

Curriculum vitae, Mikkel N. Schmidt

Personalia

Name Mikkel N. Schmidt
Address Store Mølle Vej 17, 1. tv.
2300 København S.
Denmark
Birth date 6 July 1978
Nationality Danish

Education

2012 **Programme for PhD supervisors**
LearningLab, Technical University of Denmark
2011 **Education in University Teaching**
LearningLab, Technical University of Denmark
Teaching and Learning (Module 1)
Teaching Methods and Course Planning (Module 2)
Teaching and Teacher Development (Module 3)
Teaching Development Project (Module 4)
2008 **Ph.D. in Mathematical Modeling**
Technical University of Denmark
Thesis: “Single-channel source separation using non-negative matrix factorization”
Supervisor: Associate Professor Jan Larsen
2003 **M.Sc. in Electronic and Electrical Engineering**
Aalborg University
Specialization: Speech Communication, Signal Processing
Masters thesis grade: 11
2001 **B.Sc. in Engineering**
Herning Institute of Business Administration and Technology
Grade point average: 11.2

Employment

2013– **Associate Professor**
DTU Informatics, Technical University of Denmark
2012 **Assistant Professor**
DTU Informatics, Technical University of Denmark
2011–2012 **Postdoctoral researcher**
DTU Informatics, Technical University of Denmark
Network for Danish Audio Technology.
2009–2011 **Postdoctoral researcher**
DTU Informatics, Technical University of Denmark
Grant from Danish Research Council, 2 years
2008–2009 **Postdoctoral researcher**
University of Cambridge
Grant from Villum Kann Rasmussen, 1 year
2008 **Postdoctoral researcher**
DTU Informatics, Technical University of Denmark, 7 months
2007 **Visiting Ph.D. student**
LabROSA, Columbia University, New York, 6 months
2005–2008 **Ph.D. student**
DTU Informatics, Technical University of Denmark, 3 years

Teaching experience

Courses
2014– Introduction to programming and data processing (course responsible)
2013– Audio information processing systems (course responsible)
2012– Programming of mathematical software (course responsible)

2010–12	Introduction to machine learning and data modeling (course responsible/lecturer)
2010–11	Machine learning for signal processing (lecturer/group supervisor)
2011	Non-linear signal processing (teaching assistant)
2005–06, 2010–12	Digital signal processing (lecturer/teaching assistant)
2008, 2010–11	Advanced digital signal processing (lecturer)
2006–07	Applied digital signal processing (group supervisor)
2006	Introduction to computer systems (teaching assistant)

Thesis supervision

- 4 Bachelor’s student.
- 18 Master’s students.
- 7 Ph.D. students.

Grants and stipends

- The Danish Council for Independent Research, Technology and Production Sciences
Postdoc grant, 2009, 2 years, DKK 1.664.198
- Villum Kann Rasmussen Postdoc scholarship
Postdoc grant, 2008, 1 year
- Marie & M. B. Richters Fond, Oticon Fonden, and Otto Mønstedts Fond, 2007
Financial support for external research at Columbia University
- Technical University of Denmark
Ph.D. stipend, 2005, 3 years

Research interests

Research statement

Statistical models are used in all areas of science to describe stochastic relations between variables. In statistical modeling, probability theory is used to describe the uncertainty that is present due to inaccurate measurements, model mismatch, missing data, etc. The process of drawing conclusions based on statistical models is called statistical inference. The aim of my research is to develop novel statistical methodology, which includes:

1. Formulating probabilistic models and devising procedures for computational inference, evaluation, and validation.
2. Applying the developed methodology to solve problems in various application areas in science and industry.

Keywords

Bayesian statistical models. Machine learning for supervised and unsupervised learning. Latent variable models and source separation. Approximate inference in statistical and probabilistic models. Non-parametric Bayesian data analysis.

Scientific publications and citations

- Refereed journal papers: 10
- Refereed conference papers: 35
- Number of citations (according to Google Scholar): 1352
- H-index (according to Google Scholar): 19

Service in peer review

Grant proposals – US National Science Foundation, (NSF), Information and Intelligent Systems.
– Netherlands Organisation for Scientific Research, (NWO), Physical Sciences.

Journals – Audio, Speech, and Language Processing, IEEE Transactions on
– Audio, Speech, and Music Processing, EURASIP Journal on, Hindawi
– Bernoulli Society for Mathematical Statistics and Probability, Journal of the
– Computational Intelligence and Neuroscience, Hindawi
– Chemometrics and Intelligent Laboratory Systems, Elsevier
– Image Processing, IEEE Transactions on
– Information Fusion, Elsevier
– Neurocomputing, Elsevier
– Pattern Recognition, Elsevier

- Pattern Analysis and Machine Intelligence, IEEE Transactions on
- Signal Processing, EURASIP, Elsevier
- Signal Processing, EURASIP Journal of advances in, Hindawi
- Signal Processing, IEEE Transactions on
- Signal Processing Letters, IEEE
- Signal Processing Systems, Journal of
- Technometrics, Taylor & Francis

Conferences

- Acoustics, Speech, and Signal Processing (ICASSP), IEEE Intl. Conf. on
- Artificial Neural Networks (ICANN), Intl. Conf. on
- Circuits and Systems (ISCAS), IEEE Intl. Symposium on
- Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP), IEEE
- European Signal Processing Conference (EUSIPCO), EURASIP
- Independent Component Analysis and Signal Separation, Intl. Conf. on
- Machine Learning (ICML), Intl. Conf. on
- Music Information Retrieval (ISMIR), Intl. Conf. on
- Neural Information Processing Systems (NIPS), Conf. on
- Statistical And Perceptual Audition (SAPA)

Personal References

- Professor Zoubin Ghahramani CBL, Department of Engineering, University of Cambridge, UK.
- Professor Lars Kai Hansen DTU Informatics, Technical University of Denmark.
- Associate Professor Jan Larsen DTU Informatics, Technical University of Denmark .
- Professor Dan P. W. Ellis LabROSA, Columbia University , New York, USA.