

# CURRICULUM VITAE FOR PÅL SUNDSØY

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## CONTACT INFORMATION

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Name Pål Sundsøy  
Keywords: Senior Data Scientist with large global footprint  
PhD (Dr.Philos) Data Science, Msc Physics

Birth 01.02.1979, Bergen, Norway.  
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## WORK EXPERIENCE

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- 01.06.16 – **Norges Bank Investment Management (NBIM)**  
*Senior Quantitative Analyst, , Investment Risk Analytics*  
Global Equity Models, Big Data Analytics, Machine Learning  
Quantitative trading strategies, factor investing, systematic risk  
NBIM is the investment arm of Norway's Central Bank that manages the world's largest sovereign wealth fund with assets of \$950 bn.  
See <https://www.nbim.no/en>
- 01.06.07–01.06.16 **Telenor Group Research , Big Data Analytics**  
*Senior Data Scientist / Researcher / Project Manager*  
Working globally across South-East Asia, US and Europe.  
Heading all research collaboration activities with MIT (MIT Sloan, MIT Media Lab)  
Computational Social Sciences and Applied Machine Learning for Research and Business.  
Published over 20 peer-review publications and 30+ conference talks on Big Data for Social Sciences
- 18.04.06-01.06.07 **Institute of Theoretical Astrophysics, University of Oslo**  
*Head Engineer*  
Creating the database search archive for Hinode Space Mission Project  
Collaboration between NASA, ESA and JAXA.  
Financed by European Space Agency (ESA) and Norwegian Space Agency.
- 09.01.06-10.03.06 **World Health Organization, Geneva, Switzerland**  
*Database Developer*  
Department of Evidence and information for policy, Unit of Health statistics and evidence.  
Development of database in relation to vital registration systems, and work related to statistical analysis.
- 01.08.05-01.01.06 **Group of Applied Quantum Physics, University of Geneva, Switzerland**  
*Researcher in group of Prof. Nicolas Gisin, Quantum cryptography*
- 03.10.04-05.04.05 **Department of Biotechnology, NTNU**  
*Database Developer/Research Assistant*
- 01.08.04-12.12.04 **Department of Physics, NTNU**  
*Student assistant, FY2045 Quantum Physics/TFY4250 Atomic and molecular physics.*

## EDUCATION

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- 22.02.17 **University of Oslo (UIO)**  
PhD (Dr.Philos) in Data Science  
Thesis title: "*Big Data for Social Sciences: Measuring patterns of human behavior through large-scale mobile phone data.*"
- 01.08.99-01.07.04 **Norwegian University of Science and Technology (NTNU)**  
Msc in Physics and Mathematics (5 year).
- 01.08.04-01.06.05 **Norwegian University of Science and Technology (NTNU)**  
Studies within Economics and Work- and Organization Psychology beside work.

- 01.03.03-25.07.03    **University of New South Wales, Sydney**  
Exchange student, one term.  
Studies within mathematical modelling and advanced quantum mechanics.
- 01.08.98-01.06.99    **Bjerkely Country College, Flisa, Norway.**  
Directed study within C++.
- 01.08.95-15.06.98    **Gol secondary school, Gol, Norway.**  
Full specialization within physics, mathematics and information technology.

## SCIENTIFIC WORK

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- Scientific Publications:** 20+ Scientific Research publications.
- Talks:** 25+ International Research conference talks (7 of them being at MIT)  
10+ industrial conference talks on machine learning and Big Data Analytics
- Media Exposure:** Research cited in Wall Street Journal, MIT Technology Review, Science News , Harvard Magazine, Yahoo Finance, World Bank, El Pais, Vice Media, Science Daily, Report to President Obama: White House Report on Big Data and more.
- Main Research Collaborators:** MIT Media Lab, Human Dynamics Lab  
MIT Sloan, Economics  
Harvard University,  
Northeastern University  
Flowminder
- Scientific Committees:** Netmob, Massachusetts Institute of Technology (MIT), US (2013, 2015, 2017)  
SocInfo, Oxford University, UK (2017)  
KDD, leading international conference on Data Mining , US (2014).  
CARMA, Big Data in Social Sciences , Spain (2016)  
ICDM, IEEE International Conference on Data Mining, Shenzhen, China (2014)  
Netsci, Indianapolis, US (2017)  
Complex Networks, Lyon (2017)  
Netsci, Indiana, US (2017)
- Teaching:** Chair of several international Advanced Analytics Workshops within Telenor Group. Internal teaching of machine learning, exploiting social network and mobility information on Big Data (across Europe and Asia).  
Organizer of Telenor Business Intelligence Groupwide (BIG) Conferences  
Querying Big Data – arranging programming courses for Economists, Telenor Group.

## SELECTED PUBLICATIONS

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- **Mapping Poverty using mobile phone and satellite data.** Joint work with J.Steele, Linus Bengtsson, A.Tatem, C.Pezzulo, YA Montjoye, Kenth Engø-Monsen, J.Bjelland, X Lu, E Wetter, J.Blumenstock, A.Iqbal, N.Hadiuzzaman. Published in Royal Society Interface (2017)
- **Deep learning applied to mobile phone data for Individual income classification.** Joint work with J. Bjelland, BA Reme, A. Iqbal, E.Jahani Published in International conference on Artificial Intelligence: Technologies and Applications (ICAITA 2016)
- **Improving Official Statistics in Emerging Markets using Machine Learning and Mobile Phone Data.** Joint work with E.Jahani, L.Bengtsson, J.Bjelland, YA de Montjoye, A.Pentland. Published EPJ Data Science (2017).
- **Big Data-Driven Marketing: How machine learning outperforms marketers gut-feeling.** Joint work with J. Bjelland, A.Iqbal, A. Pentland, YA Montjoye. Published in Social Computing, Behavioral-Cultural Modeling, & Prediction, Washington, USA (2014), LNCS Vol. 8393 (Springer)
- **Impact of human mobility on the emergence of dengue epidemics in Pakistan.** Joint work with A. Wesolowski, T. Qureshi M. Bonid, M.Johansson, S.Rasheed, KE Monsen, C. Buckee. Published in PNAS (2015)
- **Estimating individual employment status using mobile phone network data.** Joint work with J.Bjelland, BA Reme, E.Jahani, E.Wetter and L.Bengtsson. Submitted to Arxiv 1612.03870 (2017)

- **Comparing and visualizing the social spreading of products on a large-scale social network** . Joint work with J. Bjelland, KE Monsen, G. Canright, R. Ling. Published in The influence on Technology on Social Network Analysis and Mining, Tanel Ozyer et.al, Volume 6, 2013, pp 201-225 (Springer)

## **HOBBIES**

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- Photography : [http://500px.com/paal\\_sundsoy](http://500px.com/paal_sundsoy)
- Playing guitar
- Visualization / Motion Graphics / 3D art
- Cinematic Drone Flying : <https://vimeo.com/176800844>
- Jogging / Sports
- Travelling