

C U R R I C U L U M V I T A E

NAME: Oddbjørn Bruland
EMPLOYMENT: Section Manager Hydrology Department
DATE OF BIRTH: October 13, 1965
NATIONALITY: Norwegian
LANGUAGE: Norwegian, English, some German
MARITAL STATUS: Married

S U M M A R Y O F Q U A L I F I C A T I O N S

Broad general expertise in hydrology and at a high international level on cold climate hydrology and operational hydrology. High expertise on innovation and management processes.

Varied professional experience related to research and development in hydrology since 1991. Experience as consultant within water and sanitary engineering, water resources management and waste treatment.

Extensive and varied fieldwork experience especially from cold climate regions.

Lecturing experience both as lecturer in several classes and professor at NTNU and as supervisor for several students.

E d u c a t i o n

- 2007 – 2010** Executive Master of Technology Management (MTM) from Norwegian university of science and technology (NTNU) / Norwegian School of Economic (NHH) / MIT
- 1997 – 2002** Ph.D. in Civil Engineering, Norwegian university of science and technology (NTNU) Norway
- 1987 – 1991** MSc.Eng. in Civil Engineering, Norwegian university of science and technology (NTNU) Norway
- 1984 – 1986** Bachelor in Civil engineering, Faculty of engineering and science at Agder University College, Norway.

A d d i t i o n a l E d u c a t i o n

- 2009 – 2010** Innovation agent program, Statkraft.
- 2002** Project management, SINTEF

W o r k e x p e r i e n c e

- 2015 –** Senior Scientist at SINTEF Energy Research, Trondheim
- 2014 – 2015** Section Manager Hydrology Multiconsult, Department Trondheim
- 2012 –** Professor at NTNU, part time employment (20%)
- 2007 – 2014** Senior Hydrologist, Statkraft Energy, department Trondheim
- 2004 – 2007** Head of Hydrology, Trondheim Energy Company, Trondheim
- 2002 – 2004** Project Manager and Research Scientist, SINTEF Energy research, Trondheim.
- 1997** Ph.D-student, Dept. of Hydraulic and Environmental Eng., NTNU (NTH), Trondheim
- 1994** Research scientist, SINTEF Civil and Environmental Engineering, Department of Hydrology, Trondheim
- 1993** Consultant engineer, Interconsult (Østlandskonsult) now Cowi, Bergen
- 1992** Research Fellow at Dept. of Hydraulic and Environmental Engineering, NTH, Trondheim.
- 1986** Construction site manager, Norwegian Road Administration, Sogn og Fjordane

P u b l i c a t i o n s

- 2015** Arne Instanes, Vasily Kokorev , Richard Janowicz , Oddbjorn Bruland , Knut Sand , Terry Prowse.
Changes to freshwater systems affecting Arctic infrastructure and natural resources. Journal of Geophysical Research: Biogeosciences, submitted.

- 2015** Oddbjørn Bruland, Áshild Færevåg, Ingelin Steinsland, Glen E. Liston, and , Knut Sand. Weather SDM - A model for estimating Snow Density with high precision using snow depth and local climate. *Hydrology Research*, vol 46, no 4, pp. 494 – 506.
- 2004** Oddbjørn Bruland, Glen E. Liston, Jorien Vonk, Knut Sand and Ånund Killingtveit. Modeling the snow distribution at two high arctic sites at Svalbard, Norway, and at an alpine site in central Norway. *Nordic Hydrology*, vol. 35, no3, pp. 191-208.
- 2004** Semadeni-Davis Annette F, Maréchal David, Bruland Oddbjørn, Kodama Yuji, Sand Knut. Estimating latent heat over a melting arctic snow cover. *Nordic Hydrology* 35, 3, 175-190.
- 2003** Jan-Gunnar Winther, Oddbjørn Bruland, Knut Sand, Sebastian Gerland, David Marechal, Boris Ivanov, Piotr Głowacki, Max König. Snow research in Svalbard – an overview. *Polar Research*, 22 (2), pp 125–144, December 2003
- 2003** Sand, K., Winther, J. G., Maréchal, D., Bruland, O. and K. Melvold. Regional Variations of Snow Accumulation on Spitsbergen, Svalbard, 1997-99. *Nordic Hydrology*, 34 (1/2) pp. 17-32
- 2003** J.-G. Winther, O. Bruland, K. Sand, S. Gerland, D. Marechal, B. Ivanov, P. Glowacki & M. König. Snow research in Svalbard—an overview. *Polar Research*, Vol. 22 (2), pp. 125-144.
- 2002** Svendsen, H., Beszczynska-Møller, A., Hagen, J. O., Lefauconnier, B., Tverberg, V., Gerland, S., Ørbæk, J. B., Bischof, K., Papucci, C., Zajaczkowski, M., Azzolini, R., Bruland, O., Wiencke, C., Winther, J.-G. and Dallmann, W. The physical environment of Kongsfjorden–Krossfjorden, an Arctic fjord system in Svalbard. *Polar Research* 21(1), pp.133–166.
- 2002** Bruland, O. and J. O. Hagen. Mass Balance of Austre Brøggerbreen modelled with the HBV-model. *Polar Research*, Polar Research Volume 21, Issue 1, pages 109–121, June 2002.
- 2001** Bruland, O., Killingtveit, Å. An energy balance based HBV– model applied in an arctic watershed at Svalbard, Spitsbergen. *Nordic Hydrology*
- 2001** Bruland, O., Sand, K. Snow distribution at a high arctic site at Svalbard. *Nordic Hydrology*
- 2001** Bruland, O., Maréchal, D, Sand, K., Killingtveit, Å. Energy and water balance studies during snowmelt period at a high arctic site at Svalbard. *WINTEX /LAPP Special Issue of Theoretical and Applied Climatology*
- 2001** Bruland, O., Killingtveit, Å. An energy balance based HBV model applied in an arctic watershed at Svalbard, Spitsbergen. *Nordic Hydrology*.
- 2001** Marchand, W.D., Bruland, O., Killingtveit, Å. Enhancement of measurements and analysis of spatial snow cover by combining a ground based radar system with a differential global positioning system receive. *Nordic Hydrology*.
- 1999** Liston, G. E., O. Bruland, J. G. Winther, H. Elvehøy, and K. Sand. Meltwater Production in Antarctic Blue – ice Areas: Sensitivity to Changes in Atmospheric Forcing. *Polar Research*, Vol 18, pp. 283 – 290
- 1999** Liston, G. E., J. G. Winther, O. Bruland, H. Elvehøy, and K. Sand. Below – surface icemelt on the coastal Antarctic ice sheet. *J. Glaciol*, 45 (150), 273 – 285.
- 1999** Liston, G. E., J. G. Winther, O. Bruland, H. Elvehøy, K. Sand, and Karløf, L. Snow and Blue – ice Distribution Patterns on the Coastal Antarctic Ice Sheet. *Antarctic Science*
- 1999** Lloyd, C. R., Aurela, M., Bruland, O., Fowler, D., Friberg, T., Hansen, B. U., Harding, R. J., Hargreaves, K., Nordstroem, C., Laurila, T., Tuovinen, J.-P., K. Sand and B. Vehvilainen. Final Report of the Land Arctic Physical Processes (LAPP), Project. Contract No. ENV4-CT95-0093, EC DG XII Climate and Environment, Brussels.
- 1998** Sand, K. and Bruland, O. Application of Georadar for Snow Cover Surveying. *Nordic Hydrology*, 29 (4/5), pp. 361 – 370.
- 1998** Winter, J. G., Bruland, O., Sand, K., Killingtveit, Å. & Maréchal, D. Snow accumulation distribution on Spitsbergen, Svalbard, in 1997. *Polar Research* Vol.17 No.2

Invited Key Note speaker at American Geophysical Union (AGU) in 2012 and at Nordic Hydrological Conference in 2014. In addition more than 20 presentations and conference proceedings in Scandinavia, Europe and USA,

M e m b e r s h i p

Member of Northern Research Basin group and Norwegian Chief Delegate on behalf of the Norwegian Hydrological Council.

O t h e r r e s p o n s i b i l i t i e s

2012 Strindheim IL Ski, Sport Organization with several world championships, Chairman of the board
2011 Master in Technology Management (MTM), Executive Education Program, Chairman of the board
2011 – 2013 Loholtlia Veglag, Chairman of the board
2009 – 2012 Strindheim IL Ski, Board position
2009 – 2010 TEKNA Statkraft, board member
2008 – 2009 TEKNA Statkraft, Chairman of the board

REFERENCES

2009 – 2013 OPPDATING OF HYDROLOGICAL MODELS (OPPMODTIL).

Client: Statkraft
Volume: 12 million NOK
Function: Project Manager

A combined hydropower branch and Norwegian Research Council effort to improve updating methodologies and techniques in hydrological models. As project manager my role was both to ensure scientific quality, relevance to client, system integration, communication between involve groups and budget control.

2007 – 2012 THE ENKI - PROGRAM

Client: Statkraft
Volume: about 25 million NOK
Function: Initiator, Project manager, Implementation Responsible

A program involving several projects aiming at the operationalization of a new tool for hydrological forecasting for the Hydropower industry. This program was initiated and designed by me. I we project manager in the initial phase and later project manager for some of the included projects as OPPMODTIL.

2010– 2012 SHOPIN

Client: Statkraft
Volume: about 3 million
Function: Initiator, Project owner

Development of a tool used by production planners for improving forecasts to the short term production. My role was defining and testing of the system design and to implement this in the operation production scheduling. This included communication with end users.

2004– 2007 HYDROLOGICAL FORECASTING FOR HYDROPOWER SCHEDULING

Client: Trondheim Energy Company
Volume: 16 man months pr year
Function: Head of hydropower forecasting

Short and long term forecasting for the short and long term hydropower production schedules. My role was to ensure high quality daily and seasonal hydrological forecasts and continuously improve the forecasting system, data quality and data collection.

2002– 2003 HYDRAULIC MODEL STUDY OF THE BUJAGALI HYDROPOWER PLANT

Client: Veidekke
Volume: 6 man months
Function: Project manager

Downscale physical model studies of planned hydropower plant in Bujagali falls in the river Nile. My role was design and conduction of test scheme, budget control and reporting.