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CONFERINȚĂ

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Null controllability of the stabilized Kuramoto-Sivashinsky system with one distributed control

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We shall present a control problem for a nonlinear parabolic system, posed on a bounded interval, which consists of a Kuramoto-Sivashinsky-KdV equation coupled to a heat equation. The problem is addressed by means of a control supported in an open subset of the domain acting on one equation only. By using a Carleman estimate approach we first establish a null controllability result for the linearized system. Then, the result for the nonlinear system is obtained by means of a local inversion theorem.

Joint work with Eduardo Cerpa and Alberto Mercado