## Short curriculum vitae – Sigurd Skogestad (May 2025)

**Personal information**

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| First name, Surname: | Sigurd Skogestad |
| Position | Professor , Norwegian University of Science and Technology |
| URL for personal website:  Identifier | <https://folk.ntnu.no/skoge/>  ORCID: 0000-0001-6187-8261, |

**Education**

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| Year | Faculty/department - University/institution - Country |
| *1987* | Ph.D. in Chemical and Biological Engineering, California Institute of Technology, USA |
| 1978 | Master (siv.ing.) in Chemical Engineering, NTNU (former NTH), Trondheim. Norway |

**Positions - current and previous**

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| Year | Job title – Employer - Country |
| 1987- Current | Professor in Chemical Engineering, NTNU, Trondheim, Norway |
| 1983-1987 | PhD student and Research Assistant, California Institute of Technology, USA |
| 1980 –1983 | Research Engineer, Norsk Hydro Research Center, Porsgrunn, Norway |
| 1979 | Military Service, Norwegian Defence Research Center (FFI) |

**Career breaks - Mobility**

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| Year | Job title – Employer - Country |
| 1994 -1995 | Visiting Professor, Departments of Chemical Engineering and Mechanical Engineering, University of California, Berkeley, USA (12 months). |
| 2001-2002 | Visiting Professor, Departments of Chemical Engineering, University of California, Santa Barbara, USA (5 months). |

**Supervision of students 1987-2024** (Total number of students supervised to completion as main supervisor)

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| Master students | Ph.D.  students | University/institution - Country |
| 210 | 47 | Department of Chemical Engineering, Norwegian University of Science and Technology (NTNU), Trondheim, Norway |

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| **Fellowships and awards** |
| ***1979*** *Instilling* awarded for the *Siv.ing* degree (result communicated to the Norwegian King)  ***1983***Fullbright Fellowship (travel grant) awarded for graduate studies at Caltech  ***1983*** *Utdanningsstipend* awarded from Univ. of Trondheim for graduate studies at Caltech  ***1989*** *Ted Peterson Best Paper Award* by the CAST division of AIChE (The American Institute of  Chemical Engineers)  ***1990*** *George S. Axelby Outstanding Paper Award* by the Control System Society of IEEE (The  Institute of Electrical and Electronic Engineers)   1. *Hugo Schuck Best Paper Award* by the American Automatic Control Council 2. *Best paper award* for paper published in 2004 in *Computers and chemical engineering* 3. *Best paper award at the ESCAPE 2019 Symposium (Eindhoven, June 2019)*   ***2019*** *Computing in chemical engineering award from the American Institute of Chemical Engineers (Orlando)* |

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| **Membership of scientific societies** |
| *1988* Elected Member to the Norwegian Academy of Tehnical Sciences (NTVA)  *1991* Elected member to Det Kongelige Norske Vitenskapers Selskab  *2008-2014* Member of IFAC Technical Board  *2011* Elected member of Process Automation Hall of Fame, Delaware, USA  *2012* Elected Fellow of American Institute of Chemical Engineers (AIChE)  *2014* Elected Fellow of International Federation of Automatic Control (IFAC)  *2015* Elected member to *The Norwegian Academy of Science and Letters*, Oslo  *2015* Honorary member of *Norwegian Society of Automatic Control* |

**Academic track record**

* I have published about 230 international journal publications and 330 conference publications
* H-index (Web of Science): 54 (2024).
* H-index (Google scholar): 78 (2025)
* 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: 12161 (Google scholar, 2024)

**Selected Recent Publications**

**2024**

1. A Comparative Study of Distributed Feedback-Optimizing Control Architectures. R Dirza, HP Varadarajan, V Aas, S Skogestad, D Krishnamoorthy. IEEE Transactions on Control Systems Technology, 2024
2. Optimal switching of MPC cost function for changing active constraints. LF Bernardino, S Skogestad. Journal of Process Control 142, 103298. 2024
3. Optimal measurement-based cost gradient estimate for feedback real-time optimization. LF Bernardino, S Skogestad Computers & Chemical Engineering, 108815 2024
4. Reinforcement learning based MPC with neural dynamical models S Adhau, S Gros, S Skogestad. European Journal of Control, 101048 2024
5. Primal-dual feedback-optimizing control with override for real-time optimization R Dirza, S Skogestad. Journal of Process Control 138, 103208 3 2024
6. Decentralized control using selectors for optimal steady-state operation with changing active constraints. LF Bernardino, S Skogestad. Journal of Process Control 137, 103194 5 2024
7. Understanding Temperature Profiles of Distillation Columns LM Ranger, IJ Halvorsen, T Grutzner, S Skogestad Industrial & Engineering Chemistry Research 63 (10), 4533-4546 2024

**2023**

1. Steady-state and dynamic model for recirculating aquaculture systems with pH included AM dos Santos, LF Bernardino, KJK Attramadal, S Skogestad Aquacultural Engineering 102, 102346 5 2023
2. Home Energy Management with Dynamic Tariffs and Tiered Peak Power Charges D Perez-Pineiro, S Skogestad, S Boyd arXiv preprint arXiv:2307.07580 2023
3. Transformed inputs for linearization, decoupling and feedforward control S Skogestad, C Zotica, N Alsop. Journal of process Control 122, 113-133 13 2023
4. Advanced control using decomposition and simple elements S Skogestad Annual Reviews in Control 56, 100903 24 2023
5. Decentralized control for optimal operation under changing active constraints LF Bernardino, S Skogestad Computer Aided Chemical Engineering 52, 1699-1704 2023

**2022**

1. Experimental validation of distributed feedback-based real-time optimization in a gas-lifted oil well rig R Dirza, J Matias, S Skogestad, D Krishnamoorthy Control Engineering Practice 126, 105253 4 2022
2. Real-time optimization as a feedback control problem, A review. D Krishnamoorthy, S Skogestad Computers & Chemical Engineering 161, 107723 45 2022
3. Bidirectional inventory control with optimal use of intermediate storage C Zotica, K Forsman, S Skogestad Computers & Chemical Engineering 159, 107677 7 2022
4. Control of steam bottoming cycles using nonlinear input and output transformations for feedforward disturbance rejection C Zotica, RM Montanes, A Reyes-Lua, S Skogestad IFAC-PapersOnLine 55 (7), 969-974 8\* 2022
5. Comparison of simple feedback control structures for constrained optimal operation LF Bernardino, D Krishnamoorthy, S Skogestad IFAC-PapersOnLine 55 (7), 883-888 4 2022
6. Optimal control of water quality in a recirculating aquaculture system AM dos Santos, KJK Attramadal, S Skogestad IFAC-PapersOnLine 55 (7), 328-333 6 2022
7. Optimal operation of heat exchanger networks with changing active constraint regions LF Bernardino, D Krishnamoorthy, S Skogestad Computer Aided Chemical Engineering 49, 421-426 4 2022
8. Primal-dual feedback-optimizing control with direct constraint control R Dirza, D Krishnamoorthy, S Skogestad Computer Aided Chemical Engineering 49, 1153-1158 3 2022