Curriculum Vitæ Sigrid Källblad

KTH Royal Institute of Technology, Department of Mathematics
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Employment

2021 Dec. –	**Docent** KTH, Mathematics (spec. mathematical statistics)
2019 Jan. –	**KTH Royal Institute of Technology**, Sweden Associate Professor (Tenured) Department of Mathematics
2016 April – 2018 Dec.	**Vienna University of Technology**, Austria University Assistant (6 years position) Mathematical Stochastics – Prof. Mathias Beiglböck
2013 Sept. – 2016 March	**École Polytechnique Paris (CMAP)**, France Post Doc with Prof. Nizar Touzi

Higher Education

2009 – 2014	**University of Oxford**, *DPhil Mathematics* (2014–07–28) Supervisors: Prof. Jan Obłój and Prof. Thaleia Zariphopoulou
2007 – 2009	**ETH Zürich & University of Zürich**, Zürich, Switzerland *Master of Advanced Studies in Finance*
2003 – 2008	**Chalmers University of Technology**, Göteborg, Sweden Erasmus ETH (2006 – 2007) *M.Sc. Engineering Physics (specialisation Mathematics)*

Funding and Scholarships

2020	Swedish Research Council. Starting Grant in Mathematics. VR Grant 2020-03449 (3.8 MKr)
2020	KTH Internal PhD Funding (co-supervisor: Johan Karlsson)
2019, 2021	KTH SCI Start-up funding (1 MKr, 2 MKr)
2012	Lady Margaret Hall Oxford – Santander Graduate Scholarship
2010 – 2013	Oxford Man Institute – Scholarship
2009, 2012	Tekn. Dr Markus Wallenberg's Foundation (0.65 MKr)

Practical Experience

2009, May – Oct.	NBIM Norges Bank Investment Management, Oslo, Risk Analyst
2007, June – Sept.	Dresdner Kleinwort, Frankfurt, Internship at Capital Markets

Languages

English (fluent) – German (fluent) – French (intermediate) – Swedish (mother tongue)

Teaching

KTH Royal Institute of Technology

2024 Spring	Financial Mathematics - Basic course, master level (lecturer)
2023 Fall	Financial Derivatives, master level (lecturer)
Spring	Financial Mathematics - Basic course, master level (lecturer)
2022 Fall	Financial Derivatives, master level (lecturer)
Spring	Financial Mathematics - Basic course, master level (lecturer)
2021 Fall	Financial Derivatives, master level (lecturer)
Spring	Financial Mathematics - Basic course, master level (lecturer)
2020 Fall	Financial Derivatives, master level (lecturer)
Spring	Financial Mathematics - Basic course, master level (lecturer)
2019 Spring	Financial Mathematics - Basic course, master level (lecturer)
2023 onwards	Responsible for the Financial Mathematics track, MSc Applied and Computational Mathematics, KTH

TU Wien, Vienna University of Technology

2018 SS	Theorie Stochastischer Prozesse, master level (lecturer)
SS	Maß und Wahrscheinlichkeitstheorie I, bachelor level (TA)
2017 WS	Höhere Wahrscheinlichkeitstheorie, master level (lecturer)
WS	Maß und Wahrscheinlichkeitstheorie II, bachelor level (TA)
2016 SS	Theorie Stochastischer Prozesse, master level (TA)
WS	Höhere Wahrscheinlichkeitstheorie, master level (lecturer)
WS	Maß und Wahrscheinlichkeitstheorie II, bachelor level (TA)

University of Oxford

2012 Trinity	MSc. Financial Mathematics, part-time students (Tutor)
Hilary	Stochastic Control, master level (TA)
2010 Trinity	Lincoln College, mathematics bachelor students (Tutor)
Hilary	Financial Derivatives, bachelor level (TA)

Supervision

Doctoral	New incoming, KTH. (2024 –) Linn Engström, KTH. (2021 –) Chaorui Wang, University of Bath (co-supervisor). (2023 –) Martina Favero, KTH (co-supervisor). Defended Jan. 2021: *Asymptotics, Weak Convergence and Duality in Population Genetics.*
Master	Elsa Pahne (2023), Louise Åkerlund (2023), Alan Issa (2023), Johan Hellberg (2022), Otto Sellerstam (2021), Matthieu Giral (2021), Sigge Ahlqvist (2020), Matteus Arriaza-Hult (2020), Tobias Brodd (2020), Carolina Ljung (2020), Maria Svedberg (2020), David Olanders (2020), Oscar Ungsgård (2020), Buqing Cao (2020), Josefine Bofeldt (2019), Sara Joon (2019)
Bachelor	Responsible, co-ordinator and examiner for all Bachelor Theses in Mathematical Statistics at KTH, 2019-2020.

Services to the Society

Editorial work	Associate Editor, SIAM Journal of Financial Mathematics (2023 –)
Refereeing	*Annales de l'Institut Henri Poincaré B: Probability and Statistics* *Annals of Applied Probability* *European Journal of Operational Research* *Finance and Stochastics* *IEEE Control Systems Magazine* *IMA Journal of Management Mathematics* *Journal of Mathematical Analysis and Applications* *Mathematical Finance* *SIAM Journal on Financial Mathematics* *SIAM Journal on Control and Optimization* *Stochastic Processes and their Applications* *Quantitative Finance*
Doctoral Committees	Adam Lindhe, Mathematical Institute, KTH (Oct. 2023) (reserve) Yuqiong Wang, Mathematical Institute, Uppsala University (Sept. 2023) Klara Courteaut, Mathematical Institute, KTH (June 2023) Hampus Engsner, Mathematical Institute, Stockholm University (May 2021)
External Reviewer	Linnaeus University, Associate Professor in mathematics (2024)
Boards	Stockholm Mathematics Centre (SMC) (2024 – 2026)
Panels	3rd Berlin Workshop for Junior Female Researchers in Probability Panel discussion on equal opportunities in academia (Oct. 2021)

Invited Talks (last 5 years)

2023	Nov.	Uppsala, Uppsala University (Seminar)
	Oct.	Stockholm, KTH, Workshop on Stochastic Control Theory
	Oct.	Oberwolfach (MFO), New Challenges in the Interplay between Finance and Insurance
	Sept.	Graz, ÖMG Tagung, meeting of the Austrian Mathematical Society (symposium on Stochastic Mass Transport)
	Sept.	Luminy (CIRM), Workshop: Advances in Stochastic Analysis for Handling Risks in Finance and Insurance
	Aug.	Tokyo, ICIAM 2023, 10th International Congress on Industrial and Applied Mathematics (online) (minisymposium on Optimal Transport in Math Finance)
	June	Bielefeld, 11th General AMaMeF Conference (session on Optimal Transport and Finance)
	June	Gothenburg, NordStat Conference
	June	Zurich, ETH, Stochastic optimal control in Economics, Finance, and Learning theory: Conference in honour of Martin Schweizer's 60th birthday
	June	Berlin, Stochastic Analysis and Stochastic Finance (seminar)
	May	The Cramér society webinarium, colloquium in statistics and mathematical statistics (online)
	Jan.	SIAM Activity Group on Financial Mathematics and Engineering: virtual seminars series (online)

Invited Talks (last 5 years) – cont.

2022	Nov.	Pittsburgh, Carnegie Mellon University (Seminar)
	Oct.	Nantes, Dynamic preferences: theory, numerical computation and applications (Plenary)
	Sept.	Luminy (CIRM), Advances in Stochastic Control and Optimal Stopping with Appl. in Economics and Finance
	Sept.	Oslo, University of Oslo, Conference (STORM - Stochastics for Time-Space Risk Models)
	Aug.	Aalto University, 28th Nordic Congress of Mathematicians (Session on Stochastic Processes)
	July	Grenoble, AMS-SMF-EMS Joint International Meeting (Session on Financial Mathematics)
	July	London, Imperial College: Workshop on "New directions in stochastic control"
	June	Pisa (Centro di Giorgi), Advances in Mathematical Finance and Optimal Transport
	March	Chicago (IMSI), Institute for Mathematical and Statistical Innovation. Workshop: Decision Making and Uncertainty
	March	Banff (BIRS), Workshop: Stochastic Mass Transports
	March	Lübeck, 13th International Workshop on Stochastic Models and Control (Plenary lecture)
	Feb.	New York, Columbia University (Seminar, online)
	Feb.	Stockholm, KTH (Docent presentation, online)
2019	Oct.	Luminy (CIRM), Advances in Stochastic Analysis for Handling Risks in Finance and Insurance
	Oct.	Stockholm, KTH, Random Matrix Seminar
	Sept.	Kraków, Dynamics, Equations and Applications (DEA 2019)
	Sept.	Vienna, VCMF, Vienna Congress on Mathematical Finance
	July	Leiden, Equadiff 2019 (Minisymposium)
	June	Toronto, SIAM Conference on Financial Mathematics and Engineering (Minisymposium)
	June	Vienna, Erwin Schrödinger Institute (ESI), Workshop on Optimal Transport in Analysis and Probability
	April	Leeds, Second Leeds Meeting on Stochastic Control and Games under Ambiguity
2018	Dec.	Paris, IHP, Séminaire Bachelier
	Dec.	Paris, ENSAE ParisTech, Université Paris-Saclay (Seminar)
	Nov.	Coventry, University of Warwick, Stochastic Finance Seminar
	July	Vienna, 14th Viennese Conference on Optimal Control and Dynamic Games (Session)
	June	Bonn, Oberseminar Stochastics
	June	Göteborg, SPA 2018, 40th Conference on Stochastic Processes and their Applications (Session)
	May	Tel Aviv, 3rd Bar-Ilan conference on Financial Mathematics
	May	Oaxaca (CMO), Stochastic Analysis and its Applications
	Jan.	Princeton, ORFE, Princeton University (Seminar)
2017	Nov.	Luminy (CIRM), Advances in Stochastic Analysis for Risk Modelling
	Nov.	Zürich, ETH Seminar on Insurance Mathematics and Stochastic Finance
	Sept.	Oxford, Workshop on Martingale Optimal Transport
	July	Edinburgh, International Workshop on BSDEs, SPDEs and their Applications (Session)
	June	Amsterdam, 8th General AMaMeF Conference (Session)
	April	Zürich, Young Researcher Workshop on Robust Math. Finance
	March	Ann Arbor, Byrne Young Researcher Workshop on Math. Finance

Academic Visits and Schools

2022 (March – May)	Institute for Mathematical and Statistical Innovation (IMSI) Chicago, Programme: Decision Making & Uncertainty (Invited)
2019 (April – June)	Erwin Schrödinger Institute (ESI), Vienna, Austria Thematic Programme on Optimal Transport (Invited)
2015 (March)	Hausdorff Research Institute for Mathematics, Bonn, Germany Junior Hausdorff Trimester Program: Optimal Transportation (Invited)
2012 (Jan. – March)	University of Texas at Austin, USA, Mathematics Department Visiting Doctoral Student
2010, 2013, 2014	European Summer School in Financial Mathematics Participation in the 3rd, 6th & 7th edition
2010 (Dec.)	Marrakesh, Morocco, Autumn School on Stochastic Control Problems for FBSDEs and Applications

Publications and Preprints

L. Engström, S. Källblad and J. Karlsson: Entropic regularisation methods for martingale optimal transport problems. In final preparation.

J. Backhoff, S. Källblad and B. Robinson: Adapted Wasserstein distance between the laws of SDEs. Preprint. Available at arXiv:2209.03243

A. Cox, M. Larsson, S. Källblad and S. Svaluto: Controlled measure-valued martingales: a viscosity solution approach. *Annals of Applied Probability.* To appear. Available at arXiv:2109.00064

M. Beiglböck, A. Cox, M. Huesmann and S. Källblad: Measure-valued martingales and optimality of Bass-type solutions to the Skorokhod Embedding Problem. Preprint. Available at arXiv:1708.07071.

S. Källblad and T. Zariphopoulou: On Black's equation for the risk tolerance function. Preprint. Available at arXiv:1705.07472.

S. Källblad: A dynamic programming principle for distribution-constrained optimal stopping. *Annals of Applied Probability.* , Volume 32, Number 3 (2022), pp 1902–1928.

J. Backhoff, M. Beiglböck, M. Huesmann and S. Källblad: Martingale Benamou–Brenier: a probabilistic perspective. *Annals of Probability*, Volume 48, Number 5 (2020), pp 2258-2289.

S. Källblad: Black's inverse investment problem and forward criteria with consumption. *SIAM Journal on Financial Mathematics*, Volume 11, Number 2 (2020), pp 494-525.

S. Källblad, J. Obłój and T. Zariphopoulou: Dynamically consistent investment under model uncertainty: the robust forward criteria. *Finance and Stochastics*, Volume 22, Issue 4 (2018), pp 879-918.

A. Cox and S. Källblad: Model-independent bounds for Asian options: a dynamic programming approach. *SIAM Journal on Control and Optimization*, Volume 55, Number 6 (2017), pp 3409-3436.

S. Källblad, X. Tan and N. Touzi: Optimal Skorokhod embedding given full marginals and Azéma-Yor peacocks. *Annals of Applied Probability*, Volume 27, Number 2 (2017), pp 686-719.

S. Källblad: Risk- and ambiguity averse portfolio optimization with quasiconcave utility functionals. *Finance and Stochastics*, Volume 21, Issue 2 (2017), pp 397-425.

S. Källblad and T. Zariphopoulou: Qualitative analysis of optimal investment strategies in log-normal markets. Preprint. Available at SSRN: ssrn.com/abstract=2373587.

S. Källblad: Topics in Portfolio Choice: Qualitative Properties, Time Consistency and Investment under Model Uncertainty: *DPhil Thesis, University of Oxford* (2014). Available at SSRN: ssrn.com/abstract=2523688.