601-604, Rhodes, Greece.
- [9] Hunt, A. and Black, A. 1996. “Unit selection in a concatenative speech synthesis system using a large speech database” Proceedings of ICASSP 96, vol 1, pp 374-376, Atlanta, GA.
- [10] Black, A. 1989, “Finite State Machines from Feature Grammars”, pp 277-285, International Workshop on Parsing Technologies, Pittsburgh, PA.

Research Interests

Dr Black’s interest have covered many practical aspects of speech and language processing, including, lexicons, morphology, language modeling, computational semantics, speech synthesis, spoken dialog systems and speech to speech translation.

Dr Black continues to take the lead in the field os speech synthesis. His remains a principal developer of University of Edinburgh’s Festival Speech Synthesis System. Festival is distributed as free software and is now used by most researchers in speech synthesis, and is the basis of many commercial systems. Festival made the barrier of entry to speech synthesis lower and has helped make the subject more accessible. The FestVox (<http://festvox.org>) project and CMU Flite (<http://cmuflite.org>) further add to Dr Black’s contribution to the speech research and development community offering tools to build new synthetic voices in new languages and delivery on small platforms. He was instigator of the Blizzard Challenge 2005, the largest evaluation of corpus based synthesis as presented at the special session at Interspeech 2005 in Lisbon. Dr Black releases code, scripts, database, notes and slides for his work which is used as a basis for a number of other speech courses throughout the world.

Dr Black serves on the IEEE Signal Processing Society Speech Technical Committee, as well as reviewing for other major speech conferences. He was program chair for the 5th ISCA Workshop on Speech Synthesis (<http://www.ssw5.org>), and was area coordinator for Speech Synthesis for ICASSP2005, and is a general co-chair of the organizing committee for INTERSPEECH 2006 – ICSLP, which will be held in Pittsburgh. He is co-founder and Chief Scientist for Cepstral, LLC, (<http://cepstral.com>) a for-profit company for speech synthesis technology.

Advisees

Current: Arthur Toth, CMU PhD. John Kominek, CMU PhD. Tina Bennett, CMU PhD. S P Kishore, CMU PhD. Brian Langner, CMU PhD.

Graduated: Brian Langner, CMU MLT.(graduated 2004, now CMU PhD candidate), Jason Zhang, CMU MLT, (graduated 2004, now student at Johns Hopkins) Tina Bennett, CMU MLT (graduated 2003, now CMU PhD candidate), Ariadna Font Llitjós, CMU MLT (graduated 2001, now CMU PhD candidate), Craig Olinsky, CMU MLT (graduated 2001, now RA Media Lab, Dublin)