

# Samuel Wiqvist

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## EDUCATION

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- **Lund University** Lund, Sweden  
*Ph.D. Mathematical Statistics* *Sep. 2016 – June 2021 (expected)*
  - **Research topic:** Developing novel inference methods for likelihood-free problems.
- **Lund University** Lund, Sweden  
*MSc in Engineering, Engineering Mathematics; (GPA 4.3/5)* *Sep. 2011 – July 2016*
  - **University of Toronto, Ontario, Canada:** Exchange studies during my fourth year (2014–2015).

## EXPERIENCE

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- **Lund University** Lund, Sweden  
*Teaching Assistant* *Sep. 2016 – March 2020*
  - **Monte Carlo and Empirical Methods:** Spring semester 2018, 2019 and 2020. Lead computer exercise classes and graded projects.
  - **Financial Statistics:** Fall semester 2018 and 2019. Lead computer exercise classes.
  - **Markov Processes:** Fall semester 2017, 2018, and 2019. Lead computer tutorial exercise classes, graded exams.
  - **Mathematical Statistics, Basic Course:** Fall semester 2016, and spring semester 2017, and 2019. Lead computer tutorial exercise classes, graded projects and exams.
- **Ellevio** Stockholm, Sweden  
*Intern* *June 2015 – Aug. 2015*
  - **Project:** Working together with another intern our task was to evaluate Ellevio's position on the energy market using econometric models.

## PROJECTS

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- **Code for the paper *Efficient inference for stochastic differential mixed-effects models using correlated particle pseudo-marginal algorithms*:** Algorithm implementations analyses for results, the paper currently under review for *Computational statistics and data analyses*. Language: Julia/R, framework Jupyter, Github repository
- **Code for the paper *Partially Exchangeable Networks and Architectures for Learning Summary Statistics in Approximate Bayesian Computation*:** Algorithm implementations analyses for results, **the paper was accepted for ICML 2019**. Language: Julia, framework Knet and Jupyter, Github repository.
- **Code for the paper *Accelerating delayed-acceptance Markov chain Monte Carlo algorithms*:** Algorithm implementations analyses for results, the paper is currently in preparation for a new version. Language: Julia, Github repository.
- **Reanalysis of the MA process example in *Learning Summary Statistic for Approximate Bayesian Computation via Deep Neural Network*:** Implementation of a multi-layer perception network and associated performance analyses for the summary statistics learning task. Language: Python, framework: PyTorch and Jupyter Github repository.
- **Implementation of some approximate Bayesian computation algorithms:** Generic implementation of some approximate Bayesian computing algorithms. Language: Julia, Github repository.

## PROGRAMMING SKILLS

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- **Languages:** Julia, Matlab, Python, R      **Technologies:** HPC clusters, Jupyter, L<sup>A</sup>T<sub>E</sub>X, Linux/Unix, version control

## SELECTED COURSE WORK

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- **Advanced Topics in Machine Learning: Computational Tools for Machine Learning in Python** (Technical University of Denmark), **Introduction to Deep Learning** (Lund University), **Bayesian Statistics** (University of Copenhagen), **Methods of Data Analyses I** (University of Toronto)

## LANGUAGES

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- **Swedish:** Native speaker, **English:** Fluent