CURRICULUM VITAE

Name: Aasa Feragen
Email: afhar@dtu.dk
Age: 38
Web: https://sites.google.com/site/aasaferagen
Address: Trekløvervej 4B, 2400 København NV
Nationality: Norwegian

EMPLOYMENT HISTORY

DTU Compute:
Full Professor (permanent position) From 01.05.2019.

Department of Computer Science, University of Copenhagen (DIKU):
Associate Professor (permanent position), 01.02.2014 – 15.01.2022
Postdoc and later Freja Fellow and, 01.09.2009 – 31.01.2014

Max Planck Institutes for Intelligent Systems and Developmental Biology, Tübingen, Germany:
Postdoc 1.7.2012 – 31.12.2013, financed by DFF | FTP. I was also offered an MPI fellowship.

Leaves:
Maternity leaves: 04.11.2014 – 26.06.2015 and 10.05.2019 – 24.11.2019
Sick leave: 15.12.2016 – 12.3.2017.

EDUCATION

2010 PhD in mathematics (topology) from the University of Helsinki, Finland (awarded 16.02.2010)
2005 Master of Science in mathematics from the University of Helsinki, Finland (awarded 28.01.2005)

SELECTED GRANTS

2019 Bias and Fairness in Medicine, Independent Research Fund Denmark | **Thematic research on digital technologies, 2.699.194 DKK; PI.**
2017 Quantifying the topological events connecting tubulogenesis and beta-cell differentiation, Novo Nordisk Foundation Project Grant in Bioscience and Basic Biomedicine, **2.100.000 DKK; PI.**
2016 Image registration with topological differences through stratified diffeomorphisms, Lundbeck foundation project grant, **1.575.000 DKK; PI.**
2016 MixIT: Geometry and statistics in the space of mixture models, a VKR block stipendium, **1.132.922 DKK**; **PI.**
2015 CSGB II - Centre for stochastic geometry and advanced bioimaging, a VKR Centre of Excellence. Total budget for whole centre: 30.000.000 DKK, of which approximately **2.000.000 DKK** finance members of my group; **co-PI for one out of six work packages.**
2012 Robust geometric graph kernels for biomedical imaging applications, DFF | FTP postdoc grant, **1.978.718 DKK; PI.**
2009 Shape classification and quantification in medical image analysis using the Riemannian geometry of spaces of tree-structured shapes, Lundbeck foundation project grant, **520.000 DKK; PI.**

ACCOMPLISHMENTS, HONORS AND AWARDS

- Papers with oral presentation at MICCAI (**2019**) and CVPR (**2014)**, acceptance rate 3.3%/6%, respectively
- Best paper award, Computational Diffusion MRI (CDMRI) workshop at MICCAI (**2019**)
- Runner-up prize for the Francois Erbsmann prize for best oral presentation by a young scientist at the IPMI conference (**2013**)
- KHF elite postdoc award (**2012, 75.000 DKK**)
- Freja Fellowship from the Faculty of Science, University of Copenhagen (**2012, 2 years tenure-track employment and start-up package**)
- Helsinki University Science Foundation PhD fellowship (**2005**, awarded 40 PhD students university-wide).

SCIENTIFIC FOCUS AREAS

Geometry in machine learning and statistics; machine learning for structured data; machine learning and mathematics for biomedical imaging.

SERVICE

I take on international research leadership and actively contribute to a stronger research community by participating in the organization of international courses, workshops and conferences.

- **Program chair:** IPMI 2021 (program chair), MIDL 2019 (program chair), SIMBAD 2015 (program chair).
- **Area chair/paper selection committee:** NeurIPS 2016, 2018, 2020; MICCAI 2016; MIDL 2020, IPMI 2019 (international flagship conferences)
- **Workshop organization:** MedNeurIPS Workshop 2019; Sandbjerg workshop on Diffusion MRI and Stochastic Geometry, 2019, ICML workshop GiMLi: Geometry in Machine Learning, 2018, Oberwolfach workshop on Statistics for Data with Geometric Structure, 2018; Workshop on Geometry and Stochastics of Nonlinear, Functional and Graph Data, 2016, FEAST Workshop 2014/2015 in conjunction with ICPR/ICML, Oberwolfach Mini-workshop on Asymptotic Statistics on Stratified Spaces, 2014, Workshop on Statistics and Geometry in Bioimaging: Manifolds and Stratified Spaces, 2012.
- **Editorial duties:** Special Issue of Medical Image Analysis on Advances in Medical Imaging with Deep Learning, 2019, SIMBAD 2015 workshop proceedings, Lecture Notes in Computer Science (Springer); Special issue of Journal of Mathematical Imaging and Vision: Geometry and Statistics: Manifolds and Stratified Space, Volume 50, Issue 1-2, pp 1-4 2014.
- **International PhD course organization:** 2018, 2017, 2014, 2014, 2010, 2009.

RESEARCH MANAGEMENT

My management experience includes being PI for several grants, and international research leadership via scientific organization of conferences as shown above. Locally, I strive to run a lively research group.

- **Postdoc supervision experience:** One previous (now promoted to assistant professor), one current (2020-2021), and one soon to be hired (2020-2022).
- **Principal PhD supervion experience:** Two completed PhD theses (2016, 2020, both now in postdoc positions), two current (2020-2023) and (2018-2021)
- **PhD co-supervision:** One completed PhD thesis (2016-2020)
- **Guest supervisor** for three previous and one current visiting PhD students. One now holds a postdoc, another has been promoted to assistant professor.
- **Head of the Imaging and Machine Learning Research School** at DIKU since 2012, the main task being organization of courses and events for PhD students
- **Formal qualifications:** The course “Supervision of PhD students”, University of Copenhagen, 2013

SELECTED INVITED TALKS

While I have reduced my travel activities after having a child in 2014, I receive a number of invitations to give talks both locally and abroad, which I embrace whenever possible.

- **Uncertainty quantification for manifold valued models,** DALI/ELLIS workshop on Geometric Deep Learning, San Sebastian, 2019
- **Quantifying Spatial Uncertainty in the Space of Curves: Streamline Tractography**, Special session in Geometry-based Methods in Biomedical Image Analysis, International Symposium on Biomedical Image (ISBI), Venice, 2019
- **Geometry in Uncertainty Quantification**, Dagstuhl Seminar on Visualization and Processing of Anisotropy in Imaging, Geometry and Astronomy, Dagstuhl, 2018
- **From Tree-Spaces to Stratified Spaces**, CIRM Workshop on Topological and Geometrical structures of Information, Marseilles, 2017
- **New Possibilities with Shortest-Path Tractography**, Dagstuhl Seminar on Multidisciplinary Approaches to Multivalued Data: Modeling, Visualization, Analysis, Dagstuhl, 2016
- **Airway tree-shape modeling through large-scale tree-space statistics**, Workshop on Morphogenesis, Regeneration, and the Analysis of Shape, Mathematical Biosciences Institute, Ohio State University, 2014
- **The geometry and statistics of geometric trees**, Current Topics Workshop on Statistics, Geometry, and Combinatorics on Stratified Spaces arising from Biological Problems, Mathematical Biosciences Institute, Ohio State University, 2012
- **Statistics on tree-structured data: Modeling treelike shapes in image analysis**, Geometry seminar, Leeds University, 2011

INTERNATIONAL RELATIONS

I currently collaborate actively with Simone Vantini (MOX Laboratory, Politecnico di Milano) on graph-valued statistics for mobility, as well as with Luc Florack (TU Eindhoven) on uncertainty quantification in white matter tractography, both manifested via PhD- and Msc students hosted in my group at DTU Compute. Other current and recent international collaborators include Evren Özarslan (Linköoping University) and Tom Nye (Newcastle University). In addition to science, I am internationally very active in the scientific organization of conferences and workshop (see above), which naturally include extensive international collaboration.