UNIVERSITÀ DI TRENTO
Dipartimento di Matematica

PhD in Mathematics

"Doc in Progress" and #iorestoacasa are pleased to introduce you to

Francesca Primavera

University of Vienna

PhD in Mathematics

Universal approximation theorem for càdlàg paths and Lévy type signature models

Signature-based models have recently entered the field of stochastic modeling, in particular in Mathematical Finance. The choice of the signature as main building block is mostly explained by a universal approximation theorem (UAT) according to which continuous functionals of continuous paths can be approximated by linear functions of the time extended signature. This powerful result however, leaves open the question of approximating continuous functionals of the more general set of càdlàg paths. Based on recent results on the signature of càdlàg paths, during the first part of the talk, we present a UAT which solves this question. Next, as an application, we define signature-based models which include jumps, extending therefore the class of continuous signature models for asset prices proposed so far.

Based on ongoing joint work with C. Cuchiero and S. Svaluto-Ferro.

Thursday, December 9 – at 15:30 CET

The seminar will be held both in presence in Room A204 (Povo 1) and online via Zoom.

To join the event, please contact docinprogress.unitn@gmail.com using an institutional e-mail address for both reserving a sit in the seminar room or obtaining login credentials.