# Automatic Detection of Birdsong in Real-Field Recordings

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Bird conservation has reached to a more active stage globally. However, the current acoustic monitoring methods, particularly the automated screening of natural field audio recordings, are complex but subjected to inferior results and not generic enough to apply to other species than the ones described in the original research. Scalable methods are needed to implement strategic ecosystem monitoring to achieve adaptive management through systematic evaluation of the conservation efficacy, for example, the success of pest control, and restoration programs. The recorders can be deployed in 24/7 modus meaning that the amount of recordings generated is massive. However, a major amount of recordings only contains noise but void of target bird sounds. Therefore, employing an automatic acoustic activity detector to filter the potential sections of the recordings with target birdsongs largely reduce datasets to relatively smaller datasets for subsequent machine-based recognition or human-based recognition.
In this presentation, I introduce a scalable yet user-friendly automated acoustic event detection method using wavelets. The method has been assessed with natural noisy field recordings of four New Zealand native species namely brown kiwi (Apteryx mantelli), morepork (Ninox novaeseelandiae), Australasian bittern (Botaurus poiciloptilus), and kakapo (Strigops habroptilus) recorded with schedulable acoustic recording units. The results demonstrate high recall rates and tolerate false alarms when compared to human experts. The proposed method is recommended to estimate the abundance of any species of interest using automated recorders.