

## Session 5: Movement

### Keynote

Date: Wednesday 1 November, 2017  
Time: 09:00 – 09:45  
Room: Seminar Room

### Individual variation in dispersal in great tits

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Dispersal is the “glue” that holds spatially structured populations together, but it is also a crucial life-history trait. While dispersal can be easily characterized as distance between birth and breeding, the underlying mechanisms contributing to dispersal are manifold and often remain poorly understood. In this presentation I review work by our group and others on unravelling the contribution of environmental, genetic and social factors on individual variation in dispersal, using the great tit (*Parus major*) as a case study. Most of our work was carried out in a patchy population consisting of small woodland fragments, while other studies have focused on larger continuous woodlands. Variation in dispersal can to some extent be explained by environmental factors such as population density and habitat structure. Conditions in early life also play a role; for example, we showed earlier that family movements guided by parents influence dispersal decisions later in life. Several studies have now confirmed that dispersal also has a heritable component. I will show how this analysis can be extended to test for heritable variation in the different phases of the dispersal process (leaving, transfer, and settlement). Finally, I will discuss the role of personality-related variation in explaining variation in dispersal, both at the phenotypic and genotypic level.