



## RESEARCH PUBLICATIONS

### **A Generalization of the Pearson Correlation to Riemannian Manifolds**

Role: Primary Author, Affiliation: Universität Heidelberg; Mathematisches Institut

Subjects: Statistics Theory (math.ST); Differential Geometry (math.DG), MSC classes: 62H20

Publication date of current revision (Rev. 3): 7 Mai 2020, Date of latest review: 20 June 2020

URL: <https://arxiv.org/abs/2006.04215>

### **Applications of Structural Statistics: Geometrical Inference in Exponential Families**

Role: Primary Author, Affiliation: Universität Heidelberg; Mathematisches Institut

Subjects: Statistics Theory (math.ST), MSC classes: 62G07

Publication date of current revision (Rev. 2): 19 April 2020, Date of latest review: 20 June 2020

URL: <https://arxiv.org/abs/2004.08909>

### **Foundations of Structural Statistics: Statistical Manifolds**

Role: Primary Author, Affiliation: Universität Heidelberg; Mathematisches Institut

Subjects: Statistics Theory (math.ST); Information Theory (cs.IT), MSC classes: 62A01

Publication date of current revision (Rev. 2): 18 Feb 2020, Date of latest review: 20 June 2020

URL: <https://arxiv.org/abs/2002.07424>

### **Foundations of Structural Statistics: Topological Statistical Theory**

Role: Primary Author, Affiliation: Universität Heidelberg; Mathematisches Institut

Subjects: Statistics Theory (math.ST); Machine Learning (cs.LG), MSC classes: 62A01

Publication date of current revision (Rev. 3): 21 December 2019, Date of latest review: 20 June 2020

URL: <https://arxiv.org/abs/1912.10266>

### **Principal Manifold Based Correlation Analysis applied to Gene Regulation Analysis of Glioblastoma Multiforme**

Role: Primary Author, Affiliation: Universität Heidelberg, Deutsches Krebsforschungszentrum (DKFZ)

Subjects: Machine Learning (cs.LG); Gene Regulation (q-bio.MN), MSC classes: 62A01

Publication date: 1 September 2017

Download URL Preprint: <https://bit.ly/3JjAzng>





## CONFERENCE TALKS

### **Attention please! Attention Mechanism in Neural Networks**

Event: 4<sup>th</sup> PyData Conference 2019, Heidelberg, Germany, Type: Expert Conference

Role: Speaker, Affiliation: Frootlab Smart Analytics

Date of talk: 21 November 2019

Subjects: Machine Learning (cs.LG), MSC classes: 62A01

Download URL: <https://www.slideshare.net/PatrickMichl1/attention-please-attention-mechanism-in-neural-networks-218825708>

### **Structure Learning with deep neural networks revisited**

Event: 7<sup>th</sup> Network Modeling Workshop 2014, Heidelberg, Germany, Type: Scientific Conference

Role: Speaker, Affiliation: Universität Heidelberg/Deutsches Krebsforschungszentrum (DKFZ)

Date of talk: 28 February 2014

Subjects: Gene Regulation (q-bio.MN); Machine Learning (cs.LG), MSC classes: 62A01

URL: <https://www.slideshare.net/PatrickMichl1/structure-learning-with-deep-neuronal-networks-218824948>

### **Structure Learning with deep neural networks**

Event: 6<sup>th</sup> Network Modeling Workshop 2013, Jena, Germany, Type: Scientific Conference

Role: Speaker, Affiliation: Universität Heidelberg/Deutsches Krebsforschungszentrum (DKFZ)

Date of talk: 6 June 2013

Subjects: Gene Regulation (q-bio.MN); Machine Learning (cs.LG), MSC classes: 62A01

URL: <https://www.slideshare.net/PatrickMichl1/structure-learning-with-deep-neuronal-networks-2013-218824204>

### **Structure learning with Deep Autoencoders**

Event: Network Modeling in Systems Biology 2013, Heidelberg, Germany, Type: Scientific Conference

Role: Speaker, Affiliation: Universität Heidelberg/Deutsches Krebsforschungszentrum (DKFZ)

Date of talk: 30 April 2013

Subjects: Gene Regulation (q-bio.MN); Machine Learning (cs.LG), MSC classes: 62A01

URL: <https://www.slideshare.net/PatrickMichl1/structure-learning-with-deep-autoencoders>

### **Regulation Analysis using Restricted Boltzmann Machines**

Event: 5<sup>th</sup> Network Modeling Workshop 2013, Heidelberg, Germany, Type: Scientific Conference

Role: Speaker, Affiliation: Universität Heidelberg/Deutsches Krebsforschungszentrum (DKFZ)

Date of talk: 10 January 2013

Subjects: Gene Regulation (q-bio.MN); Machine Learning (cs.LG), MSC classes: 62A01

URL: <https://www.slideshare.net/PatrickMichl1/regulation-analysis-using-restricted-boltzmann-machines-218822661>

### **Concept of Regulation Analysis using Restricted Boltzmann Machines**

Event: iBIOS 2012, Kleinwalsertal, Austria, Type: Scientific Conference

Role: Speaker, Affiliation: Universität Heidelberg/Deutsches Krebsforschungszentrum (DKFZ)

Date of talk: 2 February 2012

Subjects: Gene Regulation (q-bio.MN); Machine Learning (cs.LG), MSC classes: 62A01

URL: <https://www.slideshare.net/PatrickMichl1/concept-of-regulation-analysis-using-restricted-boltzmann-machines-218821777>



### **PUBLISHED BOOKS**

#### **Netzwerktechnik Grundlagen**

Description: Textbook for the vocational education of IT engineers and electrical engineers in Germany

Publisher: Fernlehrinstitut Dr. Robert Eckert GmbH

Role: Primary Author, Affiliation: Bayerische Industrie- und Handelskammer

Publication date: 1 August 2011

Subjects: Signal Processing; Telecommunication; Graph Theory; Computer Networking

Article: NET(TE)1, ArtNo 02303

Download URL (preprint, encrypted, please request password): <https://bit.ly/3H3E3IW>