



YCCSA Seminar Series Autumn 2018

An interdisciplinary seminar series hosted by the York Cross-disciplinary Centre for Systems Analysis aimed at researchers from all disciplines

Assembling the Network of Life

Professor Vincent Moulton

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**Friday, 16 November 2018
Ron Cooke Hub, RCH/204 at 13:30**

Abstract:

Biologists commonly represent the evolution of organisms using a phylogenetic tree, that is, a leaf-labeled graph-theoretical 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 discuss the problem of building up phylogenetic networks from simpler networks, which leads to some interesting mathematical 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 UB1 running at frequent intervals from Heslington West.
The YCCSA Seminar room is on the second floor**