

CCSU  
DEPARTMENT OF MATHEMATICAL SCIENCES  
COLLOQUIUM

Wednesday, November 30  
12:30 – 1:30 PM  
Davidson Hall, Room 213

**ANNUITY SALES, SMALL SAMPLE SIZE,  
AND A BAYESIAN DYNAMIC  
LINEAR MODEL**

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(MA THESIS PRESENTATION)

**Abstract:** The project proposes a Bayesian Dynamic Linear Model for explaining and forecasting a time-series of annuity sales with a small sample size. The asymptotic nature of frequentist inference is inappropriate for small sample sizes, and traditional time-series methods with static parameters have inferior performance compared to state-space methods with dynamic parameters. An R package called LaplacesDemon is used and code provided. This project may enlighten other statisticians who must forecast annuity sales or time-series with small sample sizes.

*For further information:*

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<http://www.math.ccsu.edu/gotchev/colloquium/>