Teaching statement

My teaching experiences cover multiple years. I did courses and lectures in the line of machine learning, computational intelligence and programming. Seminars have been done by myself, the lectures in general under co-supervision of a professor. The lecture *Modern Data Analysis*, was done by my self with two lectures given by Professor Hammer and one by Dr. Kerstin Bunte. For the last three years the course-description is available in the information system of the University of Bielefeld *https://ekvv.uni-bielefeld.de/*. I also did teaching within the ERASMUS teaching exchange program at the University of Groningen (contact: Prof Michael Biehl, m.biehl@rug.nl). Former teaching took place at the University of Leipzig together with Prof. Thomas Villmann (contact: Prof. Thomas Villmann villmann@hs-mittweida.de) while I was in his group as a Post-Doc. Further I did some teaching during my Master and PhD in the corresponding groups I was part of. Most of the time I taught Master students, in the programming (C++ / Matlab) courses also bachelor students attended.

2011-2013

2013 Lecture+seminar *Algorithms for computer scientists*
Course-Numbers: 392007,392008, https://ekvv.uni-bielefeld.de/

2012 Lecture *Machine learning in the web*
Course-Number: 392219, https://ekvv.uni-bielefeld.de/

2012 Lecture+seminar *Algorithms for computer scientists*
Course-Numbers: 392007,392008, https://ekvv.uni-bielefeld.de/

2011-2013 Lecture *Modern Data Analysis* + exercises. Course-Numbers: 392246 (lecture), 392247 (seminar), https://ekvv.uni-bielefeld.de/

2011 Lecture *Machine learning in the web* + exercises (together with Prof. Barbara Hammer) Course-Numbers: 392219 (lecture), 392220 (seminar), https://ekvv.uni-bielefeld.de/

2011 ERASMUS-Exchange: Block-lectures (two weeks) about neural networks and computational intelligence methods at the Rijksuniversiteit Groningen, The Netherlands. I also gave a talk in the Computer Science Colloquium:
http://www.cs.rug.nl/biehl/Coll/index.html

2001-2010

2009 ERASMUS-Exchange: Block-lectures (two weeks, 10h) machine learning, neural networks and bioinformatics at the Rijksuniversiteit Groningen, The Netherlands I also gave a talk in the Computer Science Colloquium:
http://www.cs.rug.nl/biehl/Coll/archive.html

2008 ERASMUS-Exchange: Block-lectures (two weeks, 10h) machine learning and spectral data analysis in bioinformatics at the Rijksuniversiteit Groningen, The Netherlands and Lectures on neural networks
I also gave a talk in the Computer Science Colloquium:
http://www.cs.rug.nl/biehl/Coll/archive.html

2008 Lecture data mining (University of Leipzig, supervised by Prof. Thomas Villmann)

2008 Lecture machine learning II (seminars, University of Leipzig, together with Prof. Thomas Villmann)

2007 Block-lectures: machine learning and spectral data analysis in bioinformatics at the Rijksuniversiteit Groningen, The Netherlands (ERASMUS lecturer exchange) and Lectures on neural networks
I also gave a talk in the Computer Science Colloquium:
http://www.cs.rug.nl/biehl/Coll/archive.html

2007 Lecture machine learning I (seminars, University of Leipzig, together with Prof. Thomas Villmann)

2003 Lecture+seminar programming techniques (parts, 20%) together with Prof. Volker Gruhn

2001 Seminar Signal-/Imageprocessing (teaching) - master level (100%) (Dept. of Psychology, Prof. Dietmar Saupe)

2001 Seminar C++ programming (teaching) - University of Leipzig (100%) (Dept. of Psychology, Prof. Erdmute Sommerfeld)

Supervision of students

During my PhD and mainly in my Post-Doc positions I supervise(d) different computer science students to do their Master or PhD in co-supervision with Prof. Barbara Hammer or Prof. Thomas Villmann.

PhD projects - running

- Prototype based proximity learning (Daniela Hoffmann, University of Bielefeld) (2012-)
  Publications based on this work (see list of publications): Journal [4]
- Topographic mapping and relational learning (Andrej Gisbrecht, University of Bielefeld) (2010-)
  Publications based on this work (see list of publications): Journal [7,8]
- Quality assessment measures for dimensional reduction (Bassam Mokbel, University of Bielelfeld) (2010-)
  Publications based on this work (see list of publications): Journal [7]
- Prototype-based learning for large and multimodal data sets (Xibin Zhu, University of Bielefeld) (2010-)
  Publications based on this work (see list of publications): Journal [2,4,7,8]
- Hierarchical models for prototype based learning (Stephan Simmuteit) (2008-)
  Publications based on this work (see list of publications): Journal [13]
- Cognitive assistance systems in the life science (Dietlind Zühlke, Fraunhofer FIT and University of Groningen) (2007-**2012**)
  Publications based on this work (see list of publications): Conferences [24,32]
- Fuzzy approaches in prototype based learning (Tina Geweninger, University of Groningen) (2006-**2012**)
  Publications based on this work (see list of publications): Journal [23]

Master thesis projects

- Gaussian process modeling for outlier detection (Paul Stürmer, University of Appl. Sc. Mittweida) (2014)
- A hierarchical learning approach for massive relational data (Raphael Reisch, University of Bielefeld) (2012)
- Analyse von Entfaltungsmodellen für die Identifikation von Bakterien aus Mischkulturen (Jessica Brinkmann (Simmuteit), Technical University of Clausthal) (2009), Report [3]
- Untersuchungen zur automatischen Klassifikation von Spektren bei der Qualitätsprüfung von Magnetpartikeln in der Massenspektrometrie (Sven Wiesenmüller, University of Leipzig) (2008)

- Efficient retrieval of mass spectrometry bacteria fingerprints (Stephan Simmuteit, Technical University of Clausthal) (2008)

Student projects

- Relevance learning for Non-Negative Matrix Factorization (Alexander Schulz, Univ. of Bielefeld) (2012)
- Constrained based classification of mass spectra from bacteria sub-species (Mario Heinz, Univ. of Bielefeld) (2012)
- Efficient analysis of Swiss-Prot data (Raphael Reisch, Univ. of Bielefeld) (2011)
- Time-series simulator (Falk Altheide, University of Bielefeld) (2011)
- Confidence estimation for prototype based learning (Matthias Ongyerth, Univ. of Leipzig) (2008)
- Multiple trainees at Bruker from the University of Halle (2005-2006)
- Two trainees at Bruker from the University of Applied Sciences Leipzig (2005)