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

Freitag, 19. Februar 2016, 13.00 Uhr

Ort: Turm 3, Seminarraum I
Max-Planck-Institut für Molekulare Genetik
Ihnestraße 63-73, 14195 Berlin

Disputation über die Doktorarbeit von

Herrn Alessandro Mammana

Thema der Dissertation:
Patterns and Algorithms in High-Throughput Sequencing Count Data

Thema der Disputation:
Learning the parts of objects by non-negative matrix factorization

Die Arbeit wurde unter der Betreuung von **Prof. Dr. M. Vingron** durchgeführt.

Abstract: Complex multivariate datasets may be explained as a combination of simpler components. Non-negative matrix factorization (NMF) is a computational method that recovers these hidden components from their combinations in the case where the data is non-negative. In this talk we will present the assumptions and the algorithms upon which NMF is based as well as some important applications.
Finally, we will compare NMF with other factorization techniques, such as k-means clustering. We will show that different factorization approaches correspond to different assumptions about the hidden substructure of the data and we will show which method is more appropriate in which circumstances.

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. M. Vingron