

A U S H A N G

FREIE UNIVERSITÄT BERLIN Fachbereich Mathematik und Informatik

Promotionsbüro, Arnimallee 14, 14195 Berlin

DISPUTATION

Montag, 24. November 2014, 14.00 Uhr

Ort: Großer Hörsaal (Raum 001/A3), Arnimallee 3, 14195 Berlin

Disputation über die Doktorarbeit von

Frau Anna Fluder

Thema der Dissertation:

Elliptic curves over function fields of elliptic curves

Thema der Disputation:

Asymptotic behavior of elliptic curves over function fields

Die Arbeit wurde unter der Betreuung von **Prof. Dr. Dr. h.c. mult. H. Esnault** durchgeführt.

Abstract: In the first half of the talk we provide the definition of an elliptic curve and of the Mordell-Weil rank. An overview of results and hypotheses concerning ranks of elliptic curves over various bases will be given. The second half of the talk concerns elliptic curves over function fields. We start with the definition of the average rank of elliptic curves over a given base and present some well-known results. Most of our time will be dedicated to presenting the result of de Jong [deJong] on the "lim sup" of the average rank of elliptic curves over rational function fields. His methods that give an upper bound for the limit in question will be discussed. If time permits we will discuss new directions when one tries to bound the average rank of elliptic curves over general function fields.

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

Interessierte werden hiermit herzlich eingeladen

Die Vorsitzende der Promotionskommission
Prof. Dr. Dr. h.c. mult. H. Esnault