

SIGURD SKOGESTAD. CV

Norwegian citizen. Born: 14 Aug. 1955 in Flekkefjord, Norway.

Education

- 1978: M.S. (*Siv.ing.*) in Chemical Engineering at NTNU, Trondheim
- 1987: Ph.D. in Chemical Engineering at California Institute of Technology (Caltech).

Positions

- 1979: Military Service at Norwegian Defence Research Center (FFI).
- 1980-83: Research engineer at Norsk Hydro's Research Center in Porsgrunn, Norway.
- 1983-87: Ph. D. student and Research Assistant at California Institute of Technology
- 1987- present : Professor in Chemical Engineering at NTNU (Dept. Head 1999-2009)
- 1994-95: Visiting Professor at University of California, Berkeley (Departments of Chemical Engineering and Mechanical Engineering).
- 2001-02: Visiting Professor at University of California, Santa Barbara (5 months)
- 1999-2009: Head of Department of Chemical Engineering, NTNU
- 2015-present: Director of SFI SUBPRO

Supervision

- 37 completed PhD theses as main supervisor. Currently supervising 6 PhDs and 1 postdoc
- 160 completed MS theses as main supervisor.

Publications

- About 200 international journal publications and 300 conference publications
- H-index (ISI): 39 (2015).
- H-index (Google scholar): 55 (2015)
- Author of 2 international text books. (1) S. Skogestad and I. Postlethwaite, "Multivariable feedback control - analysis and design," Wiley (1996); *2nd Edition* (2005). (2) S. Skogestad, "Chemical and energy process engineering", CRC Press (2009).
- No. of citations to book *Multivariable Feedback control*: 6174 (Google scholar, 2015)

Awards and Honors

- *Innstilling* awarded for the *Siv.ing.* degree (result communicated to Norwegian King), 1979.
- *Fullbright Fellowship* (travel grant) awarded for graduate studies at Caltech, 1983.
- *Utdanningsstipend* awarded from Univ. of Trondheim for graduate studies at Caltech, 1983.
- Elected member to *The Norwegian Academy of Technical Sciences* (NTVA), 1988.
- *Ted Peterson Best Paper Award* by the CAST division of AIChE (The American Institute of Chemical Engineers), 1989.
- *George S. Axelby Outstanding Paper Award* by the Control System Society of IEEE (The Institute of Electrical and Electronic Engineers), 1990.
- Elected member to *Det Kongelige Norske Vitenskapers Selskab*, 1991.
- *O. Hugo Schuck Best Paper Award* by the American Automatic Control Council, 1992.
- *Best paper award* for paper published in 2004 in *Computers and chemical engineering* (2006)
- Member of IFAC Technical Board, 2008-2014.

- Elected member of [Process Automation Hall of Fame](#), Delaware, USA, 23 May 2011
- Elected Fellow of American Institute of Chemical Engineers (AIChE), 2012.
- Elected Fellow of International Federation of Automatic Control (IFAC), 2014.
- Elected member to *The Norwegian Academy of Science and Letters*, Oslo, 2015.
- Honorary member of *Norwegian Society of Automatic Control*, 2015.

Invited plenary lectures. recent

- "Feedback: the simple and best solution", Invited interactive Web-CAST lecture (American Institute of Chemical Engineers' Division for Computing and Systems Technology), Feb. 2006.
- "The dos and don'ts of distillation column control", *Symposium Distillation and Absorption 2006*, London, UK, Sept. 2006.
- "Self-optimizing Control: Simple Implementation of Optimal Operation", *27th Benelux Meeting on Systems and Control*, 18-20 March 2008, Heeze, Netherlands.
- "Feedback: Still the best and simplest solution", *4th IEEE conference of industrial electronics and applications (ICIEA)*, 25-27 May 2009, Xi'an, China.
- "A systematic approach to plantwide control". Invited plenary talk at ICCAS, Seoul, Oct 2011.
- "Optimal PI-Control and Verification of the SIMC Tuning Rule", Invited plenary talk at IFAC Conference PID'12, Brescia, Italy, March 2012.
- "Economic plantwide control". Invited plenary talk at AMIDIQ, San Jose del Cabo, Mexico, 01 May 2012.
- "Optimality of PID control for process control applications", Invited plenary lecture at the 5th International Symposium on Advanced Control of Industrial Processes (ADCONIP 2014), Hiroshima, Japan, May 2014.
- "Economic plantwide control", Invited plenary lecture at Chinese Process Control Conference, Nanchang, China, 01 Aug. 2015

Some other activities

- Member of four editorial boards for major journals
- *Editor* of *Automatica* (1996-2002)
- Founding chair of the Nordic Process Control Working group (1994-1998) + chair 2014-16
- Board member of Norwegian Academy of Technical Sciences (NTVA) (1992- 1999)
- Head of NTNU/SINTEF's strong point center in process systems engineering (PROST) (1994)
- Chair of NTHs fund (1996 - 2002)
- Member of the Norwegian research council expert network (1998-2002)
- Member of the Jury for Norsk Hydro's Birkeland Award, 1999-2002
- Chair of the International Federation of Automatic Control (IFAC) coordinating committee on *Process and Power Systems (CC6)* and member of the IFAC Technical Board, 2008-2014
- Member European Union control council (EUCA) (2007-2013)
- Chair of National Committee for following up International Evaluation of Chemistry Research in Norway (2009-2010)
- Chair of Nordic Process Control Workshop, Trondheim-Bodo, January 2015 (about 70 participants)
- Chair of National Organizing Committee, *11th IFAC Symposium on Dynamics and Control of Process Systems, including Biosystems (DYCOPS-CAB 2016)*, Trondheim, Norway, 06-08 June 2016 (about 250 participants expected).

Sigurd Skogestad

Representative publications from the last ten years.

1. V. Alstad and S. Skogestad, "Null Space Method for Selecting Optimal Measurement Combinations as Controlled Variables", *Ind.Eng.Chem.Res*, **46** (3), 846-853 (2007).
2. E. Storkaas and S. Skogestad, "Controllability analysis of two-phase pipeline-riser systems at riser slugging conditions", *Control Engineering Practice*, **15**, 567-581 (2007).
3. V. Alstad, S. Skogestad and E.S. Hori, "Optimal measurement combinations as controlled variables", *Journal of Process Control*, **19**, 138-148 (2009)
4. S. Skogestad, "Feedback: Still the Simplest and Best Solution", *Modeling, Identification and Control*, **30** (3), 149-155 (2009).
5. J. Jäschke and S. Skogestad, "NCO tracking and self-optimizing control in the context of real-time optimization", *Journal of Process Control*, **21** (10), 1407-1416 (2011).
6. H. Manum and S. Skogestad, "Self-optimizing control with active set changes", *Journal of Process Control*, **22** 873-883 (2012).
7. R. Yelchuru and S. Skogestad, "Convex formulations for optimal selection of controlled variables and measurements using Mixed Integer Quadratic Programming", *Journal of Process Control*, **22** 995-1007 (2012).
8. Sigurd Skogestad and Chriss Grimholt "The SIMC Method for Smooth PID Controller Tuning", Chapter 5 in: R. Vilanova, A. Visioli (eds.), *PID Control in the Third Millennium*, Advances in Industrial Control, DOI 10.1007/978-1-4471-2425-2-5, Springer-Verlag, London, 2012.
9. Sigurd Skogestad "Plantwide Control", Chapter 5.3.1 in: *Process Systems Engineering*. Part of *Ullmann's Encyclopedia of Industrial Chemistry*. Wiley, Weinheim, 2012. pp. 10-14.
10. Sigurd Skogestad "Control structure selection", In: *Encyclopedia of Systems and Control*, Baillieul, John, Samad, Tariq (Eds.), Springer, 2015. ISBN 978-1-4471-5057-2

See CV for awards etc.