SEMINAR ON STOCHASTICS
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A Functional Central Limit Theorem for Correlated Martingales

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The paper derives a central limit theorem for the empirical distributions of a system of strongly correlated continuous martingales. We provide a general Sobolev-type class of functionals for which the weak convergence to a centered Gaussian random field takes place. An explicit formula for the covariance functional is established and a characterization of the limit is given in terms of an inductive system of SPDEs. We also show a density type theorem for a special class of functions on the path space.

Friday March 10; 3:05 p.m.–3:55 p.m.; JTB 120