Active Listening & Synchrony

A Special Session at [Interspeech 2009](#)

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Traditional approaches to Multimodal Interface design have tended to assume a *ping-pong* or *push-to-talk* approach to speech interaction wherein either the system or the interlocuting human is active at any one time. This is contrary to many recent findings in conversation and discourse analysis, where the definition of a *turn*, or even an *utterance* is found to be very complex; people don't *take turns* to talk in a typical conversational interaction, but they each contribute actively to the joint emergence of a *common understanding*.

Research into Synchrony and Active Listening formally started in 1939, when Eliot Chapple used an adapted typewriter to measure timing details of human engagement in conversation, and was actively pursued in the 50s by researchers such as Bill Condon and Adam Kendon, who micro-analysed frames of video conversations. Apart from its continuing relevance to Conversation and Discourse Analysis, this field is now becoming increasingly relevant for the design of human-interface technology, dialogue systems, robotics, and avatars. The aim of this special session, marking the 70th anniversary of synchrony research, is to bring together researchers from the varous different fields, who have special interest in novel techniques that are aimed at overcoming weaknesses of the 'push-to-talk' approach in interface technology or knowledge of the history of this field from which the research community could benefit.

The primary purpose of this session is to present and discuss a number of issues pertinent to spoken interaction. Specifically,

- Development of Multimodal Interfaces
- Collection and analysis of interaction data
- Analysis of synchrony in interpersonal communication
- Theories of entrainment, synchrony, and emergent behaviour
- Applications of discourse control in robotics or virtual agents
- Use of non-verbal speech elements, fillers, laughs, and grunts
- Use of Active Listening in computer speech processing
- History of Synchrony Studies in the literature
- Interactional synchrony in conversations
- Pragmatic elements of exchanges

We especially welcome any papers that report on current ongoing research into the dynamics of human spoken interaction, including the production of multimodal conversation data, and the analysis and modelling of interaction dynamics, as well as the development of speech interface components that encourage a more interactive exchange between the human and the machine.

All Special Session papers will go through the same review process as regular papers, so be sure to mention "Special Session on Active Listening and Synchrony" on any papers that you submit.

Further Information will be available soon.