

Seminar „Systembiologie/Formelseminar“

Wintersemester 2008

Jeweils Dienstags, 13.30 Uhr Härtelstr. SR 109

Date	Title	Referent	
16.09. 23.09.	Clustering large data sets of similarity data	Frau Prof. Barbara Hammer & Dipl.-Inf. Alexander Hasenfuß TU Clausthal	Clustering and Visualization constitute key issues in computer-supported data inspection, and a variety of promising tools exist for such tasks such as the self-organizing map and variations thereof. Real life data, however, pose severe problems to standard tools: on the one hand, data are given by complex objects such as sequences of possibly different length, temporal signals, images, text data, graph structures, etc. and standard methods proposed for finite dimensional vectors in euclidean space cannot be applied. On the other hand, massive data have to be dealt with, such that data do neither fit into main memory nor more than one pass over the data is still affordable, i.e. standard methods can simply not be applied due to the sheer amount of data. We present two recent extensions of topographic mappings which can deal with more general proximity data given by pairwise distances, and which can process streaming data of arbitrary size in patches, thus resulting in an efficient linear time data visualization method for quite general data structures. We present the theoretical background as well as large scale applications to the areas of text and multimedia processing based on the generalized compression distance.
30.09. 07.10. 14.10.	Imatinib-treated chronic myeloid leukemia and minimal residual disease".	Matthias Horn (IMISE)	
21.10.	Improving the Quality of Microarray Analysis	Christian Hummer (HKI Jena)	
28.10.	"The geometry of hierarchical models for contingency tables"	Thomas Kahle (MIS Leipzig)	Exponential families for modeling contingency tables are also known as hierarchical models. In this talk we will discuss a geometric approach to the theory of these statistical models. The key insight for a geometric view is that an exponential family is the set of solutions of binomial equations (such as $p(00)*p(11) = p(10)*p(01)$ for independence) and thereby an algebraic variety.
04.11.	Exon Expression and Copy Number Analysis of Diffuse Astrocytoma - Towards Integrated Analyses	Peter Ahnert (IMISE)	

11.11.	"Kritische Betrachtungen zur Entwicklung der hochdimensionalen Datenanalyse"	Prof. J. Läuter (IZBI Leipzig)	
18.11.			
25.11.	High dimensional discriminant analysis revisited	Korbinian Strimmer	
02.12.	tba	Verena Zuber	
09.12.	Hochdurchsatzsequenzierung	St. Hoffmann	
16.12.	Prototype based Classification and Clustering in Medicine	F-M Schleif	
06.01.			
13.01.2009	Eurostem-WS		
20.01.	Functional Data Analysis	Thomas Villmann	Es geht um Methoden zur Analyse von Daten, die als Funktionen aufzufassen sind (z.B. Spektren)
27.01.	Visual Analytics: Hilfe bei der Suche der Nadel im Heuhaufen	Dirk Bartz (Neurozentrum)	
03.02.	Seminar Modelle		
10.02.	Anpassen komplexer statistischer Modelle: Markov Chain Monte Carlo 2.0	Achim Tresch (München)	

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