Edvin **Sidebo**

PhD experimental particle physics

Stockholm

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Goals

Newly graduated from KTH after five years of data intensive research in large international collaboration. Now seeking opportunities outside academia. Interested in programming, data analysis, problem solving and learning new things.

Work experience

PhD student experimental particle physics

Stockholm and Geneva

Royal Institute of Technology

November 2013 - September 2018

- Part of the ATLAS experiment at particle physics laboratory CERN outside Geneva. By analysing data from the proton collisions produced by the Large Hadron Collider me and my group measured properties of the newly discovered Higgs particle. The research consisted largely of data analysis, visualisation and application of statistical methods on the large ATLAS dataset. For two years I led the project to estimate one of the contaminations of the dataset. This estimate and its corresponding uncertainty was a key component without which publication was not possible.
  → `[Link-Thesis]` `[Link-PopularScienceArticle-Fysikaktuellt (p. 8)]`
- During the time I became an expert within my subfield and was a key person relied on in the group.
- Lived in the Geneva area and worked at CERN during about one year 2016-2017.
- Experience of working with artificial neural networks used for classifying pixel clusters in the ATLAS detector.
  → `[Link-Proceeding]`
- Much experience of documenting work and presenting it at different levels. Often presented at weekly, video-based meetings, more formally for larger audience at conferences on 3-4 occasions, popular science talks at 3-4 occasions. I am good at putting myself into the listeners perspective and adapt a presentation accordingly.
- Have taught undergraduate physics students in laboration exercises about radiation, detection techniques, statistics, data analysis. In total about 200 hours in the lab, in addition to time spent developing and improving the classes. I was responsible for developing a computer based particle physics lab: spent one month setting it up with a Docker plus jupyter notebook solution. The concept was appreciated by students and teachers who are now taking it further to be used in future courses.
- During six months I supervised a master student in our group at the university, who later got the highest grade (A) on her work.
- Organised a “particle physics afternoon” (talks, quizzes and hands-on exercises) for students at my old high school together with my colleague. The teachers were very pleased with the event which engaged and inspired the students a lot.

Investigator

Sundsvall

Sundsvall Elnät

Summer 2012, year-end 2012/2013

- At the electric power grid company in my home town I worked with evaluating sizing of cables and analysed a network regulation model. I worked independently with tasks that were not part of the core activity. I learned to take responsibility for my own work and to convince myself and others about results and conclusions.

Teacher

Umeå

NTI-gymnasiet and others

Fall 2013

- Teacher substitute, mostly at upper secondary level in chemistry and physics. I learned to adapt to different situations and students. After being a substitute I got a contract on a few months to help a student with special needs in chemistry.

Teacher (voluntary work)

Gangkharka, Nepal

Helambu Project

February - May 2011

- Teaching in math and physics on a boarding school in a mountain village in Himalaya, for children in ages 7-15. I learned to use my imagination and set up the curriculum my self, to make it work in an environment with scarce resources.

Education

M. Sc. and Civil Engineer Engineering Physics

Stockholm

Royal Institute of Technology

2007 - 2013

- Master track: subatomic and astrophysics, with thesis about the Higgs particle.
- A selection of taken courses: Industrial Ecology, Sustainable Development, Quantum Physics, Numerical Methods, Fundamentals of Data Science, Program construction, Nuclear Physics, Particle Physics.

Stand-alone courses

Umeå and Stockholm

Umeå University and Södertörn University

Fall 2011 and fall 2012

- Out of personal interest I took a course in swedish economic history (Umeå) and the history of philosophy (Södertörn).

Skills

Python:	very good knowledge. Familiar with jupyter notebooks.
C++:	very good knowledge, was the primary language during my PhD.
bash/terminal:	have used a terminal daily during my PhD.
Docker:	good knowledge. I set up an exercise for teaching purposes using Docker.
git:	good knowledge. Was a necessary tool when working with a large international collaboration.
vim:	very good knowledge.
LaTeX:	very good knowledge. Have typeset documents in LaTeX since my undergraduate days.
Statistics and mathematical modelling:	very good knowledge, mostly of frequentist methods. Highly familiar with Monte Carlo simulations.
Languages:	Swedish: native speaker. English: fluent in speaking and writing.

Missions of trust

Board member

Stocksund (Stockholm)

Fabriken 4 housing association

August 2017- present

- Board work: responsible for the association's economy, service and administration. I have identified areas of interest for investments to improve the economic situation of the association and its members.

Table tennis coach

Timrå

Delta Bordtennisklubb

2005-2006

- Coach once a week for children in ages 8-15. Responsible for planning and leading practise, coaching at competitions.

Honors and awards

Received a travel grant in the spring of 2018 from the Royal Swedish Academy of Sciences (10 000 SEK).

Personal interests

In my spare time I enjoy meeting friends and spending time with my girlfriend and family. I'm very fond of ball games and have played table tennis, badminton and beach volleyball during different periods. I also like to work out regularly at the gym (given there is a sauna!). As often as I can I spend time on food, both visiting restaurants and cooking myself. Lately, I have tried to explore the Chinese cuisine. There is some more to read about me in this article `[Fysikaktuellt-2018-3]` (p. 10).

References

Available on request.