

VOXNET: A DISTRIBUTED ACOUSTIC SENSING NETWORK FOR LOCALIZING ANIMAL CALLS

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Automated observation of the terrestrial coastal environment is an important part of understanding coastal zone dynamics, from human impacts to fluctuations in the native animal population. In this talk we will present VoxNet, a distributed terrestrial acoustic sensing system in which each cooperating node hosts a four-channel microphone array. VoxNet was designed as a field research tool to support biological research on animal behavior and ecology. In this application, several cooperative microphone arrays can localize acoustic sources such as animal calls. We will discuss ways in which our experiences with the VoxNet system might be applied to the coastal environment. While the coastal environment may have different hardware requirements, many of the lessons learned from VoxNet still apply.