

# Jonas Wallin




✉ jonas.wallin81@gmail.com

🔗 Google Scholar

🌐 <https://jonaswallin.github.io/>

🌐 LinkedIn

## Employment History

- 2020 –  **Associate Professor**, Department of Statistics, Lund university.
- 2016 – 2020  **Assistant Professor**, Department of Statistics, Lund university.
- 2014 – 2016  **Postdoc**, Mathematical Statistics, Chalmers university of technology.

## Education

- 2009 – 2014  **Ph.D., Lund University**, Mathematical Statistics  
Thesis title: *Stochastic Models Involving Second Order Lévy Motions*




## Research Publications

### Journal Articles

- 1 D. Bolin and J. Wallin, “Local scale invariance and robustness of proper scoring rules,” *Statistical Science*, vol. 1, no. 1, pp. 1–20, 2022.
- 2 A. Bukartas, J. Wallin, R. Finck, and C. Rääf, “Accuracy of a bayesian technique to estimate position and activity of orphan gamma-ray sources by mobile gamma spectrometry: Influence of imprecisions in positioning systems and computational approximations,” *Plos one*, vol. 17, no. 6, eo268556, 2022.
- 3 F. Delmar, J. Wallin, and A. M. Nofal, “Modeling new-firm growth and survival with panel data using event magnitude regression,” *Journal of Business Venturing*, vol. 37, no. 5, p. 106 245, 2022.
- 4 Z. Farooq, J. Rocklöv, J. Wallin, *et al.*, “Artificial intelligence to predict west nile virus outbreaks with eco-climatic drivers,” *The Lancet Regional Health-Europe*, vol. 17, p. 100 370, 2022.
- 5 A. Bukartas, J. Wallin, R. Finck, and C. Rääf, “Bayesian algorithm to estimate position and activity of an orphan gamma source utilizing multiple detectors in a mobile gamma spectrometry system,” *PloS one*, vol. 16, no. 1, eo245440, 2021.
- 6 L. M. McFetridge, Ö. Asar, and J. Wallin, “Robust joint modelling of longitudinal and survival data: Incorporating a time-varying degrees-of-freedom parameter,” *Biometrical Journal*, vol. 63, no. 8, pp. 1587–1606, 2021.
- 7 J. Wallin, M. Bogdan, P. A. Szulc, R. Doerge, and D. O. Siegmund, “Ghost qtl and hotspots in experimental crosses: Novel approach for modeling polygenic effects,” *Genetics*, vol. 217, no. 3, iyaa041, 2021.
- 8 Ö. Asar, D. Bolin, P. J. Diggle, and J. Wallin, “Linear mixed effects models for non-gaussian continuous repeated measurement data,” *Journal of the Royal Statistical Society: Series C (Applied Statistics)*, vol. 69, no. 5, pp. 1015–1065, 2020.
- 9 D. Bolin and J. Wallin, “Multivariate type g matérn stochastic partial differential equation random fields,” *Journal of the Royal Statistical Society. Series B: Statistical Methodology*, vol. 82, no. 1, pp. 215–239, 2020.
- 10 M. T. Parente, J. Wallin, and B. Wohlmuth, “Generalized bounds for active subspaces,” *Electronic Journal of Statistics*, vol. 14, no. 1, pp. 917–943, 2020.
- 11 D. Bolin, J. Wallin, and F. Lindgren, “Latent gaussian random field mixture models,” *Computational Statistics & Data Analysis*, vol. 130, pp. 80–93, 2019.

- 12 A. Bukartas, R. Finck, J. Wallin, and C. Rääf, "A bayesian method to localize lost gamma sources," *Applied Radiation and Isotopes*, vol. 145, pp. 142–147, 2019.
- 13 B. Gunnarsson, J. Wallin, and J. Klingberg, "Predation by avian insectivores on caterpillars is linked to leaf damage on oak (*quercus robur*)," *Oecologia*, vol. 188, no. 3, pp. 733–741, 2018.
- 14 A. Hildeman, D. Bolin, J. Wallin, and J. B. Illian, "Level set cox processes," *Spatial statistics*, vol. 28, pp. 169–193, 2018.
- 15 J. Wallin and D. Bolin, "Efficient adaptive mcmc through precision estimation," *Journal of Computational and Graphical Statistics*, vol. 27, no. 4, pp. 887–897, 2018.
- 16 D. Bolin, A. Frigessi, P. Guttorp, *et al.*, "Calibrating regionally downscaled precipitation over norway through quantile-based approaches," *Advances in Statistical Climatology, Meteorology and Oceanography*, vol. 2, no. 1, pp. 39–47, 2016.
- 17 D. Bolin and J. Wallin, "Spatially adaptive covariance tapering," *Spatial Statistics*, vol. 18, pp. 163–178, 2016.
- 18 K. Johnsson, J. Wallin, and M. Fontes, "Bayesflow: Latent modeling of flow cytometry cell populations," *BMC bioinformatics*, vol. 17, no. 1, pp. 1–16, 2016.
- 19 R. Maghsood, P. Johannesson, and J. Wallin, "Detection of steering events using hidden markov models with multivariate observations," *International Journal of Vehicle Systems Modelling and Testing*, vol. 11, no. 4, pp. 313–329, 2016.
- 20 W. Mao, I. Rychlik, J. Wallin, and G. Storhaug, "Statistical models for the speed prediction of a container ship," *Ocean engineering*, vol. 126, pp. 152–162, 2016.
- 21 K. Podgórski and J. Wallin, "Convolution-invariant subclasses of generalized hyperbolic distributions," *Communications in Statistics-Theory and Methods*, vol. 45, no. 1, pp. 98–103, 2016.
- 22 S. I. Adalbjörnsson, J. Swärd, J. Wallin, and A. Jakobsson, "Estimating periodicities in symbolic sequences using sparse modeling," *IEEE Transactions on Signal Processing*, vol. 63, no. 8, pp. 2142–2150, 2015.
- 23 R. Maghsood, I. Rychlik, and J. Wallin, "Modeling extreme loads acting on steering components using driving events," *Probabilistic Engineering Mechanics*, vol. 41, pp. 13–20, 2015.
- 24 K. Podgórski, I. Rychlik, and J. Wallin, "Slepian models for moving averages driven by a non-gaussian noise," *Extremes*, vol. 18, pp. 665–695, 2015.
- 25 K. Podgórski and J. Wallin, "Maximizing leave-one-out likelihood for the location parameter of unbounded densities," *Annals of the Institute of Statistical Mathematics*, vol. 67, no. 1, pp. 19–38, 2015.
- 26 J. Wallin and D. Bolin, "Geostatistical modelling using non-gaussian matérn fields," *Scandinavian Journal of Statistics*, vol. 42, no. 3, pp. 872–890, 2015.







## Conference Proceedings

- 1 J. Larsson and J. Wallin, "The hessian screening rule," in *Advances in Neural Information Processing Systems*, 2022.  URL: <https://openreview.net/forum?id=IpBjWtJp40j>.
- 2 D. Bolin and J. Wallin, "Efficient methods for gaussian markov random fields under sparse linear constraints," in *Advances in Neural Information Processing Systems*, vol. 34, 2021, pp. 9882–9894.  URL: <https://proceedings.neurips.cc/paper/2021/file/51e6d6e679953c6311757004d8cbbba9-Paper.pdf>.
- 3 J. Larsson, M. Bogdan, and J. Wallin, "The strong screening rule for slope," in *Advances in Neural Information Processing Systems*, H. Larochelle, M. Ranzato, R. Hadsell, M. Balcan, and H. Lin, Eds., vol. 33, Curran Associates, Inc., 2020, pp. 14 592–14 603.  URL: <https://proceedings.neurips.cc/paper/2020/file/a7d8ae4569120b5bec12e7b6e9648b86-Paper.pdf>.


F. Delmar and J. Wallin, "Modelling new firm growth and survival: Some practical solutions," in *Academy of Management Proceedings*, Academy of Management Briarcliff Manor, NY 10510, vol. 2018, 2018, p. 13 215.

## Supervision




### Ph.D. students

- 2021 –  Ivan Hejny, Department of Statistics, Lund university.  
roll: supervisor
- 2019 –  Yvette Baurne, Department of Statistics, Lund university.  
roll: supervisor
- 2018 –  Johan Larsson, Department of Statistics, Lund university.  
roll: supervisor
- 2016 – 2021  Antanas Bukartas, Faculty of Medicine, Lund university.  
roll: co-supervisor  
thesis: **Assessment of mobile radiometry data in radiological emergencies using Bayesian statistical methods**
- 2014 – 2019  Anders Hildeman, Department of Mathematical Sciences, Chalmers,  
roll: co-supervisor  
thesis: **On flexible random field models for spatial statistics: Spatial mixture models and deformed SPDE models**
- 2014 – 2016  Roza Maghsood, Department of Mathematical Sciences, Chalmers,  
roll: co-supervisor  
thesis: **Hidden Markov models for detecting steering events and evaluating fatigue damage**

### postdocs

- 2021 –  Sandra Barman, Department of Statistics, Lund university.
-  Najmeh Abiri, Department of Statistics, Lund university.

## Grants

- 2020  **Climate-AI-infection-REsponse (CLAIRE)**  
roll: co-PI  
amount: 6.989 million SEK  
found body: Vinnova
-  **Model selection for high dimensional data, with application towards genetics**  
roll: co-PI  
amount: 3.2 million SEK  
found body: Vetenskapsrådet
- 2018  **Statistics of entrepreneurship (STATENT)**  
roll: PI  
amount: 4.7 million SEK  
found body: Vetenskapsrådet