

**Speaker:** Prof. Johnathan Crook

**Talk Title:** How can we predict when a borrower becomes more or less delinquent?

**Talk Abstract:**

Predicting the probability that a borrower will become more delinquent or less delinquent in each month in the life of a credit product is useful to lenders for the prediction of expected profit, provisions, stress testing and risk of default.

This talk presents the results of the parameterisation of multistate intensity models of delinquency where the states are defined as the number of months in arrears an account is. We show the estimation methodology using discrete time hazard models with frailty applied to credit cards. We show the predictive accuracy over states and over time periods.

## Speaker Bio:

Jonathan Crook is Director of the Credit Research Centre, Deputy Dean and Director of Research at the University of Edinburgh Business School. He has researched into credit scoring and the demand and supply of credit and credit constraints since the late 1980s. He has published over 55 refereed journal articles, mostly in the areas of credit scoring and credit availability in journals such as the European Journal of Operational Research, Journal of the Operational Research Society, Journal of Banking and Finance, Journal of Business Finance and Accounting and Economics Letters. He has co-authored or co-edited five books including Credit Scoring and its Applications, 2017 (with Lyn Thomas and David Edelman). He is particularly interested in the incorporation of macroeconomic factors into credit risk modelling, stress testing, survival models, dynamic models, the demand and supply of credit and the use of new forms of data. He has received research grants from the EPSRC, ESRC, Fulbright and other sources. He is a Fellow of the Financial Institutions Center at the Wharton School, University of Pennsylvania and an External Research Fellow of the Centre for Finance, Credit and Macroeconomics at the University of Nottingham. He has acted as a credit scoring consultant to a number of banks. He is also the joint Editor of the Journal of the Operational Research Society, a Fellow of the

Royal Society of Edinburgh and a Fellow of the Academy of Social Sciences.