

**Speaker:** Andy Lewis-Pye

**Title:** Sex versus Asex

**Abstract:** The question as to why most complex organisms reproduce sexually remains a very active area of research in population genetics, and has direct applications to genetic algorithms in the context of computer science. Theories dating back to Weismann have suggested that the key must lie in the creation of increased variability in offspring, causing enhanced response to selection. Rigorously quantifying the effects of assorted mechanisms which might lead to such increased variability, and establishing that these beneficial effects outweigh the immediate costs of sexual reproduction has, however, proved problematic. In this talk I'll discuss recent work with Montalban in which we give a mathematical analysis in terms of certain mechanisms of "variance conversion". No background knowledge will be required for the talk.