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

Dienstag, 18. Juni 2019, 13:30 Uhr

Ort: Seminarraum 031

(Fachbereich Mathematik und Informatik, Arnimallee 6, 14195 Berlin)

Disputation über die Doktorarbeit von

Frau Ulrike Löber

Thema der Dissertation:

Development of Bioinformatic Tools for Retroviral Analysis from High Throughput Sequence Data

Thema der Disputation:

Identification of Transposable Elements Using Whole Genome Sequencing Data

Die Arbeit wurde unter der Betreuung von **Prof. Dr. K. Reinert** durchgeführt.

Abstract: Transposable elements (TE) are mobile genetic elements. First described in maize in 1950, it has been shown that TE play a significant role in gene regulatory networks of eukaryotes. It is crucial to understand and characterize integration sites of TE and endogenous retroviruses (ERV) to shed light on regulatory and disease mechanisms in humans and eukaryotes in general. High throughput sequencing (HTS) opens up new possibilities to investigate integration mechanisms in host genomes. The amount of data produced by HTS entail new challenges for information technology, such as data management,optimization of string matching algorithms, or reproducibility. Chen et al. developed and published a new tool termed ERVcaller in 2019: exemplary ERV and TE integration sites are detected in whole-genome sequencing data from humans. The well-defined problem of finding TE and ERV integration sites in a very well characterized species shows that it is essential to further improve laboratory and computational methods. Thus, a broad scope of applications could be covered to understand the underlying mechanisms of mobile genetic elements."

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. K. Reinert