**Paul Slater**

Purdue University

**Title:** Using phylogenomics to understand the genetic basis of male honey bee traits

**Summary:** In social insects, polyandry has evolved independently multiple times. It intensifies sexual selection, such as sperm competition and has many evolutionary consequences. Polyandry intensifies sexual conflict and generates phenotypic dimorphisms and divergent reproductive traits. As polyandry increase conflict between sexes over reproductive optima, sexes develop conflict resolution tactics, such as changes in genes expression. This has many consequences for genome architecture, such as gene sequence evolution and sex-specific gene expression. The molecular mechanisms that resolve sexual antagonisms and create phenotypic dimorphisms can also be used to understand the genetic basis of important drone traits. Here, I use a phylogenetic approach to understand the expression basis of male honey bee traits. We can use this approach to better identify traits associated with male traits.