

A U S H A N G

FREIE UNIVERSITÄT BERLIN

Fachbereich Mathematik und Informatik

Promotionsbüro, Arnimallee 14, 14195 Berlin

D I S P U T A T I O N

Donnerstag, 29.06.2023, 16:00 Uhr c.t.

Ort: Seminarraum 140

(Fachbereich Mathematik und Informatik, Arnimallee 7, 14195 Berlin)

Disputation über die Doktorarbeit von

Herrn Alejandro López Nieto

Thema der Dissertation:

Enharmonic motion: Towards the global dynamics of negative delayed feedback

Thema der Disputation:

Soliton asymptotics of shallow-water waves

Die Arbeit wurde unter der Betreuung von **Prof. Dr. B. Fiedler** durchgeführt.

Abstract: Kadomtsev and Petviashvili initially proposed the KP partial differential equation to study the stability of solutions in the Korteweg-De Vries (KdV) equation for shallow-water waves in channels. Over time, it has become clear that the KP equation and its family of symmetries showcase a rich integrable structure containing many of the currently known integrable systems. However, in recent years the focus has shifted to the study of regular solitons: explicit solutions that correspond to elements of a suitably chosen positive Grassmannian. The talk will discuss the work of Kodama and Williams (2011) regarding the combinatorial classification of KP soliton asymptotics. Their results will take us on an ambitious journey connecting topics as far apart as algebraic combinatorics and partial differential equations.

Die Disputation besteht aus dem o. g. Vortrag, danach der Vorstellung der Dissertation einschließlich jeweils anschließenden Aussprachen.

Interessierte werden hiermit herzlich eingeladen

Der Vorsitzende der Promotionskommission
Prof. Dr. B. Fiedler