



**UCD School of  
Mathematics and Statistics**

University College Dublin  
Belfield, Dublin 4, Ireland

Tel +353 1 716 2580  
Fax +353 1 716 1196

**Scoil na  
Matamaitice agus na Staitisticí UCD**

An Coláiste Ollscoile, Baile Átha Cliath  
Belfield, Baile Átha Cliath 4, Éire

Email [seminars@maths.ucd.ie](mailto:seminars@maths.ucd.ie)  
Web [maths.ucd.ie/seminars](http://maths.ucd.ie/seminars)

figuration, i.e. how many groups is most probable. Current literature uses BIC or AICM to do this. The use of reversible jump Markov chain Monte Carlo (RJMCMC) can tackle this problem in a principled manner. RJMCMC allows the Markov chain to jump between models with parameter spaces of varying dimension. Thus simulation over an unknown number of groups is possible. Discussion of further work will include the use of variational Bayesian methods to reduce computational intensity and the application of this model to temporal network data. In order to extend the latent position cluster model to dynamic networks, the number of groups will need to vary across time to tell an interesting story for most datasets. Working Group on Statistical Learning