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, 8. Februar 2022, 10:00 Uhr

WebEx

Disputation über die Doktorarbeit von

Herrn Thomas Risch

Thema der Dissertation:
Computational analysis of cancer transcriptomes: drug response prediction in colorectal cancer and gene regulatory networks and long non-coding genes in medulloblastoma

Thema der Disputation:
Feature selection in computational analysis of cancer transcriptomes

Die Arbeit wurde unter der Betreuung von **Dr. M.-L. Yaspo** und **Prof. Dr. A. Marsico** durchgeführt.

Abstract: In cancer research, machine learning is applied to solve relevant research questions and tasks by the computational analysis of high-dimensional (big) molecular data of tumors obtained via high-throughput omics technologies such as next-generation sequencing and arrays. Here, cancer transcriptome data offer a rich resource that can be used to address, for example, biomarker detection, molecular subtype identification, and the inference of gene regulatory networks. However, the successful application of machine learning methods highly depends on the selection of informative and expressive features.

During my talk, I will provide an introduction on feature selection methods focusing on methods applied for supervised machine learning. This introduction includes an overview on five types of feature selection methods: filter, embedded, wrapper, hybrid, and ensemble methods. Advantages and disadvantages of the five method types will be discussed.

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. A. Marsico