

Tatiana Polishchuk

Homepage: <http://www.itn.liu.se/~tatpo46/>

Email: tatiana.polishchuk@liu.se

Tel: +46700896659

Publication list: <https://tinyurl.com/Tatianaspublishations>



Research interests

Network optimization and modeling
Air traffic logistics and airport organization
Multimedia content distribution networks

Education

Docent in Infrainformatics, Linköping University, Sweden (April 2022)
PhD in Computer Science, University of Helsinki, Finland (November 2013)
MSc in Applied Mathematics and Statistics, State University of New York at Stony Brook, USA (2004)
MSc in Computer Science, Moscow State University of Electronic Technologies, Russia (1998)

Work Experience

12.2016 – now – Communications and Transport Systems division (KTS), ITN, Linköping University
administrative role 09.2024 - now: Flight Logistics unit chief
position 06.2021 - now: senior associate professor (biträdande professor)
position 09.2018-06.2021: assistant professor (biträdande lektor)
position 12.2016-08.2018: postdoctoral researcher
research field: air transport and logistics (ODESTA, IFWHEN, IWA, TMAKPI, CAPMOD projects)
teaching: Programming Basics for Logistics Algorithms (TNSL24), Analysis of Communication and Transport Systems (TNK103) and Applied Optimization (TNK104).

01.2015 – 07.2015 – ADIT, IDA, Linköping University, Sweden
position: postdoctoral researcher (forskarassistent)
research field: Multimedia Content Distribution Networks
teaching: Computer Networks and Distributed Systems (TDTS04), invited lectures

08.2008 – 12.2013 – HIIT, Networking group, Aalto University, Helsinki, Finland
position: PhD researcher
PhD thesis: "Enabling Multipath and Multicast Data Transmission in Legacy and Future Internet"

09.2002-05.2007 – Department of Applied Mathematics and Statistics, SUNY Stony Brook, USA
position: PhD student, teaching assistant for multiple graduate and undergraduate courses, course instructor (AMS 210, Applied Linear Algebra)
MS thesis: "Optimal Design of Mesh-Based Ultra-Scalable Supercomputer Networks for Sparse Linear Algebra Algorithms"

05.2001-06.2002 – "Intron+" Co, Department of Automation, Moscow, Russia
position: software developer, interface part of VB-SQL database client-server applications

11.1999-05.2001 – "Guilini Chemie GmbH&Co", Moscow
position: database administrator

06.1998-11.1999 – "Funai International Ltd.", Moscow
position: programmer and network assistant

Programming Skills

C, C++, Visual C, MATLAB, VB, MPI, SQL, ns-2 simulator, AMPL, Gurobi, CPLEX

Professional Activities

PhD supervision:

- Anastasia Lemetti, *co-supervisor, finished*. PhD thesis: "Enhancing Air Traffic Management: Weather and Controller Workload Challenges", 30.05.2025
- Henrik Hardell, *main supervisor, finished*. Licentiate thesis: "Optimization of Aircraft Arrival Operations for Improved Environmental Efficiency", 20.05.2024
- Lucie Smatanova, *main supervisor, finished*. Licentiate thesis: "An Advanced Framework for Comprehensive Performance Evaluation of Terminal Airspace", 02.12.2024

PhD and Docent committee member:

- PhD thesis of Santi Vilardaga at the UPC Barcelona, Spain, November 2019
- PhD thesis of Wojciech Korek, Silesian University of Technology, Poland, September 2023
- Habilitation thesis of Xavier Olive, Paul Sabatier University, Toulouse, France, October 2023
- PhD thesis of Lam Jun Guang, Andy, Nanyang Technological University (NTU), Singapore, 2024
- Half-time seminar of Suleiman Khan, IDA, LiU, September 2024
- PhD thesis of Kim Gaume, Onera-ISAE, Toulouse, France, October 2025

Proposal Evaluator:

- NWO (Dutch Research Council) - Talent program, Veni scheme project proposal

Conference organizer and PC member:

- Workshop on Digital Air Traffic Services (DATS): 2019, 2020, 2021, 2023, 2024
- DASC 2021, 2022 (session chair)
- Opensky Symposium 2022, 2023 (PC chair), 2024 (PC member), 2025 (General chair, local host)
- INFORMS 2023 (Session chair and organizer)
- HCII conference 2022, 2023, 2024, 2025 (PC member)

Editorial work:

- [JOAS: Journal of Open Aviation Science](#) (editor)

Reviewer for:

Transportation Research Parts C,D,E, JATM, JAT, Computing in Geometry and Topology, The Aeronautical journal

Invited talks:

- Opensky Symposium 2020: ADS-B Data Usage for Fine-Grained Performance Evaluation
- SAAB-NTU Joint Lab, International live webinar "[Are humans in the loop? The Future of ATCOs in Multi-Airport Digital Towers](#)", June 2021
- ENAC, Toulouse, "Selected topics in optimization", October 2025

Other teaching activities:

- PhD course on Future Sustainable Aviation at KTH in 2024-2025, Optimization module. Examiner Evalyn Otero Sola.