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Department of Mathematics  
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## Employment

### Associate Professor

Department of Mathematics  
Aarhus University  
Aarhus C, Denmark  
1 Sept 2012 → present

## Research outputs

### Self-Distillation for Gaussian Process Models

Borup, K. & Andersen, L. N., 5 Apr 2023, 10 p.

### An asymptotically optimal algorithm for online stacking

Olsen, M., Andersen, L. N. & Gross, A., Apr 2023, In: *Mathematical Methods of Operations Research*. 97, 2, p. 161-178 18 p.

### PhaseTypeR: an R package for phase-type distributions in population genetics

Rivas-González, I., Andersen, L. N. & Hobolth, A., Feb 2023, In: *The Journal of Open Source Software*. 8, 82

### Even your Teacher Needs Guidance: Ground-Truth Targets Dampen Regularization Imposed by Self-Distillation

Borup, K. & Andersen, L. N., Dec 2021.

### Multivariate phase-type theory for the site frequency spectrum

Hobolth, A., Bladt, M. & Andersen, L. N., Dec 2021, In: *Journal of Mathematical Biology*. 83, 6-7, 63.

### Even your Teacher Needs Guidance: Ground-Truth Targets Dampen Regularization Imposed by Self-Distillation

Borup, K. & Andersen, L. N., 2021, *Advances in Neural Information Processing Systems 34 - 35th Conference on Neural Information Processing Systems, NeurIPS 2021*. Ranzato, MA., Beygelzimer, A., Dauphin, Y., Liang, P. S. & Wortman Vaughan, J. (eds.). Neural Information Processing Systems Foundation, p. 5316-5327 12 p. (*Advances in Neural Information Processing Systems*, Vol. 7).

### Not All Noise Is Accounted Equally: How Differentially Private Learning Benefits From Large Sampling Rates

Dormann, F., Frisk, O., Andersen, L. N. & Pedersen, C. F., 2021, *2021 IEEE 31st International Workshop on Machine Learning for Signal Processing, MLSP 2021*. IEEE, 6 p. (*IEEE Workshop on Machine Learning for Signal Processing*, Vol. 2021).

### Integration of sequential EHR information using mathematical representations

Grønbaek, T. Ø. B., Andersen, L. N. & Mouridsen, K., 7 Jun 2019, (Unpublished).

### Efficient simulation for dependent rare events with applications to extremes

Andersen, L. N., Laub, P. & Rojas-Nandayapa, L., 2018, In: *Methodology and Computing in Applied Probability*. 20, 1, p. 385-409 25 p.

### **Towards Asymptotically Optimal One-to-One PDP Algorithms for Capacity 2+ Vehicles**

Olsen, M. & Andersen, L. N., 2018, *Computational Logistics - 9th International Conference, ICCL 2018, Proceedings*. Springer, p. 268-278 11 p. (Lecture Notes in Computer Science).

### **Lévy Matters V: Functionals of Levy Processes**

Andersen, L. N., Asmussen, S., Aurzada, F., Glynn, P. W., Maejima, M., Pihlsgård, M. & Simon, T., 2015, Springer. 224 p. (Lecture Notes in Mathematics, Vol. 2149).

### **Lévy processes with two-sided reflection**

Andersen, L. N., Asmussen, S., Glynn, P. W. & Pihlsgård, M., 2015, *Lévy Matters V*. Springer Lecture Notes in Mathematics, p. 67-182 116 p. (Lecture Notes in Mathematics, Vol. 2149).

### **Efficient computation in the IM model**

Andersen, L. N., Mailund, T. & Hobolth, A., 2014, In: *Journal of Mathematical Biology*. 68, 6, p. 1423-1451

### **A New Isolation with Migration Model along Complete Genomes Infers Very Different Divergence Processes among Closely Related Great Ape Species**

Mailund, T., Halager, A. E., Westergaard, M., Dutheil, J. Y., Munch, K., Andersen, L. N., Lunter, G., Prüfer, K., Scally, A., Hobolth, A. & Schierup, M. H., 2012, In: *P L o S Genetics*. 8, 12, p. e1003125

### **Insights into hominid evolution from the gorilla genome sequence**

Scally, A., Dutheil, J. Y., Hillier, L. W., Jordan, G. E., Goodhead, I., Herrero, J., Hobolth, A., Lappalainen, T., Mailund, T., Marques-Bonet, T., McCarthy, S., Montgomery, S. H., Schwalie, P. C., Tang, Y. A., Ward, M. C., Xue, Y., Yngvadottir, B., Alkan, C., Andersen, L. N., Ayub, Q., & 51 othersBall, E. V., Beal, K., Bradley, B. J., Chen, Y., Clee, C. M., Fitzgerald, S., Graves, T. A., Gu, Y., Heath, P., Heger, A., Karakoc, E., Kolb-Kokocinski, A., Laird, G. K., Lunter, G., Meader, S., Mort, M., Mullikin, J. C., Munch, K., O'Connor, T. D., Phillips, A. D., Prado-Martinez, J., Rogers, A. S., Sajjadian, S., Schmidt, D., Shaw, K., Simpson, J. T., Stenson, P. D., Turner, D. J., Vigilant, L., Vilella, A. J., Whitener, W., Zhu, B., Cooper, D. N., de Jong, P., Dermitzakis, E. T., Eichler, E. E., Flicek, P., Goldman, N., Mundy, N. I., Ning, Z., Odom, D. T., Ponting, C. P., Quail, M. A., Ryder, O. A., Searle, S. M., Warren, W. C., Wilson, R. K., Schierup, M. H., Rogers, J., Tyler-Smith, C. & Durbin, R., 2012, In: *Nature*. 483, 7388, p. 169-75 7 p.

### **Inferring Population Histories In The IM-model Using Site Pattern Analysis**

Andersen, L. N., 27 Jul 2011.

### **An Algebraic Approach to Signaling Cascades with n Layers**

Feliu, E., Knudsen, M., Andersen, L. N. & Wiuf, C. H., 2011, In: *Bulletin of Mathematical Biology*. 74, 1, p. 45-72

### **Local time asymptotics for centered Lévy processes with two-sided reflection**

Andersen, L. N. & Asmussen, S., 2011, In: *Stochastic Models*. 27, 2, p. 202-219 18 p.

### **On computing the coalescence time density in an isolation-with-migration model with few samples**

Hobolth, A., Andersen, L. N. & Mailund, T., 2011, In: *Genetics*. 187, p. 1242-1243 2 p.

### **Subexponential loss rate asymptotics for Lévy processes**

Andersen, L. N., 2011, In: *Mathematical Methods of Operations Research*. 73, 1, p. 91-108 18 p.

### **An Algebraic Approach to Signaling Cascades with n Layers**

Feliu, E., Knudsen, M., Wiuf, C. H. & Andersen, L. N., 2010. 1 p.

### **Steady States of Phosphorelays and Two-Component Systems**

Knudsen, M., Feliu, E., Wiuf, C. H. & Andersen, L. N., 2010. 1 p.

#### **Subexponential loss rate asymptotics for Lévy processes**

Andersen, L. N., 11 Oct 2009, Århus: Thiele Centre, Institut for Matematiske Fag, Aarhus Universitet, 17 p.

#### **Local time asymptotics for centered Lévy processes with two-sided reflection**

Andersen, L. N. & Asmussen, S., 1 Feb 2009, Århus: Thiele Centre, Institut for Matematiske Fag, Aarhus Universitet, 17 p.

#### **Loss Rates and Structural Properties of Reflected Stochastic Processes**

Andersen, L. N., 2009, Århus: Aarhus Universitetsforlag. 135 p.

#### **Structural properties of reflected Lévy processes**

Andersen, L. N. & Mandjes, M., 2009, In: Queueing Systems. 63, 1-4, p. 301-322 21 p.

#### **Structural properties of reflected Lévy processes**

Andersen, L. N. & Mandjes, M., 15 Dec 2008, Århus: Thiele Centre, Institut for Matematiske Fag, Aarhus Universitet, p. 1-22, 22 p.

#### **Parallel computing, failure recovery and extreme values**

Andersen, L. N. & Asmussen, S., 2008, In: Journal of Statistical Theory and Practice. 2, 2, p. 279-292 14 p.

#### **Parallel computing, failure recovery, and extreme values**

Andersen, L. N. & Asmussen, S., 13 Aug 2007, Århus: Department of Mathematical Sciences , University of Aarhus, 18 p.

## **Activities**

#### **Todagemøde i DSTS - Dansk Statistisk Selskab**

Andersen, L. N. (Organizer)  
21 May 2024 → 22 May 2024

#### **Medicinske anvendelser af neurale netværk**

Andersen, L. N. (Lecturer)  
17 Aug 2018

#### **Fra Lineær Regression til Neurale Netværk**

Andersen, L. N. (Lecturer)  
5 Apr 2018

#### **Dansk Selskab for Teoretisk Statistik (External organisation)**

Andersen, L. N. (Member)  
2018 → ...

#### **Applications of neural network analysis in medicine**

Andersen, L. N. (Lecturer)  
Nov 2017

#### **Stochastic modelling of gene trees & mutation processes**

Andersen, L. N. (Lecturer)  
Nov 2017

#### **Fra Lineær Regression til Neurale Netværk**

Andersen, L. N. (Lecturer)  
9 Oct 2017

**Simulering og inferens i matematiske modeller fra biologien**

Andersen, L. N. (Lecturer)

Mar 2015

**Efficient Inference of Demographic Scenarios using Whole-genome Sequence Data**

Andersen, L. N. (Lecturer)

6 Nov 2013

**Maximum likelihood inference in a multispecies coalescent model with migration**

Andersen, L. N. (Lecturer)

10 Oct 2013

**Aspect of Inference in the IM-Model**

Andersen, L. N. (Lecturer)

18 Feb 2013

**Inferring Population Histories in the IM-model**

Andersen, L. N. (Lecturer)

19 Jun 2012

**Loss rate asymptotics for reflected Lévy processes**

Andersen, L. N. (Lecturer)

21 Oct 2008

**Loss rate asymptotics for reflected Lévy processes**

Andersen, L. N. (Lecturer)

10 Sept 2007