



## **YCCSA Seminar Series Spring 2016**

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

### **The Modelling of Context-Dependent Causal Processes – A Recasting of Robert Rosen’s Thought**

**Professor Bruce Edmonds**

Centre for Policy Modelling, Manchester Metropolitan University

20 May 2016

Ron Cooke Hub, RCH/204 at 13:30

A critical recasting of some of Robert Rosen’s thought is presented as a springboard for a wider discussion of causation and complexity. It is argued that a lot of the thrust of Rosen’s work can be better understood when re-cast in terms of the context-dependency of causal models. When viewed in this way I seek to highlight how his thought does not lead to the abandonment of formal modelling and a descent into relativism but a more careful and rigorous science of complex systems. This also sheds light on several aspects of modelling including: the need for multiple models; the nature of modelling noise; and why adaptive systems cause particular problems to modellers. In this way I hope to decrease researchers fear that, by taking Rosen’s criticisms seriously, they would have to abandon the realm of acceptable science.

The talk thus argues that causation only makes sense within a context and that the complexity of what we study has significant implications as to how we approach modelling them.

#### **References**

The talk draws from two papers at:

- <http://cfpm.org/papers/tpmocdc/tpmocdc.pdf> (preprint) or  
<http://dx.doi.org/10.1002/cbdv.200790194> (published version)
- <http://bruce.edmonds.name/cacd/cacd.pdf> (preprint) or  
<http://link.springer.com/article/10.1007%2Fs10699-012-9303-x> (published)

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***