

# Variants of global Carleman weights in one-measurement inverse problems and fluid-structure controllability problems

AXEL OSSES, ALBERTO MERCADO

Departamento de Ingeniería Matemática, Universidad de Chile, Casilla 170/3 - Correo 3, Santiago, Chile and Centro de Modelamiento Matemático, UMI 2807 CNRS-Uchile, Chile.

<http://www.dim.uchile.cl/~axosses>, [axosses@dim.uchile.cl](mailto:axosses@dim.uchile.cl), [mercado@dim.uchile.cl](mailto:mercado@dim.uchile.cl)

LUCIE BAUDOUIN

Laboratoire d'Analyse et d'Architecture des Systèmes, LAAS - CNRS, 7 avenue du Colonel Roche, 31 077 Toulouse Cedex 04, France.

[baudouin@laas.fr](mailto:baudouin@laas.fr)

MURIEL BOULAKIA

Laboratoire Jacques-Louis Lions, Université Pierre et Marie Curie, 175 rue du Chevaleret, 75013 Paris, France

[boulakia@ann.jussieu.fr](mailto:boulakia@ann.jussieu.fr)

ANNA DOUBOVA

Departamento E.D.A.N., Universidad de Sevilla, Tarfia s/n, E-41012 Sevilla, Spain

[doubova@us.es](mailto:doubova@us.es)

JEAN.-PIERRE. PUEL

Laboratoire de Mathématiques Appliquées, Université de Versailles St-Quentin, 45 avenue des Etats Unis, 78035 Versailles cedex, France

[jppuel@cmapx.polytechnique.fr](mailto:jppuel@cmapx.polytechnique.fr)

## Resumen

Some variants of global Carleman weights and Carleman inequalities applied to singular controllability and inverse problems partially developed by the authors are presented in a review. First of all, we explain how to modify weights to study one measurement inverse problems for the heat and wave equations with discontinuous coefficients in the principal part and in a case of locally supported boundary observations for recovering coefficients in the wave equation. As another important application, we show how time-variable global Carleman weights are applied to study the null- controllability for a Navier-Stokes-rigid solid problem in variable domains.

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