

ISMMA

**« INSTITUTUL DE STATISTICA MATEMATICA SI MATEMATICA
APLICATA al ACADEMIEI ROMANE »**



**SOCIETATEA DE PROBABILITĂȚI
ȘI STATISTICĂ DIN ROMÂNIA**

*SEMINAR de « TEORIA PROBABILITATILOR, STATISTICA si
APLICATII »*

LUNI 23 SEPTEMBRIE 2019, ora 11:00

IULIAN CAMPEAN (IMAR Bucuresti)

**«A natural extension of Markov processes and applications
to singular SDEs»**

Abstract: We present a general method for extending Markov processes to a larger state space such that the added points form a polar set. The so obtained extension is an improvement on the standard trivial extension in which case the process is made stuck in the added points, and it renders a new technique of constructing extended solutions to S(P)DEs from all starting points, in such a way that they are solutions at least after any strictly positive time. Concretely, we apply this extension to study SDEs with singular coefficients on an infinite dimensional state space, e.g. SPDEs of evolutionary type. This talk is based on joint work with L. Beznea and M. Röckner.

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