



Seminar of the Work Group  
Nonlinear Partial Differential Equations  
WS 21/22

**Speaker: Dr. Fatima Z. Goffi**  
**January 25th, 2022, 14:00 - 15:30**  
**Zoom Link: <https://kit-lecture.zoom.us/j/5732649920>**  
**Meeting ID: 573 264 9920**

The mechanical impedance of a thin linear elastic slab

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**Abstract**

We consider a transmission problem defined on an elastic slab coated with a thin elastic shell. In such situations, it is well known that defining an impedance boundary condition serves for modeling a new problem defined on the fixed part of the domain which is called the *impedance boundary problem*. In this talk, we show how to write this boundary condition by rewriting the Lamé system in the form of a first order differential system, whose coefficients are surface differential operators.

This work is a collaboration with K. Lemrabet and A. Youyou.