

**IWR COLLOQUIUM SUMMER SEMESTER 2024**

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# **Probabilistic Machine Learning and Latent Variable Models for Molecular Data**

Nowadays researchers can obtain quantitative measurements of the abundances and activities of different types of molecules across experimental conditions and spatio-temporal resolutions. In this talk, I will discuss how latent variable models can help us to extract major underlying patterns from the noisy, heterogeneous and high-dimensional data and how to accommodate the statistical properties of molecular data in such models. Case studies will demonstrate how this can help us to highlight core biological processes along development, in health and disease and pinpoint underlying molecular drivers.

**Also streamed  
via Zoom**



**June 26, 2024 • 16:15**

Mathematikon • Conference Room / 5th Floor  
Im Neuenheimer Feld 205 • 69120 Heidelberg  
[www.iwr.uni-heidelberg.de/events/iwr-colloquium](http://www.iwr.uni-heidelberg.de/events/iwr-colloquium)

**HGS MathComp Mixer**

Prior to the IWR-Colloquium: Get-together for all members of the HGS MathComp  
**15:30 • Mathematikon • Common Room / 5th Floor**