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# MATHEMATIKKOLLOQUIUM

Das Institut für Mathematik lädt zu folgendem Vortrag ein:

**María Lopez Fernandez**

Institut für Mathematik, Universität Zürich

## **Generalized Convolution Quadrature with Variable Time Stepping**

A generalized convolution quadrature for the numerical approximation of linear convolution equations will be presented. Our main goal is to overcome the current restriction to uniform time steps of Lubich's original convolution quadrature.

A major challenge for the efficient realization of the new method is the evaluation of high-order divided differences for the transfer function in a fast and stable way. We will propose an algorithm based on contour integral representation of the numerical solution and quadrature in the complex plane.

As the main application we will consider the wave equation in exterior domains, which is formulated as a retarded boundary integral equation.

**Zeit: Donnerstag, den 8. November 2012 um 17:15 Uhr**

**Ort: Bauing.-Gebäude, Technikerstraße 13, HSB 7**

**Gäste sind herzlich willkommen!**

*Alexander Ostermann*