

Matthew Nicholas Stuttle

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Education

- 1999-2003 Ph.D. student at Cambridge University with Dr. Mark Gales in the Machine Intelligence group (formerly Speech Vision and Robotics). Thesis entitled “A Gaussian Mixture Model Spectral Representation for Speech Recognition”.
- 1996-1999 BEng (First Class Honours) in Electronic Engineering at Southampton University. Specialisations in signal, speech and image processing. Dissertation on “Instrumentation for a Novel Micromachined Capacitive Pressure Sensor”. Awarded the Schlumberger project prize and the EE Zepler Prize for academic achievement.
- 1994-1996 A levels in Physics, Chemistry and Maths at Weymouth College.
- 1989-1994 GCSEs in Science, Maths, English Language, English Lit. French, History, Geography, RE, Design Technology, Information Technology at All Saints School, Weymouth.

Work Experience

- 2003 - present - Research Associate at Cambridge University Engineering Department, working on the TALK project for Spoken Dialog Systems. Working on modelling uncertainty in speech and dialog and interfacing between speech recognition systems and dialog systems.
- 2003 Programmer at Sony Computer Entertainment Europe. Developed speech-related software and USB audio support for the “SingStar” karaoke machine on the Playstation 2.
- 1999-2002 Undergraduate supervisor for third year students at Cambridge University Engineering Department; topics including Pattern Recognition, Signal Processing, Computer Architecture and Software Engineering. Also demonstrated for Signal processing and C++ practicals 2nd year practicals.
- 1996-1999 Summer internships at Martech Systems, Weymouth. Working as a Design Engineer. Participated in projects including developing analogue-analogue fibre optic link for towed array sonar system. Worked on designs for FPGA and PIC microchips.

Technical Skills

- Over ten years experience using and programming on various Unix and Windows systems in many programming languages (C, C++, Assembly) and scripting languages (BASH, c-shell, PERL, awk).
- Six years experience in the field of speech recognition, primarily using HTK to build and implement recognition resources for research applications and dialog systems.
- Two years maintaining the ATK API for HTK which has been downloaded by thousands of users, extending the code to support Linux graphics and sound drivers and numerous acoustic modelling enhancements.
- Given oral and poster presentations of research work at several international conferences .

- Lectured on the Computer Speech, Text and Internet Technology taught MPhil at Cambridge in Speech Signal Processing for two years.
- Three years experience supervising undergraduates at Engineering Department, in subjects including Signal Processing, Artificial Intelligence, Computer Architecture, Software Design, Pattern Processing and data transmission.

Research Interests

- Current work investigates representing and modelling uncertainty in spoken dialog systems, and trying to provide richer information from the speech recogniser to the dialog manager.
- Research interests include utilising cutting-edge speech recognition techniques in real time applications.
- PhD investigated novel statistically based formant-like front-end features for speech recognition systems in clean and noisy speech on medium and large vocabulary tasks.

Publications

- J Schatzmann, M Stuttle, K Weilhammer and S Young, *Effects of the User Model on Simulation-based Learning of Dialogue Strategies*, ASRU 2005
- O Lemon, K Georgila, M Stuttle, *An ISU dialogue system exhibiting reinforcement learning of dialogue policies: generic slot-filling in the TALK in-car system*, EACL 2006
- M Stuttle, JD Williams, SJ Young, *A Framework for Dialogue Data Collection with a Simulated ASR Channel*, Proceedings ICSLP 2004
- M Stuttle, MJF Gales, *Combining a GMM frontend with MFCC parameters*, Proceedings ICSLP 2002
- M Stuttle, MJF Gales, *A Mixture of Gaussians Front End for Speech Recognition*, Proceedings Eurospeech 2001
- SP Beeby, M Stuttle, T Papakostas and NM White *Low-cost micromachined silicon capacitive pressure sensor for industrial applications* Proceedings of Sensors and their Applications X, Cardiff, September 1999, IOP Publishing, Bristol, ISBN 07503 06254
- SP Beeby, M Stuttle and NM White, *Design and fabrication of a low-cost microengineered silicon pressure with linearised output*, IEE Proceedings: Science, Measurement and Technology, 2000, Vol. 147, No. 3

Hobbies, interests and other qualifications

Participate in many different sports including running/hauling (recently ran the Grunty Fen half-marathon), kitesurfing, surfing, mountainboarding and windsurfing.

Founding member of local amateur dramatic group "HAMDrams" and have appeared in several stage productions and three pantomimes.

Practise several Martial Arts, have studied Jeet Kune Do, Ju Jitsu, Muay Thai kickboxing, Wing Chun, Kali, Escrima and Sambo

ITEC diploma in Physiology and Massage, President of Southampton University Massage Club, taught massage at Cambridge University Massage Society.

References

References available on request.