



# Lothar-Collatz-Kolloquium für Angewandte Mathematik

**Donnerstag, den 12. Dezember 2024, um 17:15 Uhr, im Hörsaal 5**

**Prof. Dr. Alessandro Coclite\***

(Politecnico di Bari, Italia, Dipartimento di Ingegneria Elettrica e dell'Informazione)

## ***Nonlinear Peridynamics on Manifolds***

### **Zusammenfassung/Abstract:**

Peridynamics elasticity theories have become widespread in various research areas due to their ability in modeling discontinuities formation and evolution. Due to its physical intuitiveness, bond-based peridynamics is widely employed in numerical simulations notwithstanding some modeling limitations.

In this work the problem of approximating the solution the nonlinear peridynamics wave equation on arbitrarily-shaped two-dimensional (2D) smooth manifolds is proposed.

This talk is based on joint works with G. M. Coclite, N. Dimola, G. Fanizza, F. Maddalena, and T. Politi.

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