## **Claire Bowern (Yale University)**

## Pama-Nyungan Phylogenetics and Beyond

Historical linguistics is concerned with two mutually dependent overarching questions: how to characterize the nature of language change, and how to reconstruct "what happened" in the history of particular families. The first question involves linking humans' behavior with what happens to their languages over time, such as how asymmetries in perception, production, and social interaction lead to the propagation of innovations across speech communities, and how repeat innovations lead to language lineage splitting. The second question requires the application of our model of change to specific cases, such as Indo-European, Austronesian, or Pama-Nyungan. In this talk I use computational phylogenetic methods to formalize a model of change, and apply it to data from Australian languages. I discuss problems and prospects for computational (particularly phylogenetic) methods in historical linguistics, and how, as an adjunction to the Comparative Method, they can shed light on certain classes of problems in investigating the history of individual language families. I show how an evolutionary approach to language history is especially useful for large families without a long documentary tradition, where the explicit quantification of uncertainty that comes with Bayesian methods is an important component of evaluating different hypotheses of language relationship. I motivate an explicit 'evolutionary' theory of language change and discuss the implications for modeling.