Curriculum Vitae

Jens Sjölund, PhD in Biomedical Engineering Sciences

Assistant Professor in Artificial Intelligence,
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Born: January 22, 1987—Gävle, Sweden. Nationality: Swedish.
Civil status: Married, three children (born 2015 and 2019 (twins)).

Positions and degrees

Positions

2021– *Assistant Professor in Artificial Intelligence*, Department of Information Technology, Uppsala University.
2020–2021 *Researcher* (60 %), Department of Information Technology, Uppsala University.
2018–2021 *Senior Research Scientist*, Elekta AB, Stockholm.
2015–2021 *Parental leave* for a total of 22 months.
2012–2018 *Research Scientist*, Elekta AB, Stockholm.
2006–2007 *Deputy Platoon Leader*, National CBRN Defence Centre, Umeå.

Academic degrees

March 23, 2018 PhD, Biomedical Engineering Sciences, Linköping University.
2012 MSc, Engineering Physics, Royal Institute of Technology (KTH).
2010 BSc, Engineering Physics, Royal Institute of Technology (KTH).

Grants, awards & prizes

Main applicant for grants totalling ∼30 MSEK. Co-applicant for grants totalling ∼15 MSEK.

Awarded grants as main applicant

2025 *Learning Switching Dynamical Systems for Predictive and Mechanistic Insights into Battery Aging*, Postdoc Project.
COMPEL at UU, 2.2 MSEK. Co-PI: Leiting Zhang.

2025 *Simulation-based inference of metal plating dynamics*, PhD Project.
Center for Interdisciplinary Mathematics (CIM) at UU, 1.6 MSEK. Co-PI: Erik J. Berg, Peter Broqvist.

2024 *Accelerating decision making in drug discovery with trustworthy foundation models*, Industrial PhD project.
Knut and Alice Wallenberg Foundation (WASP), 2.4 MSEK. Co-PI: Ola Engkvist, AstraZeneca.

2024 *Accelerating sparse linear algebra with graph neural networks*, Starting grant.
Swedish Research Council (VR), 4.4 MSEK.

2023 *Bayesian Experiment Design for Closed-loop Exploration of Battery Materials Phase Space*, WASP-WISE pre-project.
Knut and Alice Wallenberg Foundation, 1.0 MSEK. Joint with Erik J. Berg, UU.

2022 *Data-driven decision support for more efficient radiotherapy*, Advanced and innovative digitalization.
VINNOVA, 2.5 MSEK.

2022 *Learning to Optimize Conditionally Convex Problems*, Academic PhD project.
Knut and Alice Wallenberg Foundation (WASP), 2.4 MSEK. Co-PI: Ozan Öktem, KTH.

2021 *WASP Fellowship in Artificial Intelligence with a Specialization in Large-scale Optimization.*
Knut and Alice Wallenberg Foundation (WASP), 12 MSEK.

2019 *Learning task-specific numerical algorithms*, Strategic mobility project.
Swedish Foundation for Strategic Research (SSF), 0.8 MSEK.

2017 *Adaptable AI for automated segmentation in radiotherapy*, Digital Health.
VINNOVA, 1.2 MSEK.

Awarded grants as co-applicant

2025 *AI-assisted engineering of key components to minimize CAPEX in flexible green hydrogen production*, Sweden's Innovation Agency (VINNOVA), 4.4 MSEK. PI: Ida-Maria Sintorn, UU.

2025 *Automate Sweden: A supply-chain of sustainable robotics technologies, from research to shop floor*, Excellence cluster planning grant, Sweden's Innovation Agency (VINNOVA), 1.5 MSEK. PI: Volker Krueger, LU.

2024 *Coupling diffusion models with Bayesian inference for improved generation, inference, and likelihood computation*, Academic PhD project, Knut and Alice Wallenberg Foundation (WASP), 2.4 MSEK. PI: Fredrik Lindsten, LiU.

2019 *Federated learning of smart radiotherapy systems*, Industrial PhD project.
Knut and Alice Wallenberg Foundation (WASP), 2.4 MSEK. PI: Mikael Johansson, KTH.

2018 *Real-time image guided radiotherapy*, Industrial PhD project.
Knut and Alice Wallenberg Foundation (WASP), 2.4 MSEK. PI: Thomas B. Schön, UU.

2018 *Intelligence based iMprovement of Personalized treatment And Clinical workflow supporT (IMPACT).*
ITEA3/VINNOVA, 2 MSEK.

Awards & prizes

2024 Göran Gustafsson prize for young researchers, 1.1 MSEK.
2023 Top reviewer, AISTATS 2023.
2013 Best Master thesis. Swedish Society for Radiation Physics.
2012 Henrik Göransson's Sandviken Scholarship, 40 kSEK.
2010–2012 KTH Scholarship for Study Excellence (three times 10 kSEK).

Other scientific merits

2025 Opponent at Yifan Ding's half-time seminar at Linköping University.
2025 Member of the organizing committee for the *Learning on Graphs and Geometry* workshop at Uppsala University.
2025 Elected member of the European Laboratory for Learning and Intelligent Systems (ELLIS)
2025 Grant reviewer for ERC Synergy grant and for the Swiss National Science Foundation.
2024 Visiting researcher at the Tübingen AI Center for three weeks.
2021 Elected fellow of the Wallenberg AI, Autonomous Systems and Software Program (WASP)
2018–2020 Lead researcher behind the commercial radiosurgery planning software Leksell Gamma Knife Lightning.
2018– 8 invited talks in total: 3 international (Leksell Gamma Knife Society Meeting in Dubai, DIPY Open Meetings, and Tübingen AI center), 5 national (Varberg, Lund, LiU, Chalmers twice).
2017– Lead developer and maintainer of NOW, an open-source software for designing diffusion MRI experiments.
2015– Reviewer for Transactions on Machine Learning Research (TMLR), Artificial Intelligence and Statistics (AISTATS), International Conference on Learning Representations (ICLR), International Conference on Machine Learning (ICML), International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI), Learning for Dynamics and Control (L4DC), and NeuroImage. Associate Editor for Medical Physics.

Supervision

Main supervisor

2026– Tinh Thi Cao, PhD student.
2026– Aleix Nieto Juscrafresa, PhD student.
2025– Pritish Ranjan Joshi, PhD student.
2025– Ella Johanna Schmidtobreick, PhD student.
2025– Laura van Weesep, industrial PhD student.
2024– Liam Hamed Taghavian, postdoctoral researcher.
2024– Daniel Hernández Escobar, postdoctoral researcher.
2022– Paul Häusner, PhD student.
2022–2024 Zheng Zhao, postdoctoral researcher. Now assistant professor at LiU.
2021–2024 Sebastian Mair, postdoctoral researcher. Now assistant professor at LiU.
2013–2024 About 15 MSc thesis projects, 10 group projects in 15 credit master courses, and 1 BSc thesis project.

Active co-supervisor

2026– Steven Wang, PhD student.
2026– Erik Thiringer, PhD student.
2024– Adhithyan Kalaivanan, PhD student.
2024– Sanna Jarl, PhD student.
2022– Ziwei Luo, PhD student.
2022– Viktor Vanoppen, PhD student.
2021–2026 Jackie Yik, PhD student.
2019–2025 Dominik Fay, Industrial PhD student.
2018–2024 Niklas Gunnarsson, Industrial PhD student.

Pedagogical and leadership training

2025 *Scholarly Teaching in Science and Technology*, two weeks of full-time training, Uppsala University.
2024 *Leading and Developing in Academia*, (roughly) two weeks of full-time training, Uppsala University.
2022 *Academic Teacher Training*, five weeks of full-time training, Uppsala University.
2021 *Supervising Doctoral Students*, three weeks of full-time training, Uppsala University.

Teaching

2026 *Convex Optimization*, 7 credits with an optional project worth 3 additional credits, third level, joint course responsible, English, 20 students.
2025 *Advanced Probabilistic Machine Learning*, 5 credits, second level, lecturer and course responsible, 12%, English, 100 students.
2023 *Large-scale Optimization*, 6 credits with an optional project worth 3 additional credits, third level, joint course creator and responsible with Sebastian Mair, English, 20 students.
2021 *Convex Optimization*, 7 credits with an optional project worth 3 additional credits, third level, sole course creator and responsible, English, 8 students.
2022–2025 *Statistical Machine Learning*, 5 credits, second level, lecturer and course responsible, 12%, English, 250 students.
2021–2024 *Advanced Probabilistic Machine Learning*, 5 and 7.5 credits (two versions), second level, lecturer, 4%, English, 80 students.
2020– *Master thesis*, 30 credits, second level, subject reviewer for on average 4 students per year, 4%, English.

Industry Collaboration and Outreach

2026 Digital jury member for The Young Scientists exhibition (Utställningen Unga Forskare).
2025– Main supervisor for an industrial PhD student at AstraZeneca.
2024–2025 PI on a research project in collaboration with Electronic Arts.
2021– Founder and owner of the consulting firm Derivative Research.
2022–2026 PI on Vinnova project *Data-driven decision support for more efficient radiotherapy* with Elekta.
2018–2025 Co-supervisor for two industrial PhD students at Elekta.
2018–2019 Workpackage leader in the EU-project IMPACT.
2014–2017 Use case leader in the EU-project BENEFIT.

Selected Commissions of Trust

2024– The IT Department's representative in the battery initiative Compel.
2024– Chair of the IT council at the IT Department.