# Curriculum Vitae for Sigurd Skogestad

Updated May 2011

|  |  |
| --- | --- |
| Name | Sigurd Skogestad, PhD (1987) |
| Employment | Professor, Norwegian University of Science and Technology (NTNU); Trondheim |
| Contact | Email: skoge@ntnu.no, Tel.: +47 7359 4154 |
| Date of birth | 14 Aug. 1955 |

**Career Overview**

|  |  |
| --- | --- |
| 1980-83  1983-86  1987- today  1994-95  2003-04 | Norsk Hydro Research Center, Posrgrunn, Norway  PhD student, Califormia Insititute of Technology  Professor, NTNU  Visiting Professor, University of California at Berkeley  Visiting Professor, University of California at Santa Barbara |

**Main Research Areas**

Use of feedback control as a tool to (1) reduce uncertainty (including robust control), (2) change the system dynamics (including stabilization), and (3) generally make the system more well-behaved (including self-optimizing control).

**Scientific Publications**

168 international journal papers/book chapters and 242 conference papers published at international conferences. Two international published books (Wiley 1996, 20005 and CRC Press 2009) – a full list of publications can be found at http://www.nt.ntnu.no/users/skoge

H-index (ISI, Scopus): 30

H-index (Harzing’s Publish or Perish): 35

Total no. of citations (Harzing’s Publish or Perish): 8391

No. of citations to book by Skogestad and Postlethwaite, “Multivariable Feedback control”, Wiley (1996, 2005): 2833

**Project Experience**

European, Scandinavian and national research projects

Head of Department of Chemical Engineering 1999-2009

**Appointments /editor**

* Editor of Automatica (1996-2002).
* Member Advisory Panel: Chem. Eng. Sci. (from 2002).
* Member Editorial Board: Comput. Chem. Engng. (from 2002).
* Member Editorial Advisory Board: Ind. Eng. Chem. Res. (2005-2009).
* Associate Editor: Journal of Control Science and Engineering (new web journal; from 2006)
* Designated editor: Control Engineering Practice (from 2006),
* Member Editorial Board: Chem. Eng. and Processing (2001-2007).
* Associate Editor: European Journal of Control (from 2009)
* Editor (reviews): Journal of Process Control (from 2010)

**Distinguished Academic Achievements**

* *Fullbright Fellowship* awarded for graduate studies at Caltech, 1983.
* *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 (for journal paper no. 14).
* *O. Hugo Schuck Best Paper Award* by the American Automatic Control Council, 1992 (for conference paper no. 28).
* Book "Multivariable Feedback Control" (Wiley, 1996) selected first runner-up for International Federation of Automatic Control award for best texbook of the last 3 years (IFAC World Congress, Beijing, 1999).
* Outstanding Service Award of the International Federation of Automatic Control (IFAC World Congress, Prague, 2005).
* Best paper award for paper published in 2004 in Computers and chemical engineering (2006). (For paper: S. Skogestad, [``Control structure design for complete chemical plants'',](http://www.nt.ntnu.no/users/skoge/publications/2004/control_structure_design_cce) *Computers and Chemical Engineering*, **28** (1-2), 219-234 (2004).)

**Graduated PhD students (2006-2011)**

1. Antonio C.B. Araujo, [Studies on plantwide control](http://www.nt.ntnu.no/users/skoge/publications/thesis/2007_araujo), Jan. 2007. (Ass. Prof., Federal University of Campina Grande, Brazil)
2. Tore Lid, [Data reconciliation and optimal operation - With applications to refinery processes](http://www.nt.ntnu.no/users/skoge/publications/thesis/2007_lid) , June 2007 (Statoil, Mongstad/Bergen)
3. Federico Zenith, [Control of fuel cells](http://www.nt.ntnu.no/users/skoge/publications/thesis/2007_zenith), June 2007 (SINTEF Cybernetics, Trondheim)
4. Jørgen B. Jensen, [Optimal operation of refrigeration cycles](http://www.nt.ntnu.no/users/skoge/publications/thesis/2008_jensen), May 2008 (ABB, Oslo)
5. Heidi Sivertsen, [Stabilization of desired flow regimes using active control](http://www.nt.ntnu.no/users/skoge/publications/thesis/2008_sivertsen), December 2008 (Statoil, Stjørdal)
6. Elvira M.B. Aske, [Design of plantwide control systems with focus on maximizing throughput](http://www.nt.ntnu.no/users/skoge/publications/thesis/2009_aske), March 2009 (Statoil, Trondheim)
7. Andreas Linhart, [An aggregation model reduction method for one-dimensional distributed systems](http://www.nt.ntnu.no/users/skoge/publications/thesis/2009_linhart), Oct. 2009 (Conergy AG, Hamburg).
8. Henrik Manum, [Simple implementation of optimal control for process systems](http://www.nt.ntnu.no/users/skoge/publications/thesis/2010_manum), Nov. 2010 (Cybernetica, Trondheim).

**Books (2006-2011)**

1. S. Skogestad and I. Postlethwaite, [``Multivariable feedback control - analysis and design,''](http://www.nt.ntnu.no/users/skoge/book.html) Wiley, Chichester, 2nd Edition , revised (2006).
2. S. Skogestad, [``Chemical and Energy Process Engineering''](http://www.nt.ntnu.no/users/skoge/book-cep) CRC Press (Taylor & Francis Group), 450 pages, 2009.

**Journal Papers (2006-2011)**

1. V. Kariwala, S. Skogestad and J.F. Forbes, [``Relative Gain Array for norm-bounded uncertain systems'',](http://www.nt.ntnu.no/users/skoge/publications/2006/kariwala_iecr_rga-uncertain) *Ind.Eng.Chem.Res*, **45** (5), 1751-1757 (2006).
2. S. Skogestad, [``Tuning for smooth PID control with acceptable disturbance rejection'',](http://www.nt.ntnu.no/users/skoge/publications/2006/skogestad_iecr_smooth-pid) *Ind.Eng.Chem.Res*, **45** (23), 7817-7822 (2006).
3. F. Zenith, F. Seland, O.E. Kongstein, B. Børresen, R. Tunold and S. Skogestad, [``Control-oriented modelling and experimental study of the transient response of a high-temperature polymer fuel cell'',](http://www.nt.ntnu.no/users/skoge/publications/2006/zenith_polymer_fuel_cell_model+exp_jps) *Journal of Power Sources*, **162**, 215-227 (2006).
4. A.C.B. Araujo and S. Skogestad, [``Limit Cycles with Imperfect Valves: Implications for Controllability of Processes with Large Gains'',](http://www.nt.ntnu.no/users/skoge/publications/2006/araujo_iecr_large-gains) *Ind.Eng.Chem.Res*, **45** (26), 9024-9032 (2006).
5. V. Alstad and S. Skogestad, [``Null Space Method for Selecting Optimal Measurement Combinations as Controlled Variables'',](http://www.nt.ntnu.no/users/skoge/publications/2007/alstad_iecr_nullspace) *Ind.Eng.Chem.Res*, **46** (3), 846-853 (2007).
6. V. Kariwala and S. Skogestad, [``-Interaction measure for unstable systems'',](http://www.nt.ntnu.no/users/skoge/publications/2007/kariwala_mu-im_ijac) *Int. J. Automation and Control*, **1** (4), 295-313 (2007).



1. V. Kariwala and S. Skogestad, [``L1-Q Approach for efficient computation of disturbance rejection measures for feedback control'',](http://www.nt.ntnu.no/users/skoge/publications/2007/kariwala_disturbance_measures_jpc) *J. Proc. Control*, **17** (6), 501-508 (2007).
2. S. Skogestad, [``The dos and don'ts of distillation columns control'',](http://www.nt.ntnu.no/users/skoge/publications/2007/skogestad_distillation-dos-and-donts_special-issue-of-cherd) *Chemical Engineering Research and Design (Trans IChemE, Part A)*, **85** (A1), 13-23 (2007).
3. E.S. Hori and S. Skogestad, [``Selection of control structure and temperature location for two-product distillation columns'',](http://www.nt.ntnu.no/users/skoge/publications/2007/hori_distillation_structures_cherd) *Chemical Engineering Research and Design (Trans IChemE, Part A)*, **85** (A3), 293-306 (2007).
4. J. B. Jensen and S. Skogestad, [``Optimal operation of simple refrigeration cycles. Part I: Degrees of freedom and optimality of sub-cooling'',](http://www.nt.ntnu.no/users/skoge/publications/2007/jensen_refrig-oper-part1_cce) *Computers and Chemical Engineering*, **31**, 712-721 (2007).
5. J. B. Jensen and S. Skogestad, [``Optimal operation of simple refrigeration cycles. Part II: Selection of controlled variables'',](http://www.nt.ntnu.no/users/skoge/publications/2007/jensen_refrig-oper-part2_cce) *Computers and Chemical Engineering*, **31**, 1590-1601 (2007).
6. F. Zenith and S. Skogestad, [``Control of fuel cell power output'',](http://www.nt.ntnu.no/users/skoge/publications/2007/zenith-fuel-cell-power-control) *J. Proc. Control*, **17** (4), 333-347 (2007).
7. E. Storkaas and S. Skogestad, [``Controllability analysis of two-phase pipeline-riser systems at riser slugging conditions'',](http://www.nt.ntnu.no/users/skoge/publications/2007/storkaas_controllability-slug_cep) *Control Engineering Practice*, **15**, 567-581 (2007).
8. A.C.B. Araujo, M. Govatsmark and S. Skogestad, [``Application of plantwide control to the HDA process. I Steady-state and self-optimizing control'',](http://www.nt.ntnu.no/users/skoge/publications/2007/araujo_hda_part1_cep) *Control Engineering Practice*, **15**, 1222-1237 (2007).
9. A.C.B. Araujo, E.S. Hori and S. Skogestad, [``Application of plantwide control to the HDA process. Part II Regulatory control'',](http://www.nt.ntnu.no/users/skoge/publications/2007/araujo_hda_part2_dyn) *Ind.Eng.Chem.Res*, **46** (15), 5159-5174 (2007).
10. V. Kariwala, S. Skogestad and J.F. Forbes, [``Reply to ``Further Theoretical results on Relative Gain Array for Norn-Bounded Uncertain systems''''](http://www.nt.ntnu.no/users/skoge/publications/2007/kariwala_reply_rga) *Ind.Eng.Chem.Res*, **46** (24), 8290 (2007).
11. V. Lersbamrungsuk, T. Srinophakun, S. Narasimhan and S. Skogestad, [``Control structure design for optimal operation of heat exchanger networks'',](http://www.nt.ntnu.no/users/skoge/publications/2008/lek-hen-aichej) *AIChE J.*, **54** (1), 150-162 (2008). DOI 10.1002/aic.11366
12. T. Lid and S. Skogestad, [``Scaled steady state models for effective on-line applications'',](http://www.nt.ntnu.no/users/skoge/publications/2008/lid-modeling-cce-rex-issue) *Computers and Chemical Engineering*, **32**, 990-999 (2008). doi:10.1016/j.compchemeng.2007.04.003
13. T. Lid and S. Skogestad, [``Data reconciliation and optimal operation of a catalytic naphtha reformer'',](http://www.nt.ntnu.no/users/skoge/publications/2008/lid-reformer-jpc-seborg-issue) *Journal of Process Control*, **18**, 320-331 (2008). (Reprinted in *Modeling, Identification and Control*, **29**, 117-129, 2008.)
14. E.M.B. Aske, S. Strand and S. Skogestad, [``Coordinator MPC for maximizing plant throughput'',](http://www.nt.ntnu.no/users/skoge/publications/2008/aske_coordinator-mpc_cce) *Computers and Chemical Engineering*, **32**, 195-204 (2008). (Also reprinted in: *Modeling Identification and Control*, **29** (3), 103-115, 2008.)
15. J.B. Jensen and S. Skogestad, [``Problems with specifying Delta T-min in design of processes with heat exchangers'',](http://www.nt.ntnu.no/users/skoge/publications/2008/jensen_dtmin_iec) *Ind.Eng.Chem.Res*, **47** (9), 5159-5174 highlighting (2008).
16. M. Baldea, A.C.B Araujo, P. Daoutidis and S. Skogestad, [``Dynamic considerations in the synthesis of self-optimizing control structures'',](http://www.nt.ntnu.no/users/skoge/publications/2008/araujo_aichej_time-scale) *AIChE J.*, **54** (7), 1830-1841 (2008).
17. A. Araujo and S. Skogestad, [``Control structure design for the ammonia synthesis process'',](http://www.nt.ntnu.no/users/skoge/publications/2008/araujo_ammonia_cce) *Computers and Chemical Engineering*, **32** (12), 2920-2932 (2008).
18. E.S. Hori and S. Skogestad, [``Selection of controlled variables: Maximum gain rule and combination of measurements'',](http://www.nt.ntnu.no/users/skoge/publications/2008/hori_max-gain-rule) *Ind.Eng.Chem.Res*, **47** (23), 9465-9471 (2008).
19. V. Alstad, S. Skogestad and E.S. Hori, [``Optimal measurement combinations as controlled variables'',](http://www.nt.ntnu.no/users/skoge/publications/2009/alstad_extended_nullspace_jpc) *Journal of Process Control*, **19**, 138-148 (2009) (Available online March 2008; DOI 10.1016/j.jprocont.2008.01.002)
20. A. Linhart and S. Skogestad, [``Computational performance of aggregated distillation models'',](http://www.nt.ntnu.no/users/skoge/publications/2009/linhart_low-order-distillation_cce) *Computers and Chemical Engineering*, **31** (1), 296-308 (2009).
21. F. Zenith and S. Skogestad, [``Control of the mass and energy dynamics of polybenzimidazole-membrane fuel cells'',](http://www.nt.ntnu.no/users/skoge/publications/2009/zenith_fuelcell_slow_jpc) *J. Process Control*, **19** (3), 415-432 (2009).
22. S. Gruetzmann, G. Fieg and S. Skogestad, [``Experimental and Theoretical Studies on the Start-Up Operation of a Multivessel Batch Distillation Column'',](http://www.nt.ntnu.no/users/skoge/publications/2009/gruetzmann_multivessel_iecr) *Ind.Eng.Chem.Res*, **48** (11), 5336-5343 (2009).
23. J.B. Jensen and S. Skogestad, [``Steady-State Operational Degrees of Freedom with Application to Refrigeration Cycles'',](http://www.nt.ntnu.no/users/skoge/publications/2009/jensen_dof_iec) *Ind.Eng.Chem.Res*, **48** (14), 6652-6659 (2009).
24. E.M.B. Aske and S. Skogestad, [``Consistent inventory control'',](http://www.nt.ntnu.no/users/skoge/publications/2009/aske_consistency_iecr) *Ind.Eng.Chem.Res*, **48** (44), 10892-10902 (2009).
25. S. Skogestad, [``Feedback: Still the Simplest and Best Solution'',](http://www.nt.ntnu.no/users/skoge/publications/2009/skogestad_feedback-is-best_mic/) *Modeling, Identification and Control*, **30** (3), 149-155 (2009). DOI: 10.4173/mic.2009.3.5
26. H. Sivertsen, E. Storkaas and S. Skogestad, [``Small-scale experiments on stabilizing riser slug flow'',](http://www.nt.ntnu.no/users/skoge/publications/2010/sivertsen_slug_spe) *Society of Petroluem Engineers (SPE) Projects, Facilities & Construction*, **4** (4), 156-170 (Dec. 2009).
27. L. Dobos, J. Jäschke, J. Abonyi, S. Skogestad, [``Dynamic model and control of heat exchanger networks for district heating'',](http://www.nt.ntnu.no/users/skoge/publications/2009/dobos-hungarianjournal) *Hungarian Journal of Industrial Chemistry Veszprem*, **37** (1), 37-49 (2009).
28. H. Sivertsen, V. Alstad and S. Skogestad, [``Medium-scale experiments on stabilizing riser-slug flow'',](http://www.nt.ntnu.no/users/skoge/publications/2010/sivertsen_mini-slug_cherd) *Chemical Engineering Research and Design (Trans IChemE, Part A)*, **88** (A3), 213-228 (2010).
29. H. Manum and S. Skogestad, [``Bilevel programming for analysis of reduced models for use in model predictive control'',](http://www.nt.ntnu.no/users/skoge/publications/2010/manum-cyb-and-informatics) *Journal of Cybernetics and Informatics*, **9**, 3-12 (2010).
30. M. Shamsuzzoha and S. Skogestad, [``The setpoint overshoot method: A simple and fast method for closed-loop PID tuning'',](http://www.nt.ntnu.no/users/skoge/publications/2010/shamsuzzoha_pid_jpc) *Journal of Process Control*, **20**, 1220-1234 (2010).
31. A. Linhart and S. Skogestad, [``Reduced distillation models via stage aggregation'',](http://www.nt.ntnu.no/users/skoge/publications/2010/linhart_agg-dist_ces) *Chemical Engineering Science*, **65**, 3439-3456 (2010).
32. "IMC-like Analytical H-infinity design with S/SP mixed sensitivity consideration: Utility in PID tuning guidance" Journal of Process Control 21(4) (2011) pp. 554-563
33. J.J. Downs and S. Skogestad, [``An industrial and academic perspective on plantwide control'',](http://www.nt.ntnu.no/users/skoge/publications/2011/downs_skogestad_journal) *Annual Reviews in Control*, **35**, 99-110 (2011).

Book chapters (2006-2011)

1. Ivar J. Halvorsen, Sigurd Skogestad [``Minimum Energy Operation of Petlyuk Distillation Columns - Nonsharp Product Specifications'',](http://www.nt.ntnu.no/users/skoge/publications/2009/halvorsen_nonsharp-petlyuk_qatar) Proceedings of the 1st Annual Gas Processing Symposium, 2009, Pages 79-87, Elsevier, ISBN-13: 978-0-444-53292-3.
2. Jørgen Bauck Jensen, Sigurd Skogestad [`` Single-cycle mixed-fluid LNG process Part I: Optimal design'',](http://www.nt.ntnu.no/users/skoge/publications/2009/jensen_lng-prico1_qatar) Proceedings of the 1st Annual Gas Processing Symposium, 2 H. Alfadala, G.V. Rex Reklaitis and M.M. El-Halwagi (Editors). 009, Pages 211-218, Elsevier. ISBN-13: 978-0-444-53292-3.
3. Jørgen Bauck Jensen, Sigurd Skogestad [``Single-cycle mixed-fluid LNG process Part II: Optimal operation'',](http://www.nt.ntnu.no/users/skoge/publications/2009/jensen_lng-prico2_qatar) Proceedings of the 1st Annual Gas Processing Symposium, H. Alfadala, G.V. Rex Reklaitis and M.M. El-Halwagi (Editors). 2009, Pages 219-226, Elsevier. ISBN-13: 978-0-444-53292-3.
4. Mehdi Panahi, Mehdi Karimi, Sigurd Skogestad, Magne Hillestad, Hallvard F. Svendsen [``Self-Optimizing and Control Structure Design for a CO2 Capturing Plant'',](http://www.nt.ntnu.no/users/skoge/publications/2010/panahi_co2_qatar2010) Advances in Gas Processing (Volume 2). Proceedings of the 2nd Annual Gas Processing Symposium, F. T. Eljack, G.V. Rex Reklaitis and M.M. El-Hawagi (Editors). 2010, Pages 331-338, Elsevier ISBN-978-0-444-53588-7
5. Mehdi Panahi, Sigurd Skogestad, Ramprasad Yelchuru [``Steady State Simulation for Optimal Design and Operation of a GTL Process'',](http://www.nt.ntnu.no/users/skoge/publications/2010/panahi_gtl_qatar2010) Advances in Gas Processing (Volume 2). Proceedings of the 2nd Annual Gas Processing Symposium, F. T. Eljack, G.V. Rex Reklaitis and M.M. El-Hawagi (Editors). 2010, Pages 275-284, Elsevier, ISBN-978-0-444-53588-7

**International conference publications (2006-2011)**

1. A. Araujo, M.S. Govatsmark and S. Skogestad, [``Application of plantwide control to large scale systems. Part I - Self-optimizing control of the HDA process'',](http://www.nt.ntnu.no/users/skoge/publications/2006/araujo_adchem06_hda) *Proceedings Adchem 2006* (IFAC symp. on Advanc ed control of chemical processes), Gramado, Brazil, 2-5 April 2006, pp. 1049-1054.
2. J.B. Jensen and S. Skogestad, [``Optimal operation of a simple LNG process'',](http://www.nt.ntnu.no/users/skoge/publications/2006/jensen_adchem06_prico) *Proceedings Adchem 2006* (IFAC symp. on Advanc ed control of chemical processes), Gramado, Brazil, 2-5 April 2006, pp. 241-246.
3. H. Sivertsen, J.M. Godhavn, A. Faanes and S. Skogestad, [``Control solutions for subsea processing and multiphase transport''](http://www.nt.ntnu.no/users/skoge/publications/2006/sivertsen_adchem06_subsea) *Proceedings Adchem 2006* (IFAC symp. on Advanc ed control of chemical processes), Gramado, Brazil, 2-5 April 2006, pp. 1069-1074.
4. J. Strandberg and S. Skogestad, [``Stabilizing control of an integrated 4-product Kaibel column'',](http://www.nt.ntnu.no/users/skoge/publications/2006/strandberg_adchem06_kaibel) *Proceedings Adchem 2006* (IFAC symp. on Advanced control of chemical processes), Gramado, Brazil, 2-5 April 2006, pp. 623-628.
5. A. Araujo, M. Baldea, S. Skogestad and P. Daoutidis, [``Time scale separation and the link between open-loop and closed-loop dynamics '',](http://www.nt.ntnu.no/users/skoge/publications/2006/araujo_pse06_time-scale) In: *Proc. PSE-ESCAPE Symposium*, 10-13 July 2006, Garmisch-Partenkirchen, Germany. Published by Elsevier, ISBN 0-444-52969-1 978-0-444-52969-5, pp. 1455-1460.
6. E.M.B. Aske, S. Strand and S. Skogestad, [``Coordinator MPC with focus on maximizing throughput'',](http://www.nt.ntnu.no/users/skoge/publications/2006/aske_pse06_coordinator_mpc) In: *Proc. PSE-ESCAPE Symposium*, 10-13 July 2006, Garmisch-Partenkirchen, Germany. Published by Elsevier, ISBN 0-444-52969-1 978-0-444-52969-5, pp. 1203-1208.
7. J.B. Jensen and S. Skogestad, [``Optimal operation of a mixed fluid cascade LNG plant'',](http://www.nt.ntnu.no/users/skoge/publications/2006/jensen_pse06_lng) In: *Proc. PSE-ESCAPE Symposium*, 10-13 July 2006, Garmisch-Partenkirchen, Germany. Published by Elsevier, ISBN 0-444-52969-1 978-0-444-52969-5, pp. 1568-1574.
8. V. Kariwala and S. Skogestad, [``Branch and Bound Methods for Control Structure Design'',](http://www.nt.ntnu.no/users/skoge/publications/2006/kariwala_pse06_bb-csd) In: *Proc. PSE-ESCAPE Symposium*, 10-13 July 2006, Garmisch-Partenkirchen, Germany. Published by Elsevier, ISBN 0-444-52969-1 978-0-444-52969-5, pp. 1371-1376.
9. S. Skogestad, [``The dos and don’ts of distillation column control'',](http://www.nt.ntnu.no/users/skoge/publications/2006/skogestad_distillation06-plenary) Proceedings Distillation and Apsorption, London, UK, 4-6 Sept. 2006, In: *IChemE Symposium Series*, **152**, ISBN-13 978 0 85295 505 5, pp. 28-43 (2006).
10. E.S. Hori, S. Skogestad and M.A. Al-Arfaj, [``Self-optimizing control configurations for two-product distillation columns'',](http://www.nt.ntnu.no/users/skoge/publications/2006/hori_distillation06) , Proceedings Distillation and Apsorption, London, UK, 4-6 Sept. 2006, In: *IChemE Symposium Series*, **152**, ISBN-13 978 0 85295 505 5, pp. 590-599 (2006).
11. J. Strandberg and S. Skogestad, [``Stabilizing operation of a 4-product integrated Kaibel column'',](http://www.nt.ntnu.no/users/skoge/publications/2006/strandberg_distillation06_kaibel) , Proceedings Distillation and Apsorption, London, UK, 4-6 Sept. 2006, In: *IChemE Symposium Series*, **152**, ISBN-13 978 0 85295 505 5, pp. 638-647 (2006).
12. V. Lersbamrungsuk, S. Skogestad and T. Srinophakun, [``A Simple Strategy for Optimal Operation of Heat Exchanger Networks'',](http://www.nt.ntnu.no/users/skoge/publications/2006/lek_hen_thai-conference) International Conference on Modeling in Chemical and Biological Engineering Sciences (CBES 2006), Bangkok, Thailand, 25-27 Oct. 2006. Paper 180 (12 pages).
13. I.J. Halvorsen and S. Skogestad, [`` Minimum Energy for the four-product Kaibel-column'',](http://www.nt.ntnu.no/users/skoge/publications/2006/halvorsen_kaibel_aiche06) AIChE Annual Meeting, San Francisco, USA, Nov. 2006, Paper and Presentation 216d.
14. E.M.B. Aske, S. Strand and S. Skogestad, [``Coordinator MPC for maximization of plant throughput'',](http://www.nt.ntnu.no/users/skoge/publications/2006/aske_coordinator-mpc_aiche06) AIChE Annual Meeting, San Francisco, USA, Nov. 2006, Abstract and Presentation 330b.
15. A.C.B. Araujo and S. Skogestad, [``A plantwide control procedure applied to the HDA process'',](http://www.nt.ntnu.no/users/skoge/publications/2006/araujo_hda_aiche06) AIChE Annual Meeting, San Francisco, USA, Nov. 2006, Abstract and Presentation 406d.
16. M. Baldea, P. Daoutidis, A.C.B. Araujo, S. Skogestad, [``Integrated Process Networks: Nonlinear Control System Design for Optimality and Dynamic Performance'',](http://www.nt.ntnu.no/users/skoge/publications/2006/baldea_aiche06) AIChE Annual Meeting, San Francisco, USA, Nov. 2006, Abstract and Presentation 222c.
17. V. Kariwala, J.F. Forbes and S. Skogestad, [``Mu-interaction measure for unstable systems'',](http://www.nt.ntnu.no/users/skoge/publications/2006/kariwala_icarcv06_mu-im-unstable) *9th International IEEE Conference on Control, Automation, Robotics and Vision (ICARCV 2006)*, Singapore, 05-08 Dec. 2006, Paper 526 (6 pages).
18. E. M. B. Aske, S. Skogestad, S. Strand, ["Throughput maximization by improved bottleneck control",](http://www.nt.ntnu.no/users/skoge/publications/2007/aske_dycops07) 8th International Symposium on Dynamics and Control of Process Systems (DYCOPS), vol. 1, June 6-8 2007, Cancun, Mexico, pp. 63-68.
19. E. S. Hori, S.Skogestad, ["Maximum Gain Rule for Selecting Controlled Variables",](http://www.nt.ntnu.no/users/skoge/publications/2007/hori_dycops07) 8th International Symposium on Dynamics and Control of Process Systems (DYCOPS), vol. 2, June 6-8 2007, Cancun, Mexico, pp. 129-134
20. M. Mulas, R. Baratti, S. Skogestad, ["Controlled Variables Selection, for a Biological Wastewater Treatment",](http://www.nt.ntnu.no/users/skoge/publications/2007/mulas_dycops07) 8th International Symposium on Dynamics and Control of Process Systems (DYCOPS), vol. 2, June 6-8 2007, Cancun, 17 Mexico, pp. 141-146
21. S. Narasimhan, S. Skogestad, ["Implementation of optimal Opteration using Off-Line Calculations",](http://www.nt.ntnu.no/users/skoge/publications/2007/narasimham_dycops07) 8th International Symposium on Dynamics and Control of Process Systems (DYCOPS), vol. 2, June 6-8 2007, Cancun, 24 17 Mexico, pp. 121-126
22. E.S. Hori and S. skogestad, ["Control structure selection of a deethanizer column with partial condenser",](http://www.nt.ntnu.no/users/skoge/publications/2007/hori_ecce6_sep07) European Congress of Chemical Engineering (ECCE-6), Copenhagen, 16-20 September 2007. Abstracts published in "ECCE-6 Book of abstracts", Vol. 1, ISBN 978-87-91435-56-0. Full paper available on conference CD.
23. H. Manum, S. Narasimham, S. Skogestad, ["A new approach to explicit MPC", Paper 65b,](http://www.nt.ntnu.no/users/skoge/publications/2007/manum_aiche-annual) AIChE Annual Meeting, Salt Lake City, USA, Nov. 2007.
24. H. Dahl-Olsen, S. Narasimham, S. Skogestad, ["Near-optimal feedback control of dynamic processes",](http://www.nt.ntnu.no/users/skoge/publications/2007/dahl-olsen_aiche-annual) Paper 150a, AIChE Annual Meeting, Salt Lake City, USA, Nov. 2007.
25. H. Manum, S. Narasimham and S. Skogestad, ["A new approach to explicit MPC using self-optimizing control",](http://www.nt.ntnu.no/users/skoge/publications/2008/manum_acc08) *Proc. American Control Conference (ACC)*, 435-440, Seattle, June 2008.
26. H. Dahl-Olsen, S. Narasimham and S. Skogestad, ["Optimal output selection for control of batch proecesses",](http://www.nt.ntnu.no/users/skoge/publications/2008/dahl-olsen_acc08) *Proc. American Control Conference (ACC)*, 2870-2871 begin\_of\_the\_skype\_highlighting              2870-2871      end\_of\_the\_skype\_highlighting, Seattle, June 2008.
27. J. Cai, J.B. Jensen, S. Skogestad and J. Stoustrup, ["One the trade-off between energy consumption and food quality loss in supermarket refrigeration systems",](http://www.nt.ntnu.no/users/skoge/publications/2008/cai_acc08) *Proc. American Control Conference (ACC)*, 2880-2885 begin\_of\_the\_skype\_highlighting              2880-2885      end\_of\_the\_skype\_highlighting, Seattle, June 2008.
28. H. Manum, S. Narasimham and S. Skogestad, ["Explicit MPC with output feedback using self-optimizing control",](http://www.nt.ntnu.no/users/skoge/publications/2008/manum_ifac2008) *Proc. 17th IFAC World Congress. International federation of Automatic Control*, 6956-6961 begin\_of\_the\_skype\_highlighting              6956-6961      end\_of\_the\_skype\_highlighting, Seoul, Korea, July 2008.
29. E.M.B. Aske, S. Strand, S. Skogestad, ["Implementation of coordinator MPC on a large-scale gas plant",](http://www.nt.ntnu.no/users/skoge/publications/2008/aske-aiche08-coordinator-mpc) Paper 409g, AIChE Annual Meeting, Philadelphia, USA, Nov. 2008.
30. J. Jäschke, S. Narasimhan, S. Skogestad, ["Explicit real-time optimization",](http://www.nt.ntnu.no/users/skoge/publications/2008/jaschke-aiche08_explicit-rto) Paper 471a, AIChE Annual Meeting, Philadelphia, USA, Nov. 2008.
31. S. Skogestad, ["Feedback: Still the simplest and best solution,"](http://www.nt.ntnu.no/users/skoge/publications/2009/skogestad_feedback-is-best_iciea09) (Plenary lecture). *4th IEEE Conference on Industrial Electronics and Applications (ICIEA)*, 25-27 May 2009, Xi'an, China
32. J. Jäschke, H. Smedsrud, S. Skogestad, H. Manum. ["Optimal Operation of a Waste Incineration Plant for District Heating"](http://www.nt.ntnu.no/users/skoge/publications/2009/jaschke_energy_acc) *Proc. American Control Conference*, St. Louis, USA, June 2009, pp. 665-670. ISBN: 978-1-4244-4524-0
33. H. Manum, S. Skogestad, J. Jäschke, ["Convex initialization of the H2-optimal static output feedback problem"](http://www.nt.ntnu.no/users/skoge/publications/2009/manum_lq-pid_acc) *Proc. American Control Conference*, St. Louis, USA, June 2009, pp. 1724-1729. ISBN: 978-1-4244-4524-0
34. J.J. Downs, S. Skogestad, ["An industrial and academic perspective on plantwide control",](http://www.nt.ntnu.no/users/skoge/publications/2009/aske_adchem09_industrial-coordinator) *Proc. IFAC Symposium on Advanced Control of Chemical Processes (Adchem 2009)*, pp. 119-130, Koc University, Istanbul, Turkey, 12-15 July 2009.
35. E.M.B. Aske, S. Strand, S. Skogestad, ["Industrial Implementation of a Coordinator MPC for Maximizing Throughput at a Large-Scale Gas Plant",](http://www.nt.ntnu.no/users/skoge/publications/2009/aske_adchem09_industrial-coordinator) *Proc. IFAC Symposium on Advanced Control of Chemical Processes (Adchem 2009)*, pp. 132-137. Koc University, Istanbul, Turkey, 12-15 July 2009.
36. J.Jäschke, S. Skogestad, ["Optimally Invariant Variable Combinations for Nonlinear Systems",](http://www.nt.ntnu.no/users/skoge/publications/2009/jaschke_adchem09) *Proc. IFAC Symposium on Advanced Control of Chemical Processes (Adchem 2009)*, pp. 551-556, Koc University, Istanbul, Turkey, 12-15 July 2009.
37. E.M.B. Aske, S. Strand, S. Skogestad, ["Dynamic degrees of freedom for tighter bottleneck control",](http://www.nt.ntnu.no/users/skoge/publications/2009/aske-dynbottle_pse09) *Proc. 10th International Symposium on Process Systems Engineering (PSE2009)*, Salvador, Brazil, 16-20 Aug. 2009, In: Book series Computer Aided Chemical Engineering, Vol. 27, Elsevier, 2009, pp. 1275-1280. ISBN-13: 978-0-444-53472-9
38. H. Manum, C.N. Jones, J. Löfberg, M. Morari, S. Skogestad. ["Bilevel programming for analysis of low-complexity control of linear systems with constraints."](http://www.nt.ntnu.no/users/skoge/publications/2009/manum_cdc09) *Proc. Conference on Decision and Control (CDC)*, Shanghai, China, December 2009, pp. 946-951. ISBN: 978-1-4244-3872-3/09
39. Mehdi Panahi and S. Skogestad, "Self-optimizing control of a GTL process", 1st Trondheim Gas Technology Conference, 21-22 Oct. 2009.
40. Magnus Glosli Jacobsen and S. Skogestad, "Choosing optimal controlled variables for the C3-MR process for liquification of natural gas", 1st Trondheim Gas Technology Conference, 21-22 Oct. 2009.
41. Maryam Ghadrdan, S. Skogestad and I.J. Halvorsen, "Selection of controlled variables for self-optimizing control of thermally coupled distillation columns", 1st Trondheim Gas Technology Conference, 21-22 Oct. 2009.
42. H. Dahl-Olsen and S. Skogestad, ["Near-optimal control of batch processes - by tracking of approximated sufficient conditions of optimality."](http://www.nt.ntnu.no/users/skoge/publications/2009/dahl-olsen_2009-aiche-annual-meeting) Oral Presentation, AIChE Annual Meeting, Nashville, USA, Nov. 2009.
43. Ramprasad Yelchuru, Sigurd Skogestad, Henrik Manum , [MIQP formulation for Controlled Variable Selection in Self Optimizing Control](http://www.nt.ntnu.no/users/skoge/publications/2010/yelchuru-miqp-dycops2010) *9th IFAC Symposium on Dynamics and Control of Process Systems (DYCOPS-9* Leuven, Belgium, 5-7 July 2010, pp. 61-66 (2010).
44. Mohammad Shamsuzzohaa ,Sigurd Skogestad, Ivar J. Halvorsen [On-Line PI Controller Tuning Using Closed-Loop Setpoint Response](http://www.nt.ntnu.no/users/skoge/publications/2010/shamsuzzoha_pi_dycops2010) *9th IFAC Symposium on Dynamics and Control of Process Systems (DYCOPS-9* Leuven, Belgium, 5-7 July 2010, pp. 497-502 (2010).
45. Martin Kvernland, Ivar Halvosen, Sigurd Skogestad, [Model Predictive Control of a Kaibel Distillation Column](http://www.nt.ntnu.no/users/skoge/publications/2010/kvernland-dycops2010) *9th IFAC Symposium on Dynamics and Control of Process Systems (DYCOPS-9* Leuven, Belgium, 5-7 July 2010, pp. 539-544 (2010).
46. Morten Bakke, Tor A. Johansen, Sigurd Skogestad, [Effect of Varying Controller Parameters in Closed-Loop Subspace Identification](http://www.nt.ntnu.no/users/skoge/publications/2010/bakke_dycops2010) *9th IFAC Symposium on Dynamics and Control of Process Systems (DYCOPS-9* Leuven, Belgium, 5-7 July 2010, pp. 581-586 (2010).
47. Johannes Jäschke, Sigurd Skogestad, [Self-optimizing Control and NCO tracking in the Context of Real-Time Optimization](http://www.nt.ntnu.no/users/skoge/publications/2010/jaschke_soc-nco_dycops2010) *9th IFAC Symposium on Dynamics and Control of Process Systems (DYCOPS-9* Leuven, Belgium, 5-7 July 2010, pp. 594-599 (Keynote paper) (2010).
48. Michela Mulas, Antonio Carlos Brandao de Ara`ujo, Roberto Baratti, Sigurd Skogestad [Optimized Control Structure for a Wastewater Treatment Benchmark](http://www.nt.ntnu.no/users/skoge/publications/2010/mulas-dycops2010) *9th IFAC Symposium on Dynamics and Control of Process Systems (DYCOPS-9* Leuven, Belgium, 5-7 July 2010, pp. 647-652 (2010).
49. Ramprasad Yelchuru, Sigurd Skogestad, [MIQP formulation for Optimal Controlled Variable Selection in Self Optimizing Control,](http://www.nt.ntnu.no/users/skoge/publications/2010/yelchuru-pseasia) Proceedings PSE ASIA, Singapore, 25-28 July 2010. ISBN: 978-981-08-6395-1 [USB Thumb-Drive].
50. Igor Dejanovic, Ljubica Matijasevic, Zarko Olujic, Ivar Halvorsen, Sigurd Skogestad, Helmut Jansen and Björn Kaibel [CONCEPTUAL DESIGN AND COMPARISON OF FOUR-PRODUCTS DIVIDING WALL COLUMNS FOR SEPARATION OF A MULTICOMPONENT AROMATICS MIXTURE,](http://www.nt.ntnu.no/users/skoge/publications/2010/distillation-2010-papers/dejanovic) Proceedings Symposium Distillation and Absorption 2010, Eindhoven, The Netherlands, 12-15 September 2010, pp. 85-90 ISBN 978-90-386-2215-6.
51. Ivar J. Halvorsen, Igor Dejanovic, Ljubica Matijasevic, Zarko Olujic and Sigurd Skogestad, [ESTABLISHING INTERNAL CONFIGURATION OF DIVIDING WALL COLUMN FOR SEPARATION OF A MULTICOMPONENT AROMATICS MIXTURE,](http://www.nt.ntnu.no/users/skoge/publications/2010/distillation-2010-papers/halvorsen) Proceedings Symposium Distillation and Absorption 2010, Eindhoven, The Netherlands, 12-15 September 2010, pp. 91-96, ISBN 978-90-386-2215-6.
52. Jens Strandberg Sigurd Skogestad and Ivar J. Halvorsen, [PRACTICAL CONTROL OF DIVIDING-WALL COLUMNS,](http://www.nt.ntnu.no/users/skoge/publications/2010/distillation-2010-papers/strandberg) Proceedings Symposium Distillation and Absorption 2010, Eindhoven, The Netherlands, 12-15 September 2010, pp. 527-532, ISBN 978-90-386-2215-6.
53. Maryam Ghadrdan, Ivar Halvorsen and Sigurd Skogestad, [OPTIMAL OPERATION OF THERMALLY-COUPLED KAIBEL DISTILLATION COLUMNS,](http://www.nt.ntnu.no/users/skoge/publications/2010/distillation-2010-papers/ghadrdan) Proceedings Symposium Distillation and Absorption 2010, Eindhoven, The Netherlands, 12-15 September 2010, pp. 563-568, ISBN 978-90-386-2215-6.
54. Rahul Jagtap, Nitin Kaistha and Sigurd Skogestad, ["Plantwide Control for Economic Operation of a Recycle Process",](http://www.nt.ntnu.no/users/skoge/publications/2010/jagtap_plantwide_escape2010) *Proc. 20th European Symposium of Computer Aided Process Systems Engineering (ESCAPE20)*, Ischia, Italy, 06-09 June 2010, In: Book series Computer Aided Chemical Engineering, Vol. 28, Elsevier, 2010, pp. 499-504, ISBN 13: 978-0-444-53569-6
55. Mohammad Shamsuzzoha, Sigurd Skogestad, Ivar J. Halvorsen, ["A simple approach for on-line PI controller tuning using closed-loop setpoint responses",](http://www.nt.ntnu.no/users/skoge/publications/2010/shamsuzzoha_pi_escape2010) *Proc. 20th European Symposium of Computer Aided Process Systems Engineering (ESCAPE20)*, Ischia, Italy, 06-09 June 2010, In: Book series Computer Aided Chemical Engineering, Vol. 28, Elsevier, 2010, pp. 619-624, ISBN 13: 978-0-444-53569-6
56. Sigurd Skogestad, ["A Systematic Approach to Plantwide Control",](http://www.nt.ntnu.no/users/skoge/publications/2010/skogestad-plantwide-control-reach2010) *Symposium on Recent and Emerging Advances in Chemical Engineering (REACH)*, Indian Institute of Technology Madras, Chennai, India. December 2-4, 2010. pp. 132-139 (2010).
57. Henrik Manum and Sigurd Skogestad, ["BILEVEL PROGRAMMING FOR ANALYSIS OF REDUCED MODELS FOR USE IN MODEL PREDICTIVE CONTROL",](http://www.nt.ntnu.no/users/skoge/publications/2010/manum_reduced-models_slovakia) *International Conference Cybernetics and Informatics*, Vysna Boca, Slovak replublic, February 10-13, 2010 (10 pages).
58. Sigurd Skogestad, ["FEEDBACK: STILL THE SIMPLEST AND BEST SOLUTION",](http://www.nt.ntnu.no/users/skoge/publications/2010/skogestad_feedback-is-still-best_slovakia) *International Conference Cybernetics and Informatics*, Vysna Boca, Slovak replublic, February 10-13, 2010 (10 pages).