



ECONOMETRIC RESEARCH SEMINAR

- May 28, 2009, 9:15 am
- SZVI
Institut für Höhere Studien
Stumpergasse 56, 1060 Wien

Paul SCHNEIDER,
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“L2 Transition Density Approximations for Multivariate Affine Jump-Diffusions”

We develop expansion methods using orthogonal polynomials for the approximation of transition densities of multivariate affine jump-diffusions. We improve existing methods by working on the correct state space of the process; using the properties of polynomial processes, of which affine diffusions are a subclass, the quality of our expansion is independent of the time-interval between observations. We provide examples with Heston's model and a square-root process with exponential jumps. A variety of applications arises in continuous-time econometrics, option pricing, and credit risk.

with Eberhard Mayerhofer (Vienna Institute of Finance).