Combatting Acoustic Echoes And Noise in Future Natural Immersive Human/Machine Interfaces

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Since its first workshop in 1989, the IWAENC community has always been driven by both the vision of immersive natural acoustic human/machine interfaces as well as intermediate goals such as 'plain' hands-free telephony. Fortunately for the researchers, the vision remains at a distance, while continuous progress and its successful practical implementations justify previous and future efforts. In this talk, we will highlight samples of past and present developments to describe the state of the related technologies and to speculate about the near future. Supported by recent examples, it will be argued that the fundamental limitations of observability in space and time should be seen as the real challenges calling for more advanced estimation methods and models whereas computational resources should play a secondary role in future research.

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