



# Severin Sadjina

*Physicist & Researcher*

Creative physics PhD with 6 years of research experience, spanning from superspintronics to maritime full-system simulation. Highly trained in technical problem solving, combining outside-the-box thinking with a systematic and precise approach. Expert knowledge in several areas of physics and mathematics. Fast and enthusiastic learner, with a broad interest in science, technology, and beyond. Strong ability to communicate complex issues effectively and directly, with a natural ambition to inspire and share knowledge. Sociable and positive character, enjoys being part of a large multi-disciplinary and international working environment.

Mathematical Modeling • Computer Simulations & Programming • Data Science & Machine Learning • Technical Problem Solving • Analytical & Abstract Thinking • Team Work & Team Leadership • Project Management • Technical Writing & Public Speaking

## Professional Experience

### Research

2014–2016 **Postdoctoral Research Fellow**, *Department of Marine Technology, NTNU, Trondheim.*  
Development of an open, standardized framework for virtual prototyping and full-system simulation (ViProMa) as a new platform for product development and cooperation in the maritime industry. Development of a distributed simulation bus to couple models and tools from various engineering fields. Formulation of novel methods for direct error feedback and optimization of simulation quality and efficiency. Partners: *Rolls-Royce Marine, VARD, DNV GL, SINTEF Ocean.*

2008–2013 **PhD Research Fellow**, *Department of Physics, NTNU, Trondheim.*  
Work on a variety of ambitious research projects in the emerging field of spintronics and superspintronics, driven by numerous prospective applications in microtechnology. Publications in renowned scientific journals. Teaching at university level equivalent to 1 year of full-time employment.

### Creative

2010–2015 **Photographer**, *Severin Sadjina ENK.*  
Passion for directing comprehensive and detailed scenes with as many as 80 people at a time, with main focus on lifestyle and wedding photography. Workshop instructor. Clients include *Widerøe, UKA, and Alaska Communications.*

## Education

2008–2013 **PhD Theoretical Physics**, *NTNU, Trondheim.*  
Theoretical study of novel spin-orbit-induced transport phenomena in nanoscaled metals and superconductors utilizing modern theories of quantum transport. Courses in computational physics, functional integral methods, mathematical approximation methods, and quantum transport.

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2002–2008 **Dipl.-Ing. Technical Physics**, *Graz University of Technology*, Austria.  
General physics, mathematics, and engineering education, including training in computer simulations, experimental techniques, business administration and industrial sociology.

## Additional Skills and Technical Experience

Data Science Machine learning, data mining, statistical pattern recognition.  
Programming Skilled with Mathematica and MATLAB mathematical softwares, experience with software development and numerics in C++.  
Productivity  $\LaTeX$ , HTML, MS Office Suite.

## Personal Projects

since 2015 **ECCO**. Versatile and potent co-simulation method based on energy conservation.  
since 2013 **Pure Chance and the Distribution of Wealth**. Simple model of an economy based on pure chance, accurately describes data on wealth distribution for various countries.  
since 2011 **Federal Debt of Austria**. Quantitative investigation of increasing federal debt.

## Language Proficiency

English Full professional proficiency (C2)  
Norwegian Upper intermediate proficiency (B2)  
German Native proficiency (C2)

## Personal Information

Date of Birth February 8, 1983  
Nationality Austrian  
Marital status Cohabiting  
Children Ida Jakobie (2)  
Interests Strength training, digital art, econophysics & socioeconomics, mountaineering.

## References

### Lars Tandle Kyllingstad

Research Scientist, *SINTEF Ocean*.  
ViProMa workpackage leader.

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### Arne Brataas

Professor, *Department of Physics, NTNU*.  
PhD thesis supervisor.

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### Lars Erlend Leganger

Senior Consultant, *EY*.  
Former photo editor at *Under Dusken*.

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