Uncertainty in acoustic data: who's problem is it ?

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Automatic systems are increasingly used to collect large quantities of acoustic environmental data using both passive listening and active sonar. It has long been known that the performance of these systems (detection efficiency, false detection rate, classification accuracy, etc.) can vary between studies due to differences in equipment and background noise, a different species mix, changes in behaviour within a taxa, etc. Even with earlier heuristic detectors it was often difficult to predict performance in different noise environments. With the increasing use of 'black box' Machine Learning methods based around Deep Neural Networks, this problem is only getting worse. So who's problem is this ? Is it purely for me the algorithm developer to solve, or my more statistical friends who are using the output of my detectors ? Better, how do we work together (lets bring some biologists in here too) to understand and address these problems.