

## SÉMINAIRE DE MATHÉMATIQUES ACTUARIELLES ET FINANCIÈRES

organisé par *Quantact*, le *Laboratoire de mathématiques actuarielles et financières* du CRM

UQAM  
Pavillon Président-Kennedy  
PK-5115  
16 septembre 2016, 14:00-15:00

**Guojun Gan**

Department of Mathematics, University of Connecticut

### *Metamodeling and Its Applications in Variable Annuity*

The guarantees embedded in variable annuities are complex and there are no closed-form formulas to calculate their fair market values and sensitivities to major risk drivers. Insurance companies rely heavily on Monte Carlo simulation, which is computationally demanding for large portfolios of variable annuity contracts. In this talk, I will talk about the computational issues arising from variable annuities and present some metamodeling approaches, which are promising solutions to these issues.

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