

The CREAR Working Group on Risk, the Econometrics & Forecasting seminar of the IDS Department at ESSEC, the BFA group of the SFdS and Institut des Actuairens have the pleasure to invite you to listen to:

Prof. Andréas HEINEN
THEMA, Université de Cergy-Pontoise

January 28, 2015, 12:30-1:30 pm
EEE - ESSEC La Défense (CNIT)- Room 202

**Contagion in Subprime Mortgage Defaults:
a Composite Likelihood Approach**

Using a composite likelihood approach, we analyze the pairwise dependence of defaults within a set of securitized subprime mortgages originated in Los Angeles between 2000 and 2011. As the main factors affecting default dependence, we propose geographic proximity as well as the similarity of mortgages in terms of various other time-varying economic variables. Thus, in addition to geographic distance, we employ measures of non-geographic distance, in terms of both individual mortgages and their neighborhood characteristics. For physical distance, we use a squared exponential correlation function, a special case of the Matérn function. Our results show that physical distance has a strongly significant effect on default dependence. Furthermore, even after controlling for physical distance, a number of these non-geographic measures prove significant in explaining default dependence.

This is a joint work with J. B. Kau, D. C. Keenan, M. L. Kim, C. Slawson.

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Andréas HEINEN has been Professor of Economics at THEMA, Université de Cergy-Pontoise, since 2010. He was beforehand in the Statistics Department of Universidad Carlos III in Madrid. His research topics are integer time series, multivariate regime-switching copulas in finance, and their use in risk-management, time-varying vine copulas, and credit risk modeling with copulas. He is also interested in banking and microfinance.



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Modèles Mathématiques et Économiques de la
Dynamique, de l'Incertitude et des Interactions

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