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IMPACT OF NOISE IN SOME MEMS  
(MICRO-ELECTRO-MECHANICAL SYSTEMS)

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Abstract: In this talk we will consider a few local and nonlocal stochastic parabolic models arising in MEMS industry. The considered models are driven either by Brownian or by fractional Brownian motion or by a mixture of both. The impact of the considered noise on the dynamics of those models will be explored. In particular, we will present how the presence of the noise affects the quenching behaviour of the solutions. Additionally, estimates of the probability of quenching and of global-in-time existence will be provided. Finally, numerical experiments complementary to the analytical results will be presented.

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