CURRICULUM VITAE

PERSONAL INFORMATION
Family name, First name: Stordal, Andreas S.
Date of Birth: 29.01.1983
Sex: Male
Nationality: Norwegian

EDUCATION
2011   PhD, Department of Mathematics, University of Bergen, Norway

2008   Master, Department of Mathematics, University of Bergen, Norway

2006   Bachelor, Department of Mathematics, NTNU Trondheim, Norway

CURRENT AND PREVIOUS POSITIONS
2020 – 2022   Associate Professor II, Department of Mathematics, University of Bergen
2018 – present Researcher, NORCE Energy, Norway
2017 – 2018   Researcher, Institute of Marine Research, Norway
2013 – 2017   Senior Research Scientist
               Energy Department, International Research Institute of Stavanger, Norway
2008 – 2013   Research Scientist
               Energy Department, International Research Institute of Stavanger, Norway

POSITIONS OFFERED
2014   Assistant Professor
       Department of Petroleum Technology, University of Tulsa, USA

AWARDS
Paper of the year 2017, Computers and Geosciences

MOBILITY
2014 – 2017   Visiting Guest Researcher
               Department of Physical Mathematics, Delft University of Technology, Netherlands
2013   Visiting Post Doc, Delft University of Technology, Netherlands
               Hosts: Professor Arnold Heemink and Professor Jan Dirk Jansen
2010   Visiting student, Department of Petroleum Engineering, University of Oklahoma, USA
               Host: Professor Dean S. Oliver
2010   Visiting student, Center for Collaborative Applied Mathematics
               University of Oxford, England Host: Professor Chris Farmer

ADDITIONAL TEACHING

2018-2021	Stat 111, Statistical methods,Stat 110 Introduction to statistics University of Bergen
2019	6th Summer School on Data Assimilation and its application in Engineering Timisoara, Romania
2019	Stat 111, Statistical methods, University of Bergen
2018	Stat 110, Introduction to statistics, University of Bergen
2017	5th Summer School on Data Assimilation and its application in Engineering Sibiu, Romania
2015	4th Summer School on Data Assimilation and its application in Engineering July 20-31, Brasov, Romania
2013	3rd Summer School on Data Assimilation and its application in Engineering July22- August 2, Cluj, Romania

SUPERVISION OF GRADUATE STUDENTS

2019 - 2022	Co-supervisor, PhD student Øyvind Rørtveit
	Department of Physics, University of Bergen, Norway
2020 - 2021	Master student Andreas Hansen
	Department of Mathematics, University of Bergen, Norway
2015 - 2019	PhD student Yiteng Zhang
	Department of Petroleum Engineering, University of Stavanger, Norway
2013	Master student Fei Cong
	Department of Physical Mathematics, Delft University of Technology, Netherlands Finished June 2013

ASSOCIATE EDITOR

2022-present   Nordic Journal of Music Therapy

TECHNICAL REVIEWER

Monthly Weather Review, IEEE Transaction on Signal Processing, Mathematical Geosciences, Computational Geosciences, ASA/SIAM Journal of Uncertainty Quantification, SPE Journal, Journal of Petroleum Science and Engineering, Quarterly Journal of the Royal Meteorological Society, Computers and Geosciences, Ocean Dynamics

PROJECT MANAGEMENT

Snas II LongStep Equinor WP leader NCS2030 IOR

INVITED SPEAKER

2012	ISAPP symposium, Delft University of Technology, November 7-8
2015	ISAPP symposium, Delft University of Technology, November 11-12
2016	PMPM and UK InterPore Joint Annual Meeting, Heriot-Watt University, Edinburgh, January 13-15
2016	Optimization Workshop TNO, Utrecht, September 2
2016	ISAPP, Delft University of Technology, November 9-10
2017	12th International EnKF Workshop, Bergen, June 12-14
2017	Computational Issues in Oil Field applications: Data Assimilation, Uncertainty Reduction and Optimization for Subsurface Flow UCLA, Los Angeles, May 22-26

PEER REVIEWED JOURNAL PUBLICATIONS

Bridging the ensemble Kalman filter and particle filters: the adaptive Gaussian mixture filter, A.S. Stordal, H.A. Karlsen, G. Nævdal, H.J. Skaug, B. Valles, Computational Geosciences 15 (2), 293-305, 2011

Characterization of permeability and porosity from nanosensor observations, A.S. Stordal, D.S. Oliver, Advances in Water Resources 34 (8), 946-956, 2011

Evaluation of EnKF and variants on the PUNQ-S3 Case. R. Valestrand, G. Nævdal, A.S. Stordal, Oil and Gas Science and Technology-Revue d IFP Energies nouvelles 67 (5), 841-855, 2012

Comparing the adaptive Gaussian mixture filter with the ensemble Kalman filter on synthetic reservoir models, A.S. Stordal, R. Valestrand, H.A. Karlsen, G. Nævdal, H.J. Skaug, Computational Geosciences 16 (2), 467-482, 2012

Filtering with state space localized Kalman gain, A.S. Stordal, H.A. Karlsen, G. Nævdal, D.S. Oliver, H.J. Skaug Physica D: Nonlinear Phenomena 241 (13), 1123-1135, 2012

Estimation of Production Rates Using Transient Well Flow Modeling and the Auxiliary Particle Filter, R. Lorentzen, A.S. Stordal, G. Nævdal, H.A. Karlsen, H.J. Skaug, SPE Journal 19 (2), 172-180, 2014

An Iterative Version of the Adaptive Gaussian Mixture Filter, A.S. Stordal, R. Lorentzen, Computational Geosciences, 18(3-4), 579-595, 2014

Toward an enhanced Bayesian estimation framework for multiphase flow soft-sensingl, X. Luo, R.J. Lorentzen, A.S. Stordal, G. Nævdal, Inverse Problems 30 (11), 11042, 2014

Bridging Multi-point statistics and truncated Gaussian fields for improved estimation of channelized reservoirs with ensemble methods, B. Sebacher, A.S. Stordal, R.G. Hanea, Computational Geosciences 19 (2), 341-369, 2015

Iterative Baysesian Inversion with Gaussian Mixtures: Finite sample implementation and Large sample Asymptotics, A.S. Stordal, Computational Geosciences, 19 (1), 1-15, 2015

Ensemble Smoothers in the Annealed Importance Sampling Framework, A.S. Stordal and A.H. Elsheikh, Advances in Water Resources, 86, 231-239, 2015

Iterative ensemble smoothing as an approximation solution to a regularized minimum-average-cost problem:theory and applications, X. Luo, A.S. Stordal, R.J. Lorentzen , G. Nævdal, SPE-J 20 (15), 962-982, 2015

A Theoretical look at Ensemble based Optimization for Reservoir Management, A.S. Stordal, S.P. Szklarz, O. Leeuwenburgh, Mathematical Geosciences 48 (4), 399-417, 2016

Estimation of Production Rates Using Transient Well Flow Modeling and the Auxiliary Particle Filter, Full Scale Application, R. Lorentzen, A.S. Stordal, X.Luo, G. Nævdal, SPE Production and Operations 31(2), 163-175, 2016

Complex Geology Estimation using the iterative adaptvie Gaussian mixture filter, B. Sebacher,

A.S. Stordal, R. Hanea, Computational Geosciences 20 (1), 133-148, 2016

Integrated Work Flow of Preserving facies Realism in History Matching: Application to the Brugge Field, Y. Chang, A. S. Stordal R. Valestrand, SPE J 21 (4), 1413-1424, 2016

An auxiliary adaptive Gaussian mixture filter applied to flowrate allocation using real data from a multiphase producer, R. Loretnzen, A.S. Stordal, N. Hewitt, Computers & Geosciences, 102, 34-44, 2017

Improving Physically Based Snow Simulations by Assimilating Snow Depth using the Particle Filter, J. Magnusson, A. Winstral, A.S. Stordal, R. Essery, T. Jonas, Water Resources Research, DOI: 10.1002/2016WR0119092, 53(2). 1125-1143, 2017

Large Sample Properties of the Adaptive Gaussian Mixture Filter, A.S. Stordal, H.A. Karlsen, MWR, DOI: 10.1175/MWR-D-15-0372.1, 145(7), 2017

A Modified Randomized Maximum Likelihood for Improved Bayesian History Matching. A.S. Stordal, G. Nævdal, Computational Geosciences 22(1), 29-41, 2018

Revising the Stochastic Iterative Ensemble Smoother P.N. Raanes, G. Evensen, A.S. Stordal, Non-linear Processes in Geophysics, 26(3), 325-339, 2019

Assessment of Multilevel Ensemble Based Data Assimilation for Reservoir History Matching K. Fossum, T. Mannset, A.S. Stordal, Computational Geosciences, 24(1), 217-239 2020

Efficient Implementation of an Iterative Ensemble Smoother for Data Assimilation and Reservoir History Matching G. Evensen, Patrick N. Raanes, A.S. Stordal, Joakim Hove, Frontiers in Applied Mathematics and Statistics, 5, 47 , DOI:10.3389/fams.2019.00047, 2019

P-kernel Stein variational gradient descent for Data Assimilation and History Matching A.S. Stordal, Rafael Moraes, Patrick N. Raanes, Geir Evensen, Mathematical Geosciences , 53(3), 375-393, 2021

Short-term Music Therapy for Families with Premature Infants: The LongSTEP Randomized Trial T.S Gaden et al, Pediatrics 149(2), 2021

Reducing systematic error due to deformation of organs at risk in radiotherapy Ø.L Rørtveit, L.B. Hysing, A.S. Stordal, S.Pilskog , DOI:10.3389, Medical Physics, 48(11), 6578-6587, 2021

A natural Hessian approximation for ensemble based optimization Y. Zhang, A.S. Stordal, R.J. Lorentzen, Computational Geosciences 27(2), 355-364, 2023

Marginalized Iterative Ensemble Smoothers A.S. Stordal, R.J. Lorentzen, K. Fossum, Computational Geosciences 27(6), 975-986, 2023

Treatment fidelity in a pragmatic clinical trial of music therapy for premature infants and their parents: The LongSTEP study T.S. Gaden et al, Trials 24(1), 160 , 2023

An organ deformation model using Bayesian inference to combine population and patient-specific data Ø.L Rørtveit, L.B. Hysing, A.S. Stordal, S.Pilskog , Physics in Medicine and Biology

68(5), 2023

Longer-term Effects of Music Therapy on Bonding with Preterm Infants C. Ghetti et al, accepted for publication Journal of American Medical Association, 2023

Music Therapy and Weight Gain in Preterm Infants: Secondary analysis of the randomized controlled LongSTEP trial S. Bauer-Rusek, S. Shalit, D. Yakobson, O. Levkovitz, C. Ghetti, C. Gold, , A.S. Stordal, S, Arnon, Journal of Pedriatic Gastroenterology and Nutrition, DOI: 10.1002/jpn3.12061, 2023

The impact of paternal anxiety on mother-infant bonding in neonatal intensive care M. Ettenberger, L. Bielnienik, A.S. Stordal, C. Ghetti, BMC Pregnancy and Childbirth, accepted 2023

Offshore wind farm layout optimizationusing ensemble methods K. S. Eikrem, R. J. Lorentzen, R. Faria, A. S. Stordal, and A. Godard, Renewable Energy, 216, 119061, 2023

Non-Gaussian Ensemble Optimization M. M. Nilsen, A.S. Stordal, K. S. Eikrem, P. Raanes, R. J. Lorentzen, Mathematical Geosciences, submitted