

The IEEE Speech Technical Committee (STC)

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Over the past decade, we have witnessed a revolutionary transformation in speech technology from fundamental theory to commercial services, from proprietary software to structured interfaces and standards, from speech only modality to multimodal inputs, and from signal processing to spoken language processing. This exciting transformation has resulted in the formation of many new companies and has expanded and tied together the research community world-wide, presenting them with a significant number of new and challenging technical problems.

For more than five decades the IEEE has been a leading organization in promoting the sharing of information and results within the technical community. Since its inception in 1968, the IEEE Speech Technical Committee (STC) (which is made up of distinguished and active researchers from key universities and industries) has been responsible for promoting the advancement of speech technologies and applications within IEEE. The STC coordinates all speech-related activities within the Signal Processing Society (SPS), including the annual paper review for our yearly conference (ICASSP), nominations of all Society Awards, and support for IEEE speech-related workshops, as well as stimulating the IEEE Fellow nominations, and managing the STC electronic Newsletter. More information about the STC can be found at <http://www.ieee.org/stc/>.

Earlier this year, the STC adopted a new speech EDICS classification of topics in order for ICASSP to align with recent advancements in speech and language processing research. This change, along with other factors such as government funding and the current business environment, has led to an understanding of new research trends which have evolved over the past years. For instance, with the advent of Voice over IP, we are starting to see the evolution of more technical contributions on robust speech processing in packet network environments. The availability of large amounts of data and faster computers has not only motivated researchers to revisit older computationally intensive algorithms, but has also opened up new waves of research in speech data mining and multimedia search. The heightened threat of security worldwide has resulted in a significant increase in fundamental research in the area of biometric speaker recognition. For ICASSP'05, we have experienced an 8% increase in the number of papers in speech processing over that submitted to ICASSP'04. This includes a nearly 50% increase in speaker recognition papers, nearly 50% increase in spoken language technology papers and a modest 5% of new submissions in the areas of speech data mining and multimodal/multimedia Human/Computer interfaces.

Similar trends have been observed in the IEEE Transactions on Speech and Audio Processing (T-SAP), reflected for instance in the topics of recent special issues on Speech-to-Speech Machine Translation, Data Mining of Speech, Audio and Dialog, Statistical and Perceptual Audio Processing, and Expressive Speech Synthesis. This trend also resulted in new EDICS classifications for T-SAP which was published in the November 2004 issue. More information about the T-SAP can be found at www.ieee.org/tsap/.

The IEEE is committed to fostering continuous growth in the area of human-machine communication by bringing the research community together and recognizing distinguished researchers and top quality publications. As members of the SPS, it is our responsibility not only to help promote top quality publications on speech and spoken language technology within IEEE, but also to diversify our membership and attract new members with technical skills in these new and expanding research areas. The role of the STC is to serve as the focal point for progress and growth in human communication technologies and to continue to attract new members of the technical community to the society.