Institut für
Angewandte Mathematik

Leibniz
Universität
Hannover

Institut für Angewandte Mathematik
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Oberseminar
Analysis und Theoretische Physik

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Reconstructing water waves from the velocity field

Abstract:

In the context of traveling water waves with rough - that is discontinuous or even unbounded - vorticity, I will show that the wave profile and all the other streamlines are real-analytic curves. Using this optimal regularity property, I will show that the symmetry of the wave surface can be characterized in terms of the underlying flow.

A further application of the real-analyticity result is that one can recover the wave profile from the velocity field on a vertical axis of symmetry of the wave surface.

Dienstag, 28.10.2014, 15:00 Uhr, Raum g005
Hauptgebäude der Universität

Über Ihren Besuch würden sich freuen:

Prof. Dr. Joachim Escher
Prof. Dr. Olaf Lechtenfeld
Prof. Dr. Elmar Schrohe
Prof. Dr. Christoph Walker