



Seminar of the Work Group
Nonlinear Partial Differential Equations
WS 21/22

Speaker: PD Dr. Lei Zhao
January 11th, 2022, 14:00 - 15:30
Zoom Link: <https://kit-lecture.zoom.us/j/5732649920>
Meeting ID: 573 264 9920

Conformal Correspondence of Classical and Quantum Mechanical Systems

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Abstract

In 1889, Goursat noted that conformal transformations in the plane induce correspondences of planar natural mechanical systems including the Hooke-Kepler correspondence. A generalization of this observation has been explained in a note by Darboux right after the note of Goursat, in the same volume of *Comptes Rendus*, which has been subsequently forgotten. The aim of this talk is to explain this forgotten theorem of Darboux and some of its consequences in classical and quantum mechanical systems.