



Leibniz
Universität
Hannover

Oberseminar Analysis und Theoretische Physik

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Uniqueness & non-uniqueness results for wave equations

A well-known theorem of Choquet-Bruhat and Geroch states that for given smooth initial data for the Einstein equations there exists a unique maximal globally hyperbolic development. In particular, time evolution of globally hyperbolic solutions is unique. This talk investigates whether the same result holds for quasilinear wave equations defined on a fixed background. After recalling the notion of global hyperbolicity, we first present an example of a quasilinear wave equation for which unique time evolution in fact fails and contrast this with the Einstein equations. We then proceed by presenting conditions on quasilinear wave equations which ensure uniqueness. This talk is based on joint work with Harvey Reall and Felicity Eperon.

**Dienstag, 19.12.2023, 15:00 Uhr, Raum c311
Hauptgebäude der Leibniz Universität**

Dazu laden herzlich ein:

Prof. Dr. Wolfram Bauer, Prof. Dr. Joachim Escher, Prof. Dr. Johannes Lankeit,
Prof. Dr. Elmar Schrohe, Prof. Dr. Alexander Strohmaier, Dr. Alden Waters,
Prof. Dr. Christoph Walker