February 27th, 2017
KAP 414
2:00 P.M. – 3:00 P.M.

Professor Pierre-Olivier Goffard

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"Boundary Crossing Problems with Applications to Risk Management"

Abstract: Many problems in stochastic modeling come down to study the crossing time of a certain stochastic process through a given boundary, lower or upper. Typical fields of application are in risk theory, epidemic modeling, queueing, reliability and sequential analysis. The purpose of this talk is to present a method to determine boundary crossing probabilities linked to stochastic point processes having the order statistic property. A very well-known boundary crossing result is revisited, a detailed proof is given. the same arguments may be used to derive results in trickier situations. We further discuss the practical implications of this classical result and if there is still some time left, some duality features might be presented.