$$S_t \circ c(h)(a_s)_{ti} c(s) + \mathfrak{S}_e m^i n(a_r)$$

Department of Mathematics, University of Utah

'Split' invariance principles for stationary processes

Siegfried Hörmann
University of Utah

Time and Place: Friday April 17, 2009; 3:00–4:00 p.m.; LCB 219

We introduce a new mixing condition and use it to prove almost sure invariance principles for stationary processes. Our results have a 'split' character, involving two Wiener processes in the approximation. This leads to almost optimal remainder terms and extends the applicability of the results substantially. I will give a more detailed introduction with some historical aspects of strong invariance principles which allows to compare the improvement obtained via our method. Applications and examples will be also presented.

The talk is based on joint work with István Berkes and Johannes Schauer from TU-Graz.