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Book of Abstracts

Scientific programme: symposia conveners and abstracts selection

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Recent advances in our understanding of livestock and zoo animal vocal communication

Studying animal vocal communication in zoos: overview and practical example

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Zoos and aquaria can offer a variety of opportunities for studying vocal communication in animals that are logistically very difficult to observe and record in the wild. Moreover, the research carried out in captive settings is generally less expensive than fieldwork and several modern exhibits offer environments that replicate many natural conditions. Nevertheless, very little of the zoo research published in peer-reviewed literature is directed towards the study of vocal communication. Recent studies of animal vocalisations are also aimed to quantifying the similarities or differences between vocal signals by means of mathematical computational techniques. However, these techniques require a large database of calls, and zoo settings can offer the opportunity to collect large numbers of vocalisations in controlled conditions. Finally, in zoo exhibits is often possible to label calls with the emitter in species where this would be very difficult to achieve in the wild. I will present results from a study of vocal communication in captive African Penguins (*Spheniscus demersus*), as well as the contribution of captive animal recordings to test the reliability of machine learning approaches for revealing critically important information in vocalisations.

(keynote speaker)

Recent advances in our understanding of livestock vocal communication

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I will review recent progress in our understanding of livestock vocal communication. Over the last 10 years in particular, sound recording and analysis techniques have advanced greatly. Furthermore, the adoption of source-filter theory from speech research has resulted in a better understanding of the communicative roles that the various acoustic parameters of vocalisations are involved in; for example, they contain information linked age, sex, individuality and even social status. I will offer advice on how to record and