

**FINITE DIMENSIONAL PROPERTIES OF A PARABOLIC
PARTIAL DIFFERENTIAL EQUATION**

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Abstract: In this talk, we introduce a finite dimensional property of parabolic partial differential equation which is related to the theory of inertial manifold. The main goal must be the complete proof of the existence of inertial manifold for Navier-Stokes equations but we couldn't accomplish at this moment. Meanwhile we take another approach to attack that problem and will apply to a related reaction diffusion system.