

Control of parabolic problems and block moment method

jeudi 3 juillet 2025 09:45 (45 minutes)

The goal of this talk is to give an overview of the block moment method and its applications to the study of null controllability for certain parabolic problems in recent years. I will present the method we developed with Assia Benabdallah and Franck Boyer, starting from the motivations that led to its introduction, and moving on to its application to new classes of parabolic problems.

I will also

relate the block moment method to known results (Komornik-Loreti, Avdonin-Ivanov) on the hyperbolic setting concerning Riesz bases of divided differences of time exponentials,

explain how we extended the method to handle quite general control operators in 1D problems including distributed control

and present why it is an important tool in the construction of biorthogonal families in higher-dimensional tensorized settings.

This talk is related to different works in collaboration with F. Ammar Khodja, A. Benabdallah, F. Boyer, M. González-Burgos, M. Mehrenberger and L. de Teresa.

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