

# On determining coefficients and source terms in some coupled parabolic systems

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## **Abstract**

In this work we deal with inverse problems for  $2 \times 2$  coupled parabolic systems. More specifically, we establish some stability results using suitable Carleman inequalities. In a first part, we investigate inverse problems of determining coefficients for strongly coupled parabolic systems and we prove Lipschitz stability based on Carleman estimates with one observation. In the second part, we present partial results concerning stability estimate of Hölder type in an inverse source problem for fractional diffusion system. At the end, we present some related works about inverse problems for degenerate parabolic systems.