

## Karlsruher PDE-Seminar

# Breather solutions in nonlinear wave equations with spatially periodic coefficients

Prof. Dr. C. Eugene Wayne

Boston University

cew@math.bu.edu

<http://math.bu.edu/people/cew/>

Breathers are spatially localized, temporally periodic solutions of nonlinear partial differential equations. While very rare in PDE's with translationally invariant coefficients, they are believed to be much more common in equations with spatially periodic coefficients. I will present a method for their construction based on dynamical systems ideas and describe how this leads to novel questions in the inverse spectral theory of weighted Sturm-Liouville operators. This is joint work with Martina Chirilus-Bruckner.

**Termin:** Dienstag, 18. Februar 2014, 10:00 Uhr

**Ort:** 1C-04, Allianz-Gebäude 05.20

**Gastgeber:** Die Dozenten des Schwerpunkts Partielle Differentialgleichungen