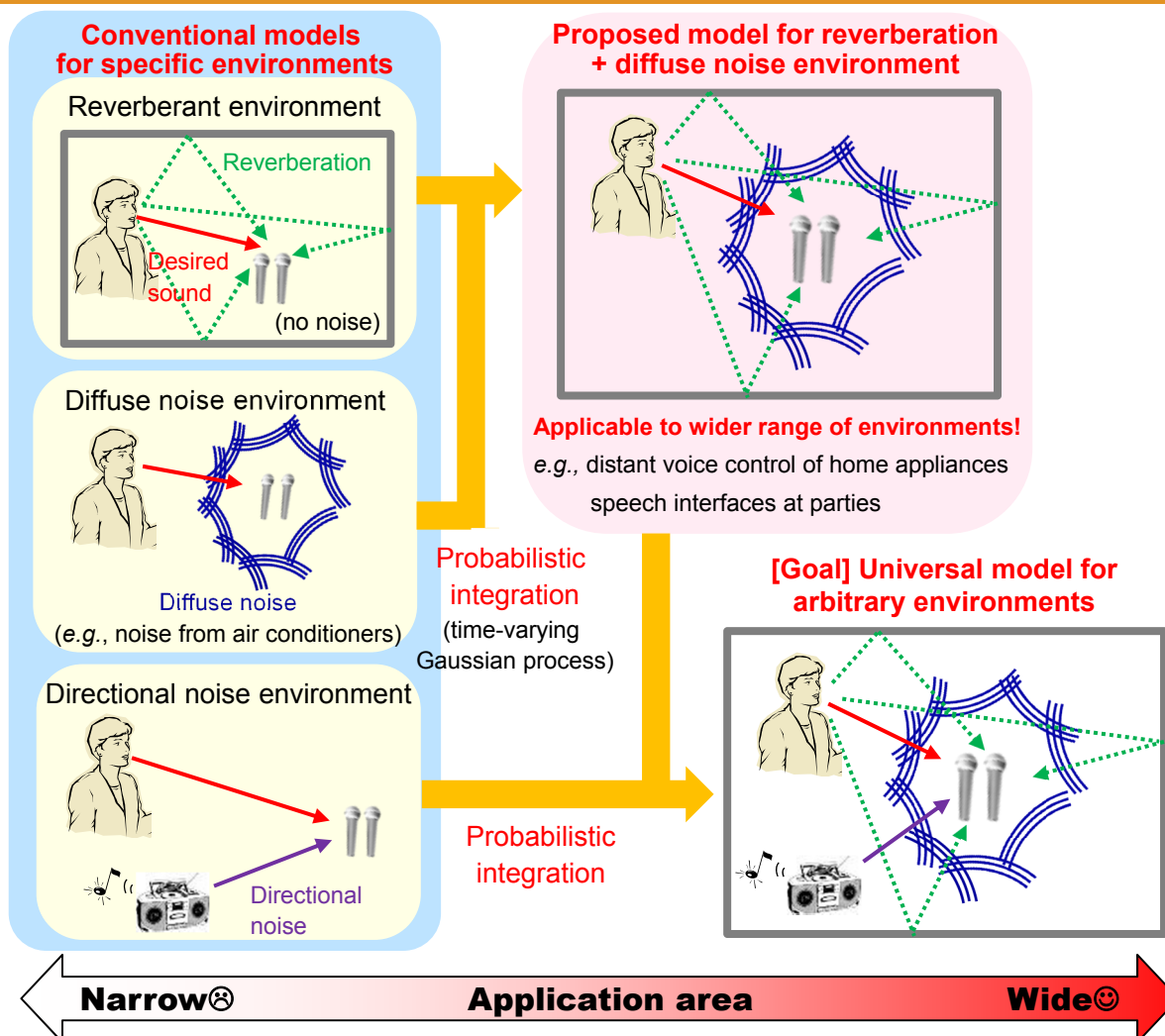


## Making computers listen to desired sounds anywhere

~Probabilistic modeling and integration for speech enhancement~

### Abstract

Sounds recorded using distant microphones are usually distorted by noise and reverberation, which degrades both sound quality and speech recognition accuracy. Conventional techniques for signal enhancement (SE) are limited to **specific environments**. To realize SE techniques that apply to **arbitrary environments**, we need to develop a **universal model** that **probabilistically integrates** models for specific environments. We have developed an SE technique that applies to a wider range of environments by integrating models for reverberant environments and diffuse noise environments. This research can be applied to, e.g., distant voice control of home appliances.



### Related work

[1] N. Ito, S. Araki, and T. Nakatani, "Probabilistic integration of diffuse noise suppression and dereverberation," in *Proc. International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, May 2014 (accepted).

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