



## **YCCSA Seminar Series Autumn 2016**

An interdisciplinary seminar series hosted by the York Centre for Complex System Analysis aimed at researchers from all disciplines

### **A quick tour through phylogenetic networks**

**Professor Vincent Moulton**

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18 November 2016

Ron Cooke Hub, RCH/204 at 13:30

**Abstract:**

Biologists commonly represent the evolution of organisms using a phylogenetic tree, the tree-of-life providing a well-known example of such a tree. In recent years, however, it has become increasingly recognised that the evolutionary history of certain organisms (e.g. plants, viruses and bacteria) is not always best represented by a tree. This is due to evolutionary processes that take place on the molecular level, such as recombination, lateral gene transfer and recombination. In such cases phylogenetic networks — more complex leaf-labeled graphs — can provide a useful alternative to trees.

In this talk we review some ways to construct phylogenetic networks, including a recent method that builds up networks from simpler networks called Trilonet, which also leads to some interesting theoretical and computational problems.

The seminar includes a refreshment break to fuel interdisciplinary discussion

***Ron Cooke Hub is on Heslington East Campus – accessible by free bus services  
Nos. 66 and 44 running at frequent intervals from Heslington West.  
The YCCSA Seminar room is on the second floor***