CURRICULUM VITAE : JO EIDSVIK

PERSONAL INFORMATION:

Name:	Jo Eidsvik
	30 November, 1973
	Norwegian.
	Married. Three children.
Postal Address:	Department of Mathematical Sciences, NTNU, 7491 Trondheim, Norway
Contacts:	4790127472, jo.eidsvik@ntnu.no
Homepage:	https://www.ntnu.no/employees/jo.eidsvik
Hobbies:	Sports, nature activities. (Norway jr pole vault champion ($\leq$ 18y), 1991.)

CURRENT AND PREVIOUS POSITIONS:

2013-Present:	Professor, Department of Mathematical Sciences, NTNU.
2005-2013:	Associate Professor, Department of Mathematical Sciences, NTNU.
2003-2007:	Senior Geophysicist, Statoil Research Center (Equinor), Trondheim, Norway. (Part-time 2005-2007)
1998-1999:	Researcher, Norwegian Defense Research Establishment (FFI).

MOBILITY:

2022:	Visiting Fellow (7 months), Duke Univ, North Carolina.
2014-2015:	Visiting Fellow (12 months), Energy Resources Engineering, Stanford Univ, California
2009-2010:	Visiting Fellow (12 months), SAMSI project: Space-time analysis for environmental mapping, epidemiology and climate change, Duke Univ, North Carolina.
2001-2002:	Visiting Researcher (12 months), Department of Statistics and Department of Geophysics, Stanford Univ, California.

EDUCATION:

2003, PhD:	*Markov chain Monte Carlo algorithms and their applications to petroleum reservoir applications*, Department of Mathematical Sciences, NTNU.
1997, MSc:	*Contributions to Monte Carlo filtering*, Department of Mathematical Sciences, University of Oslo.

PHD SUPERVISION:

Current students and planned time of defense:

Singsaas, Ø. 'Bayesian estimation for rock hazard characterization'. **Defense June 2027**

Truong, K. 'Spatio-temporal analysis of massive-size DAS data'. **Defense June 2026**

Ovanger, O. 'Assimilation of multiple data sources in geomodeling'. **Defense June 2025**

Olaisen, A. 'AI-based planning for autonomous spatial sampling'. **Defense June 2025**

Defended PhD theses: Spremic, M. (2024), Beiser, F. (2024), Ge, Y. (2024), Anyosa, S. (2023), Gineste, M. (2020), Paglia, J. (2020), Skauvold, J. (2018), Lilleborge, M.(2017), Rezaie, J. (2013), Martinelli, G. (2012), Aune, E. (2012).

CURRENT RESEARCH PROJECTS:

2020-2028:	Center for Geophysical Forecasting (CGF), SFI, Norwegian Research Council
2021-2025:	GEOPARD, Norwegian Research Council
2020-2024:	ML4ITS, Norwegian Research Council
2020-2024:	HAVVARSEL, Norwegian Research Council
2019-2025:	Geophysics and Applied Mathematics for Exploration and Safe Production (GAMES), Research Council and Industry partners.
2019-2024:	Maritime Autonomous Sampling and Control (MASCOT), Norwegian Research Council

TEACHING ACTIVITIES:

I have been teaching the following classes at NTNU:

- Statistics (BSc): 2006, 2008, 2011, 2012, 2013, 2015, 2016, 2022, 2024
- Industrial statistics (BSc) : 2005, 2006, 2007
- Applied statistics (BSc) : 2021, 2024
- Stochastic modeling (BSc): 2016, 2017, 2018
- Spatial statistics (MSc): 2009, 2011
- Computational statistics (MSc): 2012, 2013
- Experts in team (MSc): 2007, 2017, 2018, 2019, 2023
- Spatio-temporal statistics and value of information analysis (PhD): 2016, 2019
- Advanced computational statistics (PhD): 2018, 2020

INSTITUTIONAL RESPONSIBILITIES:

- 2019-2023 - Head of statistics group, NTNU.
- 2015-2019 - Leader of the *Physics and Mathematics study program* at NTNU ($\sim$110 students/year).
- 2008-2014 - Leader of the MSc program in *Industrial Mathematics* at NTNU ($\sim$50 students/year).
- I have supervised more than 50 MSc students.
- PhD committees at NTNU, Univ of Oslo, Univ of Bergen, Univ of Stavanger, Monash University, Australian National University, Stanford University.

PROFESSIONAL ACTIVITIES:

- Associate Editor of *Statistics and Computing* (2011-Present) and *Mathematical Geosciences* (2017-Present).
- Best paper award from *Environmetrics* for 'Using an autonomous underwater vehicle with onboard stochastic advection-diffusion models to map excursion sets of environmental variables' in 2022 and from *Mathematical Geosciences* for 'The value of information in spatial decision making' awarded in 2011.
- Runner-up / finalist award (2nd place) from the *Decision Analysis Society*, 2017, for the monograph 'Value of information in the Earth sciences'.
- Invited talks or short courses on spatial and computational statistics and value of information analysis the last years: Mathematics Winter School, Geilo (2019), Probabilistic AI, Trondheim (2019), Seminar UTAD, Portugal (2020), Seminar at Univ of Glasgow, UK (2020), Seminar at Univ of Bath, UK (2021), Interdisciplinary workshop in maritime robotics and applications, Croatia (2021), Seminar at Lancaster Univ (2022), Workshop on Practical data assimilation and uncertainty quantification, Orleans, France (2024).
- Chairman conferences and workshops: Norwegian Statistical Meeting (Røros, 2011), Latent Gaussian models (Trondheim, 2012), Trondheim Statistics Symposium (Orkanger, 2017), Ocean Data Analytics, Trondheim, 2018), Petroleum Geostatistics (Florence, 2019), Symposium on Ocean Observation (Azores, 2022), IAMG Trondheim (2023), Petroleum Geostatistics (Porto, 2023).
- EAGE lecturer (2018-Present).
- Leader of the *Norwegian Statistical Association* (2011-2013).
- Member of Det Kongelige Norske Vitenskapers Selskab (DKNVS), 2021-.

PUBLICATION RECORD:

- I have written more than 50 journal papers on spatial and computational statistics and value of information analysis.
- H-index: 25 (Google scholar)

Monograph:

Eidsvik, J., Mukerji, T. and Bhattacharjya, D., **2015**, *Value of information in the earth sciences : Integrating spatial modeling and decision analysis*, Cambridge University Press.

Patent:

Bruun, B., Eidsvik, J., and Nyrnes, E., **2010**, *Forming a geological model : 3D pos model* , GB patent (GB2467687). (Additionally accepted as US patent (US 8,442,770 B2) in 2013.)

Ten selected recent journal papers:

Lee, D., Ovanger, O., Eidsvik, J., Aune, E., Skauvold, J. & Hauge, R. (2025). Latent diffusion model for conditional reservoir facies generation. Computers & Geosciences, 105750.

Spremic, M., Eidsvik, J., Avseth, P. (2024). Bayesian rock-physics inversion using a localized ensemble-based approach - with an application to the Alvheim field. Geophysics, R95-R108.

Koski, V., Eidsvik, J. (2024). Sampling design methods for making improved lake management decisions. Environmetrics, e2842.

Berild, M, Ge, Y., Eidsvik, J., Fuglstad, G-A., Ellingsen, I. (2024). Efficient 3D real-time adaptive AUV sampling of a river plume front. Frontiers in Marine Science, 10:1319719.

Beiser, F., Holm, H.H., Eidsvik, J. (2024). Comparison of ensemble-based data assimilation methods for sparse oceanographic data, Quarterly Journal of the Royal Meteorological Society, 150, 1068-1095.

Lee, D., Aune, E., Langet, N. & Eidsvik, J. (2023). Ensemble and self-supervised learning for improved classification of seismic signals from the Åknes rockslope. Mathematical Geosciences, 377-400.

Anyosa, S., Eidsvik, J. & Pizarro, O. (2023). Adaptive spatial designs minimizing the integrated Bernoulli variance in spatial logistic regression models-with an application to benthic habitat mapping. Computational Statistics & Data Analysis, 179, 107643.

Rørstadbotnen, R., Eidsvik, J., Bouffaut, L. et al. (2023). Simultaneous tracking of multiple whales using two fiber-optic cables in the Arctic. Frontiers in Marine Science, 10.2023.

Paglia, J., Eidsvik, J., Karvanen, J. (2022). Efficient spatial designs using Hausdorff distances and Bayesian optimization. Scandinavian Journal of Statistics, 1060-1084.

Foss, K., Berget, G.E. & Eidsvik, J. (2022). Using an autonomous underwater vehicle with onboard stochastic advection-diffusion models to map excursion sets of environmental variables. Environmetrics, e2702.

Fossum, T. O., Travelletti, C., Eidsvik, J., Ginsbourger, D., & Rajan, K. (2021). Learning excursion sets of vector-valued Gaussian random fields for autonomous ocean sampling. The Annals of Applied Statistics, 15(2), 597-618.