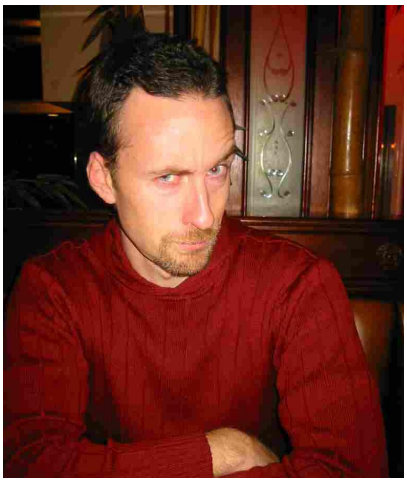
Curriculum Vitae



Name

Philipp Dominik Häfliger

Address

Philipp Häfliger
Dept. of Informatics
University of Oslo
Box 1080, Blindern
N-0316 Oslo
Norway

Phone: ++47 22 84 01 18
Fax: ++47 22 85 24 01

Homepage:
http://www.ifi.uio.no/~hafliger

e-mail: hafliger@ifi.uio.no

Date and place of birth

18. March 1970 in Zürich

Parents

Eduard Häfliger, Diplomierter Elektro Ingenieur ETH, 1941
Monika Häfliger, Teacher, 1942

Nationality

Swiss

Languages

German, French, English, Norwegian

Education and Career Milestones

Associate professor at the Department of Informatics, UiO, Norway	6/2006-?
Associate professor at the Institute for Microsystems Technology, Vestfold University College, Norway	9/2006-4/2007
Senior member of the IEEE	10/2010
Chairman of the IEEE CASS Biomedical circuits and systems technical committee	5/2010-6/2012
Local coordinator for EU IST project CAVIAR, UiO, Norway	6/2002-5/2006
Researcher at the Department of Informatics, UiO, Norway	7/2003-5/2006
Postdoc at the Department of Informatics, UiO, Norway	7/2000-6/2003
Doctor of Natural Sciences (PhD), ETH Zürich, Switzerland	4/2000
Telluride Workshop on Neuromorphic Engineering	7/1998
Crete Course in Computational Neuroscience	10/1996
Doctoral student at the Institute of Neuroinformatics, UNIZ/ETHZ	11/1995-4/2000
Research and teaching assistent at the Institute of Information Systems, ETHZ	4/1995-10/1995
Informatik Ingenieur Diplom ETH (M. Sc. Computer Science)	3/1995
Member of the winning team in the regional ACM programming contest at ETH Zürich and participant in the West European ACM programming contest	1994
Internship Gretag AS	3/1993-4/1993
Internship Siemens-Integra	3/1992-4/1992
Studying Astronomy as a second subject	10/1992-10/1994
Studying Computer Science at ETH Zürich	10/1990-3/1995
Working for SBG Zürich	10/1989-1/1990
Matura Typus B	1989
Kantonsschule Wiedikon, Zürich	1983-89
Primarschule Friesenberg, Zürich	1977-83

Project Management

- Local coordinator for partner 'University of Oslo' of the EU IST project CAVIAR (Contract number: IST-2001-34124)
  Responsible for two positions (senior researcher and doctoral student), total

budget of approximately 500000 Euros over 4 years. Partners: Instituto Microelectronica Sevilla, University of Sevilla, ETH Zürich.

Teaching

- Full lecture 'Neuromorphic Electronics', link to compendium, one term per year, since 2001.
- 50% lecture 'Computer Architecture', link to compendium, one term per year, since 2010.
- Supervision of master projects, 12 finished and 1 in progress
- Supervision of PhD projects, 4 in progress

Teaching Awards

- Honorary mention as runner up of the lecturer of the year 2010 award of the Microelectronics student association
- Lecturer of the year 2007 award of the Microelectronics student association
- Fall term 2005 best lecture award of the Microelectronics student association

Publications

PhD Thesis

- A spike based learning rule and its implementation in analog hardware, PhD thesis, ETH Zürich, Switzerland, 2000, pdf

  Number of citations, status August 2010, Google scholar: 14

Popular Press and Media Coverage

- Elektronikk som ligner hjerneceller, Forskning.no, a Norwegian research web-news-site, 9-May-2015.
- Teknologi mot sykdom, Tekno, Schrödingers Katt, NRK (Norwegian national TV), 17-May-2011.
- Sensorer varsler sykdom og fare, Aftenposten (Norwegian National/Regional Newspaper), 18-Jan-2011
- Sensorer i kroppen blir en del av fremtidens internett, Apollon (University Newspaper), 18-Jan-2011

Last modified: Fri Aug 26 09:19:58 CET 2015

PhD Opponent

- *title to be announced*, University of Oslo, Håkon Hjortland, 2011
- On the Evolution and Coevolution of Machines for Optimization and Automated Problem Solving in Industry, University of Oslo, Marcus Furuholm, 2010
- AER convolution chips for asynchronous neocortical processing of sensory visual information coded in events, IMSE Sevilla, Luis Camunas, 2010
- Study, Design, Implementation, and Test of VLSI Retinae Sensitive to Spatial and Temporal Contrast, IMSE Sevilla, Juan Antonio Leñero Bardallo, 2010
- Ein Beitrag zur Implementierung von biologisch-orientierten Architekturen für die akustische Signalverarbeitung in CMOS-Technologie, Technische Universität Ilmenau, Richard Izak, 2005

Editorial Services

- Guest Associate Editor IEEE Transactions on Biomedical Circuits and Systems, 2009-2010

Paper Referee

Journals

IEEE Transactions on Neural Networks, IEEE Press; IEEE Transactions on Circuits and Systems I&II, IEEE Press; Analog Integrated Circuits and Signal Processing, Kluwer Academic Publishers earlier and now Springer; IEEE Sensors Journal, IEEE Press; IEEE Transactions on Biomedical Circuits and Systems, IEEE Press;

Conferences

Neural Information Processing Systems (NIPS), IEEE Biomedical Circuits and Systems Conference (BioCAS), Neural Information Processing Systems (NIPS), IEEE International Symposium on Circuits and Systems (ISCAS), European Symposium on Artificial Neural Networks (ESANN), International Conference on Evolvable Systems (ICES)

International Committees

- Chairman of the IEEE CAS Biomedical Circuits and Systems Technical Committee, since 2010 (member since 2003)
- Member of the Steering Committee of the IEEE Biomedical Circuits and Systems (BioCAS) conference since 2010
- Member of the IEEE CAS Neural Systems and Applications Technical Committee, since 2003
- Member of the IEEE CAS Sensory Systems Technical Committee, since 2003
- Technical Program Co-Chair IEEE Biomedical Circuits and Systems (BioCAS) conference 2011 and Technical program committee 2010, 2007 and 2004
- Organizer of a thematic sub-conference (track chair) of the IEEE International Symposium on Circuits and Systems (ISCAS): BioCAS track 2011, Live demonstrations track 2010 and 2009
- Organizer of the special session on 'Live Demonstrations of Circuits and Systems' at ISCAS 2007 in New Orleans, USA
- Organizer of the special session on 'Live Demonstrations of Circuits and Systems' at ISCAS 2006 on Kos, Greece
- Organizer of the special session on 'Spiking Neural Networks I & II' at ISCAS 2004 in Vancouver, Canada

National/University Committees

- PhD utvalget, IFI, UiO (2011-)

References

Project leader of Glucosense 2006-2008:

Erik Johannessen, PhD
Associate professor (1. Amanuensis)
Vestfold University College
PO Box 2243

Phone: ++47 33037932

E-mail: Erik.A.Johannessen@hive.no

N-3103 Tønsberg, Norway

Homepage: http://www.hive.no/ansatte/erik-andrew-johannessen-article10007-4174.html

Principal coordinator of the EU IST project CAVIAR (Contract IST-2001-34124) 2002-2006:

Bernabe Linares-Barranco, PhD
Full Professor (Profesor de Investigacion) CSIC
Instituto Microelectronica Sevilla (IMSE)
National Microelectronics Center, CNM-CSIC
Ed. CICA, Av. Reina Mercedes s/n
41012 Sevilla, SPAIN

Phone: ++34-95-505-6670/66
Fax: ++34-95-505-6686
E-mail: Bernabe.Linares_at_imse.cnm.es
Homepage: http://www.imse.cnm.es/~bernabe

Full professor and collegue 2000-present:

Tor Sverre Lande, PhD
Full professor
Department of informatics
PO Box 1080, Blindern
0316 Oslo, Norway

Phone: ++47 22852455
Fax: ++47 22852401
E-mail: bassen_at_ifi.uio.no
Homepage: http://www.ifi.uio.no/~bassen

Colleague at ETHZ 1997-2000 and partner in the CAVIAR project 2002-2006:

Tobi Delbrück, PhD
Group Leader
Institute of Neuroinformatics
Winterthurerstrasse 190
CH-8057 Zürich, Switzerland

Phone: ++41 44 6353038
Fax: ++41 44 6353053
E-mail: tobi_at_ini.phys.ethz.ch
Homepage: http://www.ini.unizh.ch/~tobi/

Financial officer of IFI 2000-present, local administrative collaborator for the CAVIAR project:

Anne Cathrine Modahl
Principal executive officer
Department of informatics
PO Box 1080, Blindern
0316 Oslo, Norway

Phone: ++47 22852430
Fax: ++47 22852401
E-mail: annecmo_at_ifi.uio.no
Homepage: http://www.ifi.uio.no/~annecmo

Hobbies

skiing, snowboarding, games, mushroom picking, fishing, climbing, drums, kites, Origami, para-gliding, martial arts, all kinds of sports

---

last update: 15.4.2011

Philipp Häfliger

University of Oslo

Google Scholar

Citation indices	All	Since 2011
Citations	1205	883
h-index	16	11
i10-index	20	12

Title 1–20	Cited by	Year
Neuromorphic silicon neuron circuits G Indiveri, B Linares-Barranco, TJ Hamilton, A van Schaik, ... Frontiers in neuroscience 5, 73	360	2011
CAVIAR: A 45k neuron, 5M synapse, 12G connects/s AER hardware sensory–processing–learning–actuating system for high-speed visual object recognition and tracking R Serrano-Gotarredona, M Oster, P Lichtsteiner, A Linares-Barranco, ... IEEE Transactions on Neural Networks 20 (9), 1417-1438	197	2009
AER building blocks for multi-layer multi-chip neuromorphic vision systems R Serrano-Gotarredona, M Oster, P Lichtsteiner, A Linares-Barranco, ... Advances in neural information processing systems 18, 1217	89	2006
Adaptive WTA with an analog VLSI neuromorphic learning chip P Hafliger IEEE transactions on neural networks 18 (2), 551-572	61	2007
A spike based learning neuron in analog VLSI P Häfliger, M Mahowald, L Watts Advances in neural information processing systems, 692-698	55	1997
A foveated AER imager chip [address event representation] M Azadmehr, JP Abrahamsen, P Hafliger 2005 IEEE International Symposium on Circuits and Systems, 2751-2754	50	2005
Toward real-time particle tracking using an event-based dynamic vision sensor D Drazen, P Lichtsteiner, P Häfliger, T Delbrück, A Jensen Experiments in Fluids 51 (5), 1465-1469	35	2011
A spike based learning rule and its implementation in analog hardware PD Häfliger Diss. Naturwissenschaften ETH ZÃ¼rich, Nr 13581, 2000	31	2000
Toward an injectable continuous osmotic glucose sensor E Johannessen, O Krushinitskaya, A Sokolov, P Häfliger, A Hoogerwerf, ... Journal of diabetes science and technology 4 (4), 882-892	26	2010
High-speed serial AER on FPGA HKO Berge, P Hafliger 2007 IEEE International Symposium on Circuits and Systems, 857-860	26	2007
A time domain winner-take-all network of integrate-and-fire neurons JP Abrahamsen, P Hafliger, TS Lande Circuits and Systems, 2004. ISCAS'04. Proceedings of the 2004 International ...	20	2004
A multi-level static memory cell P Hafliger, HK Riis Circuits and Systems, 2003. ISCAS'03. Proceedings of the 2003 International ...	20	2003

Title 1–20	Cited by	Year
Floating gate analog memory for parameter and variable storage in a learning silicon neuron P Hafliger, C Rasche Circuits and Systems, 1999. ISCAS'99. Proceedings of the 1999 IEEE ...	20	1999
Bio-inspired asynchronous pixel event tricolor vision sensor JA Leñero-Bardallo, DH Bryn, P Häfliger IEEE transactions on biomedical circuits and systems 8 (3), 345-357	18	2014
Spike based learning with weak multi-level static memory HK Riis, P Hafliger Circuits and Systems, 2004. ISCAS'04. Proceedings of the 2004 International ...	18	2004
Spike based normalizing Hebbian learning in an analog VLSI artificial neuron P Häfliger, M Mahowald Analog Integrated Circuits and Signal Processing 18 (2-3), 133-139	16	1999
Asynchronous event redirecting in bio-inspired communication P Hafliger Electronics, Circuits and Systems, 2001. ICECS 2001. The 8th IEEE ...	14	2001
Tobi Delbruck G Indiveri, B Linares-Barranco, TJ Hamilton, A van Schaik, ... Shih-Chii Liu, Piotr Dudek, Philipp Häfliger, Sylvie Renaud, Johannes ...	13	2011
A Sub-Bandgap Reference Circuit With an Inherent Curvature-Compensation Property KK Lee, TS Lande, PD Häfliger IEEE Transactions on Circuits and Systems I: Regular Papers 62 (1), 1-9	11	2015
Analog to interval encoder with active use of gate leakage for an implanted blood-sugar sensor P Hafliger, E Johannessen 2008 IEEE Biomedical Circuits and Systems Conference, 169-172	10	2008

Dates and citation counts are estimated and are determined automatically by a computer program.