

CV Nils Damm Christophersen

November 2016



Employment

- 2006 – 2009 Board member at the University of Oslo
- 2003 – 2004 Dean of studies, Faculty of Mathematics and Natural Sciences
- 2000 – 2006 Group leader Digital signal and image analysis (DSB).
- 1998 – 1999 Head, Department of informatics
- 1997 – 1998 Visiting scientist, Department of Statistics, Stanford University
- 1991 – Professor, Department of informatics, University of Oslo
- 1988 – 1989 Visiting scientist, Institute of Hydrology, UK
- 1986 – 1991 Adjunct professor Department of informatics, University of Oslo
- 1978 – 1991 Research scientist, Center for industrial Research/SINTEF, Oslo
- 1975 – 1977 Associate professor, Department of physics, University of Oslo
- 1972 – 1975 Research scientist, Norwegian Defence Research Establishment

Education:

- 1983 Dr. Philos. (PhD) (environmental modeling of impacts of acid rain), Center for Industrial Research (SINTEF)/Department of informatics, University of Oslo
- 1972 Cand. real. (M.Sc.) in cybernetics, Norwegian Defense Research Establishment /Department for Physics, University of Oslo

Honoraria

- Highly cited scientist as defined by the Institute for Scientific Information (ISI) - <http://highlycited.com/> (archives 2001 list)
- Awarded the University of Oslo Innovation prize for 2016 - <http://www.uio.no/om/tall-og-fakta/uio-priser/universitetsstyrets-priser/innovasjonsprisen/index.html>

Nils Christophersen received a MSc. in physics (cybernetics) in 1972 and a PhD in informatics in 1983, both from the University of Oslo (UiO). He worked at the Norwegian Defence Research Establishment from 1972 to 1975 and was associate professor at the Department of Physics, University of Oslo from 1975 to 1977. He then worked at Centre for Industrial research (later SINTEF) for fourteen years, leading the Environmental data analysis group for 6 years and becoming an adjunct professor in 1986. He was a visiting scientist at the Institute of Hydrology, UK, in 1988-1989.

His main work in this period was hydro-chemical modelling of effects of acid rain on soils and freshwaters. This work has put him on the list of highly cited scientists as defined by the Institute for Scientific Information <http://highlycited.com/> (archives 2001 list).

Since 1991, he has been professor at the Department of informatics (Ifi), University of Oslo working within applied statistics and signal processing. He spent a sabbatical leave at the Department of Statistics, Stanford University in 1997 - 1998. Back in Oslo, he served as Head of Department of Informatics for the period 1998 – 1999 and was Dean of studies at the Faculty of Mathematics and Natural Sciences from 2003 to 2004.

During his stay at Stanford University, Christophersen became interested in commercialization of academic research and in 1999 founded the Norwegian School of Entrepreneurship at the University of Oslo. The idea is to teach students at the master level from different fields (e.g. engineering, natural and social sciences, and business administration) entrepreneurship in a hands-on manner. After a standard initial course in entrepreneurship, the main component is a three-month working period in start-up companies abroad. In 2016, there will be about 150 Norwegian students from 8 universities and colleges in Norway working in Boston, Houston, San Francisco and Singapore. In addition, about 25 students will work with social entrepreneurship in Cape Town. In total, over 2000 students have taken part in the programmes.

As Dean of Studies at the Faculty of Mathematics and Natural Science, Christophersen was instrumental in establishing the Centre for Entrepreneurship at the University of Oslo which now includes the Norwegian School of Entrepreneurship. This centre also gives a master degree in entrepreneurship for students with a background in science. Christophersen chaired the board of the centre for the first 5 years and in this period also served as board member of the “Venture Cup” business competition.

Furthermore, he was board member of the University of Oslo (2006-2009), SINTEF’s institute for information technology (2006-2010) and the Norwegian Centre for International Cooperation in Higher Education (SIU) (2006-2009) as well as the UiO Committee for North-South collaboration (2006-2010). A main interest in this period was the application of modern *free and open source* information technology to foster good governance and sustainable economic growth in developing countries, including entrepreneurship and innovation. In the same period, he headed the PhD committee at the Department of informatics.

From 2009 to 2014 he headed the Computational Life Science initiative (CLSi) at UiO, where the aim has been to develop suitable IT tools for life science scientists within bioinformatics, and at the same time establish an interdisciplinary course curriculum.

The last couple of years, there has been an increased emphasis on innovation and entrepreneurship in the Norwegian university sector. On request from the university,

Christophersen developed a plan for how UiO could increase the activity of both students and faculty in this area, and now heads a group appointed to oversee the teaching within innovation and entrepreneurship at the university. He also heads the Innovation committee at the Department of informatics.

Nils Christophersen is married to a Swedish archaeologist and has three children with his first wife. In his spare time, he has headed the group promoting the UN Millennium Goals in the Norwegian Polytechnic Society and is a member of Concerned Scientists Norway and the Norwegian chapter of Concerned Grandparents against climate change. A main interest in his leisure time is the relationship between “the two cultures” – the humanities and the natural sciences. An interview with Christophersen in Norwegian from September 2016 may be found at <https://titan.uio.no/node/1928>.

List of publications

Papers in peer reviewed journals

Dahl, T., S.S. Pereira, N. Christophersen, and D. Gesbert, 2007. Intrinsic subspace convergence in TDD MIMO communication, *IEEE Trans. Signal Processing*, 55(6), 2676-2687.

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Bølviken, E., P. Acklam, N. Christophersen, and J.M. Størdal, 2001. Monte-Carlo filters for non-linear state estimation, *Automatica*, 37(2), 177-183.

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Akerjord, M.A., N. Christophersen, 1996. Assessing mixing models within a common framework, *Env. Sci. Tech.*, 30, 2105-2112.

Hauhs, M., C. Neal, R.P. Hooper, and N. Christophersen, 1996. Summary of a workshop on ecosystem modelling: The end of an area?, *Sci. Tot. Env.*, 183, 1-5.

Mulder, J., N. Christophersen, K. Kopperud, and P.H. Fjeldal, 1995. Water flow paths and the spatial distribution of soils as a key to understanding differences in streamwater chemistry between three catchments (Norway), *Water Air Soil Pollut.*, 81, 67-91.

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Christophersen, N., C. Neal, and R.P. Hooper, 1993. Modelling the hydrochemistry of catchments: a challenge for the scientific method, *J. Hydrol.*, 152, 1-12.

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Easthouse, K. B., J. Mulder, N. Christophersen, and H.M. Seip, 1992. Dissolved organic carbon during variable hydrological conditions at Birkenes, southern Norway, *Water Resour. Res.*, 28, 1585-1596.

Christophersen, N. and R.P. Hooper, 1992. Multivariate analysis of streamwater chemical data: The use of principle component analysis for the end-member mixing problem, *Water Resour. Res.*, 28, 99-107.

Mulder, J., M. Pijpers and N. Christophersen, 1991. Water flow paths and the spatial distribution of soils and exchangeable cations in an acid - rain impacted and a pristine catchment in Norway, *Water Resour. Res.*, 27, 2919-2928.

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acidification models, *J. Hydrol.*, 116, 307 - 320.

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at Birkenes, southernmost Norway, *J. Hydrol.*, 108, 387-405.

Hooper, R.P., A. Stone, N. Christophersen, E. de Grosbois and H.M. Seip, 1988. Assessing the Birkenes model of stream acidification using a multisignal calibration methodology, *Water Resour. Res.*, 24, 1308-1316.

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- Reuss, J.O., N. Christophersen and H.M. Seip, 1986. A critique of models for freshwater and soil acidification. *Water Air Soil Pollut.*, 30, 909-930.
- Sullivan, T.J., N. Christophersen, I.P. Muniz, H.M. Seip and P.D. Sullivan, 1986. Aqueous aluminium chemistry: Response to episodic increases in discharge. *Nature*, 323, 324-327.
- Rustad, S., N. Christophersen, H.M. Seip and P.J. Dillon, 1986. Model for streamwater chemistry of a tributary to HarpLake, Ontario. *Can. J. Fish. Aquat. Sci.*, 43, 625-633.
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- Christophersen, N., C. QWvenold, H.M. Seip, and O. Tollan, 1982. Sodium mobility in a mini-catchment studied with radioactive tracers and artificial precipitation, *Nordic Hydrology*, 13, 105-114.
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Dahl, J.B., C. Qvenild, O. Tollan, N. Christophersen, and H.M. Seip, 1979. Methodology of studies on chemical processes in water runoff from rock and shallow soil cover using radioactive tracers, *Water Air Soil Pollut.*, 11, 179-190.

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Neal, C., Robson, A.J., and Christophersen, N., 1997. Towards coupling hydrological, soil, and weathering processes within a modelling perspective, In Saether, O.M. and de Caritat, P. (eds.) *Geochemical processes, weathering and groundwater recharge in catchments*, pp. 329-380, A.A. Balkema, Rotterdam.

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