Sebastian Persson

──────── **Work**

2025–present **Postdoctoral fellow**, *The Francis Crick Institute London*.

──────── **Education**

2020–2025 **PhD in computational biology**, *University of Gothenburg*.

2018–2020 **Master of Engineering Mathematics and Computational Science**, *Chalmers University of Technology*.

2015–2018 **Bachelor of Bioengineering**, *Chalmers University of Technology*.

──────── **Published papers**

Persson, S. (2024) Enabling mechanistic understanding of cellular dynamics through mathematical modelling and development of efficient methods. PhD thesis.

Braam, S., Österberg, L., Tripoi, F., **Persson, S**., Welkenhuysen, N., Coccetti, P., Cvijovic, M. (2024) Exploring Carbon Source related Localization and Phosphorylation in the Snf1/Mig1 Network using Population and Single Cell-based Approaches. Microbial cell (Graz, Austria), 11, 143-154..

Persson, S., Shashkova, S., Österberg, L, Cvijovic, M. (2022) Modelling of glucose repression signalling in yeast *Saccharomyces cerevisiae*. FEMS Yeast Research, 22(1).

Persson, S., Welkenhuysen, N., Shashkova, S., Wiqvist, S., Reith, P., Schmidt, GW., Picchini, U., Cvijovic, M. (2022) Scalable and flexible inference framework for stochastic dynamic single-cell models. PLOS Computational Biology 18.5.

Persson S., Welkenhuysen, N., Shashkova, S., Cvijovic, M. (2020). Fine-tuning of energy levels regulates *SUC2* via a SNF1-dependent feedback loop. *Frontiers in physiology, 11:953*.

──────── **Commissions of trust**

2024 - 2026 **PEtab editorial board**, I was recently elected to the editorial board for the PEtab standard `https://petab.readthedocs.io`.

2022, 2023 **Arranged MBM workshop**, Modelling in Biology and Medicine workshop with around 30-40 participants each year I organised twice with PhD students from University of Linköping.

Research visits

April 2024 **Fröhlich lab**, *The Francis Crick Institute*, I spent one month at the lab of Dr. Fröhlich working with method development for sciencetific machine learning.

April 2023 **Computational Life Sciences**, *Bonn*, I spent one month at the lab of Prof. Jan Hasenauer working with method development for dynamic models.

Summer 2022 **The System Biology Institute**, *Tokyo*, I spent two months at the institute of Prof. Hiroaki Kitano-san studying RNA-seq data to deduce the effect of NMN on ageing.

Workshops and conferences

July 2024 **JuliaConn**, *(Eindhoven Netherlands)*, PEtab.jl - Fast and efficient parameter estimation for ODE models (accepted for a talk).

June 2024 **Society for Mathematical Biology conference**, *(Seoul South Korea)*, Positive feedback and exocytosis regulate the size of self-assembled structures in budding yeast (accepted for a talk).

August 2023 **Yeast Meeting**, *(Gothenburg Sweden)*, Understanding septin ring formation in budding yeast by combining experiments and modelling (talk).

April 2023 **Mathematics and Life Sciences conference**, *(Bonn Germany)*, PEtab.jl - Fast and efficient parameter estimation for ODE models (talk).

October 2022 **International Conferance on Systems Biology**, *(Berlin Germany)*, Efficient inference for single-cell dynamic modelling (talk and poster).

Nov 2021 **Advanced Lecture Course on Computational Systems Biology**, *Aussois France*, Efficient inference for single-cell dynamic modelling (poster).

Jun 2021 **International Society for Bayesian Analysis conference**, *(online)*, Efficient inference for single-cell dynamic modelling (talk).

Jun 2021 **INtegrative COllaborative modeling in systems MEdicine conference**, *(online)*, Fine-tuning of energy levels regulates *SUC2* via a SNF1-dependent feedback (talk).

Travel Grants

2023, 2024 **Swefum foundation**, *Scholarship*, $36\,000$SEK (≈ 2600£).

2022 **Donationsnämndens foundation**, *Scholarship*, $15\,000$SEK (≈ 1100£).

2022 **Japan Society for the Promotion of Science summer internship**, *Scholarship*, $58\,000$SEK ≈ 4400£).

2020 **Knut and Alice Wallenbergs foundation**, *Scholarship*, 4000SEK (≈ 300£).

2020 **GS Magnusson foundation**, *Scholarship*, $13\,000$SEK (≈ 1000£).

Teaching Experience

2022–present **Lecturer Scientific Visualisation**, *Chalmers University of Technology*, I designed the lectures, homework, and exam for course on 2d visualisation. In the course I was the lecturer and course responsible.

2020–present **Supervision of Theses**, *Chalmers University of Technology*, Have supervised 3 Master student and 5 groups of Bachelor students with four students each.

2020–present	**Graduate Teaching Assistant**, *Chalmers University of Technology*, Three courses: High Performance Computing, Statistical Learning for Big Data, and Applied Mathematics (PDE course).

Software

2023–present	**SBMLImporter.jl**, *https://github.com/sebapersson/SBMLImporter.jl*, Julia package for importing models in the SBML standard format.
2023–present	**PEtab.jl**, *https://github.com/sebapersson/PEtab.jl*, Julia package for parameter estimating ODE-models.

Computer skills

Julia, Advanced level. Lead developer for two Julia packages.

R, Advanced level. Proficient in data handling and visualisation.

Python, Intermediate level. Proficient in data handling and solving PDE:s (FeniCS).

C, Intermediate level. Been teaching assistant in C based high-performance computing course.

Awards

2021	**John Erikson Medal**, *Chalmers University of Technology*, For completing my Bachelor's and Master's with top grades (only 5 of ≈ 1000 students achieve this).

Languages

Swedish	Native tongue
English	Fluent in reading, writing and speaking