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 h-index:
 36 (Google Scholar)

 Citations:
 >5900, Monographs: 2, Book chapters: 2

 Journal articles:
 62, Conf. papers: 107

Work experience!

2009 - Current Dept. Marine Technology, NTNU, Trondheim, Norway: Professor in control engineering

WIEEE Senior member

- Holds a <u>Maritime Knowledge Hub</u> professorship position in marine control engineering; the Kongsberg Maritime chair.
- (2021.08-2025.07) Deputy leader on research at the Department of Marine Technology. Member of research committee at Faculty of Engineering.
- (2017-2018) Research sabbatical Center for Control, Dynamical-systems and Computation (CCDC) at University of California at Santa Barbara (UCSB).
- (2013.08-2017.07) Leader of the Marine Structures research group at the Department of Marine Technology.
- Management research projects:
 - > (2020-2028) Norwegian Centre of Research-based Innovation, "SFI AutoShip". Co-director and supervisor 1 PhD stud.
 - (2022-2025) NTNU-China "DigitalSealce: Multi-scale integration and digitalization of Arctic sea ice observations and prediction models", RCN project no. 328960. Project manager and PI; co-supervisor 1 PhD and 1 PD. Partners: Met.no, Dalian Univ. Tech., and Jiangsu Univ. Sci. and Tech.
 - > (2021-2024) KSP project "ZEVS: enabling Zero Emission passenger Vessel Services", RCN project no. 320659. Leader WP1; supervisor 1 PhD.
 - > (2021-2023) EU project "ENDURE: Detection, prediction, and solutions for safe operations of MASS", EU NOR/POLNOR/ENDURE/0019/2019-00.
 - (2016-2020) KPN project "Hybrid Testing: Real-Time Hybrid Model Testing for Extreme Marine Environments", RCN project no. 203471. Leader WP1 and supervisor 1 PhD stud.
 - (2011-2019) Centre for Research-based Innovation, CRI "SAMCoT: Sustainable Arctic Marine and Coastal Technology", RCN project no. 203471.
 Leader of Work Package 5: "Ice management and design philosophy". Supervisor 1 PhD stud.
 - (2010-2014) KMB project "Arctic DP: Safe and Green Dynamic Positioning Operations of Offshore Vessels in an Arctic Environment", RCN project no. 199567. Project manager and supervisor 3 PhD students and 2 postdocs.

Participation other research projects:

- (2018-2023) NTNU Digital transformation, AutoFerry. Supervisor 1 PhD stud.
- > (2015-2023) Norwegian Centre of Research-based Innovation, "SFI MOVE: Marine Operations". Supervisor 1 PhD stud. and 2 PD
- > (2013-2022) Norwegian Centre of Excellence, "SFF AMOS: Centre for Autonomous Marine Operations and Systems". Supervisor 2 PhD stud.
- > (2011-2017) KPN project, "D2V: Design of Control Systems for Safe and Energy-efficient Vessels with Hybrid Power Plants". 1 PhD stud.
- > (2012-2016) KPN project, "LEEDS: Low Energy and Emission Design of Ships". Supervisor of 1 PhD stud.
- > (2011-2016) NTNU "AUR-Lab: Applied Underwater Robotics Lab", Supervisor of 1 PhD stud.
- > (2009-2012) Norwegian Centre of Excellence, "SFF CeSOS: Centre for Ships and Ocean Structures". 1 PhD stud and associated researcher.

Teaching courses:

- (2009-2015) TMR4290 Marine electric power and propulsion systems; (2011-2023) TMR4243 Marine control systems II; (Fall 2010-2013) TMR4515 Specialization subjects in marine control eng; (2013-2023) MR8500 Advanced topics in marine control systems.
- Students:
 - > 9 PhD students completed, 6 in progress. 4 post-docs completed. Supervised 90 MSc students (Spring 2024).

2004 – 2009 Marine Cybernetics AS, Trondheim, Norway: Product Manager Power & Drilling Systems

- R&D projects: (2004 2008) Development of the CyberSea Simulator, (2004 2006) Development of DP-HIL Testing, (2005 2005) DNV Standard for Certification of HIL Testing consultancy, (2006 - 2009) Development of PMS-HIL Testing, (2008 - 2009) Development of Drill-HIL Testing.
- Delivery projects: (Au.-Oct. 2004) Viking Poseidon DP-HIL Testing, (May-Jun. 2005) Consultancy Kongsberg Automotive, (Jan.-Mar. 2006) Acergy Osprey DP-HIL Testing, (Feb. 2006 Jan. 2007) Island Frontier DP-HIL Testing, (Jun. 2006 Nov. 2007) Ulstein Verft NB275 PMS-HIL Testing, (Jun. 2006-Nov. 2007) Ulstein Verft NB276 PMS-HIL Testing, (Jun. 2006 Dec. 2007) Aker Yards Brattvåg NB117 (Edda Fauna) DP-HIL and PMS-HIL Testing, (Jul. 2006) Stena Trader, Fosen Mekaniske Verksted (FMV) Speed and Maneuvering Trials, (Oct.-Nov. 2006) Normand Flower DP-HIL Testing, (Jan. 2007 Mar. 2008) DNV Consultancy 2007, (Mar.-Aug. 2007) CSO Wellservicer DP-HIL Testing, (Apr. 2007 Mar. 2008) Aker Yards Brevik NB47 (Far Seeker) DP-HIL Testing, (Mar. 2008 Feb. 2009) DNV Consultancy 2008.

1991 – 1999 Aker Elektro AS, Stord Norway: Electrician

- Apprentice: 1991 1993
- Projects: (Oil Installations): Jun. 1991 Mar. 1992: Snorre A, Mar. 1992 Aug. 1992: Sleipner A, Aug. 1992 Nov. 1992: Embla, Nov. 1992 Aug. 1993: Nelson Drilling Module, Feb. 1993 Aug. 1994: Troll A, Dec. 1994: Heidrun, Jun. 1995 Aug. 1995: Sleipner M12, Feb. 1996: Tjeldbergodden Methanol Factory, Jun. 1996 Aug. 1997: Njord, Jun. 1997 Jul. 1997: Norne, Jul. 1998 Sept. 1998: Åsgard A, Jun. 1999 Aug. 1999: Veslefrikk B.
- **Competitions:** (1994) Participated in the final of the Norwegian Championship for young electricians.

Education!

2000 - 2005 Norwegian University of Science and Technology (NTNU), Trondheim, Norway

Degree: Doctor of Philosophy – Engineering Cybernetics

- Ph.d. thesis: "The Maneuvering Problem", awarded ExxonMobil prize 2005 for best ph.d. thesis on applied research at NTNU.
- Main advisor: Prof. Thor I. Fossen (NTNU), Co-advisor: Prof. Petar V. Kokotovic (UCSB); Research stays at UCSB 2000/2001.

1999 - 2000 University of California, Santa Barbara (UCSB), Santa Barbara, USA

Degree: Master of Science - Control Engineering

Working in the student lab of Prof. Petar Kokotovic. Teaching Assistant: Winter 2000 and Spring 2000.

1997 - 2000 University of California, Santa Barbara (UCSB), Santa Barbara, USA

Degree: Bachelor of Science - Electrical Engineering

Admitted to the five year BSc/MSc program at the electrical engineering department in 1998.

1997 Manchester Metropolitan University (MMU), Manchester, England

Thesis project: "Development of a Self-Tuning PID-Controller." (Exchange student in the EU ERASMUS program.)

1994 – 1997 Bergen College (HiB)

Bergen, Norway

Degree: Automation engineering degree (Norwegian: Høgskoleingeniør): Dept. Electrical Engineering, Automation.

Vocational schools

- 1993 1994 Stord Vocational School, Stord, Norway: Preliminary studies for Engineering College.
- **1991 1994** Aker Elektro AS, Stord, Norway: Degree: Skilled electrician certificate. Apprenticeship Jun. 1991- Aug. 1993.
- 1989 1991
 Stord Vocational School, Stord, Norway: (1989-90) Basic Course electrical theory and practical installations. (1990-91) Advanced

 Course I electrical theory and practical installations.

Other courses!

- ◆ 2013: Falck Nutec, "Basic Safety and Emergency Training Refresher Course with HUET and airpocket." Trondheim, Norway.
- 2009: Falck Nutec, "Basic Safety and Emergency Training Refresher Course with HUET and airpocket." Trondheim, Norway.
- ◆ 2009: Norsk Petroleums- Undervisning AS, "Introductory course in drilling technology." Trondheim, Norway.
- ♦ 2008: Maersk Drilling, "Drilling familiarization course Maersk Developer Drill Rig." Korsør, Denmark.
- ◆ 2005: ResQ AS, "Basic Safety Training Course incl. Helicopter Underwater Escape Training (HUET)." Haugesund, Norway.
- ◆ 2001: Total Consult AS, "Development Program in Management and Performance." Trondheim, Norway.
- **2001: NTNU**, "French language course level 1+2 of 4."Trondheim, Norway.
- ◆ 1998: Tau Beta Pi, "Basic People Skills Module Describing Problems, Motivating Others." Santa Barbara, USA.
- 1994: NETS national student organization, "Organizational techniques Conf. Leadership, Speech Techn., and Organizational Work." Voss, Norway.

Board, council, and committee positions!

- NTNU-IV Research Committee: (2021-2025) Member of research committee of NTNU Faculty of Engineering.
- ArcISo AS: (2016 present) Co-founder and Chairman of Board in NTNU spin-off company ArcISo AS.
- NTNU R/V Gunnerus: (Fall 2015 present) Member of user panel for the research ship R/V Gunnerus.
- Marine Cybernetics AS: (Spring 2008 Summer 2009) Elected board member by employees of Marine Cybernetics.
- Bergen College Council: (1995 1996) Board member of Bergen College Council.
- Bergen College Student Council: (1995 1996) Board member of the Main Student Council of Bergen College.
- NETS: (1995 1996) Board member of the National Student Organization NETS that represent students in technology majors.
- ◆ Student Council: (1994 1996) Board member of the Student Council at Engineering and Economics Dept., Bergen College.

Professional memberships!

- IEEE Senior member: Member since 1999; Senior member since Feb. 2021.
- IFAC (International Federation of Automatic Control): Represented by NFEA (Norwegian Society of Electric and Automatic Control)

Scientific review activities!

- Expert evaluator 2013 Netherland Techn. Foundation STW, prop. 13276, "ShipDrive".
- Reviewer for many journal papers in Automatica (IFAC), Trans. Control Systems Technology (IEEE), Trans. on Mechatronics (IEEE), J. on Oceanic Engineering (IEEE), Ships and Ocean Structures (Taylor & Francis), Int. Journal of Control (Taylor & Francis), Control Theory and Applications (IET), J. of the Franklin Institute, Int. J. of Adaptive Control and Signal Processing (Wiley), as well as many international conferences.
- Committee member and administrator for 6 PhD defenses.
- Scientific evaluator of applicants for NTNU adjunct professor position in underwater robotic, 2013.

Awards!

- 2016: China Scholarship Council: Professor's honor in 2015 National Award Outstanding Self-financed Chinese Students Study Abroad for Bo Zhao.
- 2014: China Scholarship Council: Professor's honor in 2013 National Award Outstanding Self-financed Chinese Students Study Abroad for Qin Zhang
- 2005: Norwegian Univ. of Science & Technology, Trondheim, Norway: Exxon Mobil prize 2005 for best PhD thesis in applied research at NTNU.
- 2004: American Control Conference, Boston, USA: Session best student speaker award "Maneuvering dynamical systems by sliding-mode control."

Patents!

- "Method and system for testing a control system for a marine petroleum process plant", Proprietor: Marine Cybernetics AS, Norway patent no.: NO 323949
 B1, European Patent Office, 11.10.2006.
- "Test method and system for dynamic positioning systems", Proprietor: Marine Cybernetics AS, Norway pat. no.: NO 322007 B1.
- "A method and a system for testing of a Power Management System of a marine vessel", Proprietor: Marine Cybernetics AS, US patent no.: US 7,467,051 B2, PCT patent application.
- "Method and system for improved DP/PMS testing of a marine control system", Proprietor: Marine Cybernetics AS, Norway pat. no.: NO 327025.
- "Method for testing a combined dynamic positioning and power control system", Proprietor: Marine Cybernetics AS, Norway patent no.: NO 320841 B1, PCT and US, 05.04.2004, European Patent Office, 14.04.2005.

Co-founding spin-off companies!

- ArcISo AS: (2016) Co-founder of ArcISo AS and chairman of board. Technology platform: Simulator Arctic Marine Structures (SAMS).
- Blueye Robotics AS: (2015) Co-founder of company. Delivers high-quality underwater drones to mass consumer market.

PhD students and theses!

- Emir Cem Gezer (2023-2027) "Risk-aware and safeguarding control for autonomous ships."
- Samieh Najjaran (2021-2025) "Enabling zero-emission high speed ferries along the coast of Norway."
- Namireddy Praveen Reddy (2018-2024) "Intelligent Control of Onboard Power Systems for Zero-emission Autonomous Ships"
- Jon Bjørnø (2016-2024) "Optimal icebreaker deployment and coordination for effective ice management tactics."
- Andreas R. Dahl (2013-2024) "Nonlinear and fault-tolerant control of electric power production in DP vessels."
- ◆ Laxminarayan Thorat (2013-2024) "Energy control for highly redundant shipboard electric power production systems."
- Mathias Marley (2019-2024) "Hybrid and nonhybrid control barrier functions for constraint satisfaction in dynamical systems: Applied to safe motion control of autonomous vessels." <u>PhD defence 17.06.2024</u>

CV: Roger Skjetne

- Johann Alexander Dirdal (2019-2024; co-supervisor) "Signal-based sea state estimation: A phase-time-path-difference approach. A new shipboard wave estimation approach." <u>PhD defence 14.03.2024</u>
- Alexandre Cardaillac (2020-2024; co-supervisor) "Towards autonomous underwater navigation and perception for end-to-end ship hull inspection." <u>PhD defence 05.03.2024</u>
- Siamak Karimi (2019-2022; co-supervisor) "Shore-to-Ship Charging Systems for Battery-Electric Ships: Power System Architecture, Performance Analysis, and Future Trends." <u>PhD defence 19.12.2022</u>
- Emil Hjelseth Thyri (2018-2022; co-superv) "COLREGs-aware Trajectory Planning and Collision Avoidance for Autonomous Surface Vessels." PhD 7.2022
- Mikkel Eske Nørgaard Sørensen (2014-2021; co-supervisor) "Topics in Nonlinear and Model-based Control of Ships." PhD defence 09.12.2021
- Einar S. Ueland (2016-2021) "Load control for real-time hybrid model testing using cable-driven parallel robots." PhD defence 09.09.2021
- Svenn A. T. Værnø (2014-2020) "Transient Performance in Dynamic Positioning of Ships: Investigation of Residual Load Models and Control Methods for Effective Compensation." <u>PhD defence 18.11.2020</u>
- Zhengru Ren (2016-2019) "Advanced Control Algorithms to Support Automated Offshore Wind Turbine Installation." PhD defence 21.08.2019
- Hans-Martin Heyn (2014-2019) "Motion sensing on vessels operating in sea ice: A local ice monitoring system for transit and stationkeeping operations under the influence of sea ice." <u>PhD defence 15.05.2019</u>
- Petter Norgren (2013-2018) "Autonomous underwater vehicles in Arctic marine operations: Arctic marine research and ice monitoring." PhD 3.9.2018
- Kevin Koosup Yum (2013-2017; co-supervisor) "Transient Performance and Emissions of a Turbocharged Diesel Engine for Marine Power Plants: Numerical Simulation and Experimental Investigation." <u>PhD defence 24.08.2017</u>
- Michel Rejani Miyazaki (2013-2017; co-supervisor) "Modeling and control of hybrid marine power plants." PhD defence 29.07.2017
- Valentin Chabaud (2011-2016; co-supervisor) "Real-Time Hybrid Model Testing of Floating Wind Turbines." <u>PhD defence 13.12.2016</u>
- Øivind K. Kjerstad (2010-2016) "Dynamic Positioning of Marine Vessels in Ice." PhD defence 31.05.2016
- Torstein Ingebrigtsen Bø (2012-2016; co-supervisor) "Scenario- and Optimization-based Control of Marine Electric Power Systems." PhD 07.03.2016
- Gin Zhang (2011-2015) "Image Processing for Ice Parameter Identification in Ice Management." PhD defence 17.12.2015
- Ivan Metrikin (2010-2015; co-supervisor) "Experimental and Numerical Investigations of Dynamic Positioning in Discontinuous Ice." PhD defence 2015
- Bo Zhao (2009-2015) "Particle Filter for Fault Diagnosis: Applications to Dynamic Positioning Vessels and Underwater Robotics". PhD def. 30.06.2015
- Aleksander Veksler (2010-2014; co-supervisor) "Optimization-based control of diesel-electric ships in dynamic positioning." PhD defence 2014
- ♦ Joakim Haugen (2010-2014; co-supervisor) "Autonomous Aerial Ice Observation." PhD defence 10.2014

Post-docs!

- George Jagite (2021-2023) Wave prediction research in SFI MOVE.
- Zhengru Ren (2019-2021) Research on control and monitoring for demanding marine operations, particularly offshore wind installation, in SFI MOVE.
- Biao Su (2012-2014) Research on ice mechanics in the "Arctic DP" project.
- Francesco Scibilia (2010-2012) Research on guidance and control for Ice Management in "Arctic DP" project.

Research expeditions!

- Cruises with participation of students:
- 2024.08.29-09.19 GoNorth Geosciences in Northern Arctic (2024): Expedition to North-East Greenland ocean area. O.G. Veggeland & A.A. Khan
- 2023.07.06-08.07 GoNorth Geosciences in Northern Arctic (2023): Expedition to Gakkelryggen in the Arctic Ocean. O.G. Veggeland & N. Panchi
- 2022.10.27 R/V Gunnerus maneuvering trials: Campaign with R/V Gunnerus in Trondheim Fjord conducting maneuvering and low-speed tests.
- 2022.10.14-11.03 GoNorth Geosciences in Northern Arctic (2022): Expedition to ocean north of Nordaustlandet and Kvitøya, Svalbard. N. Panchi
- 2017.03.03-17 Equinor stationkeeping trials 2017: Expedition with Magne Viking and Tor Viking conducting experiments in the Bay of Bothnia.
- 2016.10.17-21 & 2016.11.14-18 AMOS DP Research Cruise (ADPRC 2016): Full-scale testing of DP algorithms on RV Gunnerus in Trondheim Fjord.
- 2016.08.09-09.19 Arctic Ocean 2016: 6 weeks expedition with IB Oden and CCGS Amundsen to the Arctic ocean around the North pole.
- 2015.09.17-10.02 Oden Arctic Technology Research Cruise (OATRC 2015): Expedition with IB Oden to North of Svalbard, 82.5° N.
- 2015.04.17-05.06 Statoil Research Expedition 2015: Expedition with Canadian IB CCGS Amundsen along the Newfoundland and Labrador coast.
- 2013.08.19-09.02 Oden Arctic Technology Research Cruise 2013 (OATRC2013): Expedition with IB Oden in the Fram strait Northeast of Greenland.
- 2012.09.15-25 Oden Arctic Technology Research Cruise 2012 (OATRC 2012): Expedition with IB Oden to the waters Northeast of Greenland.

Participated myself on OATRC 2015, ADPRC 2016, and the various R/V Gunnerus trials.

Keynote lectures!

- 1. Center for Control, Dynamical-systems and Computation (CCDC) at University of California at Santa Barbara (UCSB), "Control and Estimation for Effective Stationkeeping Operations in Sea-ice", Nov. 3, 2017.
- 2. 6th Annual Seminar OSVs for Ice and Cold Climates, Lloyd's Maritime Academy, "Determining ice loads for OSVs", London, Nov. 30, 2015.
- 3. IBC Maritime Ice Class Vessels conference. Chairman of conference with keynote lecture "Arctic DP: The Arctic Offshore Project on Stationkeeping in Ice", Seoul, Oct. 28-29, 2014.
- 4. Marcus Evans 2nd Annual Arctic Marine Logistics & Infrastructure Forum, "Dynamic positioning in ice for offshore vessels: Results from the Arctic DP Project", Amsterdam, Nov. 25-26, 2013.
- 5. OSV Conference 2013, Technical Workshop on Equipping OSVs for Ice & Harsh Environments, "Dynamic positioning in ice for offshore vessels", Oslo, Oct. 23-25, 2013.
- 6. 9th Annual Arctic Shipping Forum (ASF 2013), "Designing for effective stationkeeping in ice", Helsinki, April 23-26, 2013.
- 7. 3rd Annual Seminar OSVs for Ice and Cold Climates, Lloyd's Maritime Academy, "Designing for effective stationkeeping in ice", London, Nov. 20, 2012.
- 8. 8th Annual Arctic Shipping Forum (ASF 2012), "Designing for effective stationkeeping in ice", Helsinki, April 24-27, 2012.

Textbooks, book chapters, PhD thesis, and selected reports!

- van den Berg, M., J. Bjørnø, W. Lu, R. Skjetne, R. Lubbad, and S. Løset (2022), "The Value of High-Fidelity Numerical Simulations of Ice-Ship and Ice-Structure Interaction in Arctic Design with Informed Decisionmaking." In P.A. Berkman et al. (eds.), *Building Common Interests in the Arctic Ocean with Global Inclusion*, Vol. 2, Springer series *Informed Decisionmaking for Sustainability*. Ch.10, pp. 151-177, DOI: 10.1007/978-3-030-89312-5_10
- 2. Zhang, Q. and R. Skjetne (2018), "Sea Ice Image Processing with Matlab®". CRC Press, Taylor & Francis. Boca Raton, FL. ISBN 9781138032668.
- Skjetne, R. (2005), "The Maneuvering Problem." Norwegian Univ. Science & Technology, Dept. Eng. Cybernetics, NTNU PhD thesis 2005:1, ISBN 8247168596 (el), ISBN 8247168618 (pr), ISSN 1503-8181, Trondheim, Norway, March 2005.
- Skjetne, R., "Maneuvering Control." In T.I. Fossen (ed.) Marine Control Systems: Guidance, Navigation, and Control of Ships, Rigs, and Underwater Vehicles, Chapter 10.2, pp. 394-416. Marine Cybernetics, Trondheim, Norway, 2002.
- 5. Skjetne, R. (2004), "Set-stability for nonlinear systems", tech. report: 2004-8-W, NTNU Dept. Eng. Cybernetics, Nov. 1, 2004.
- Skjetne, R. and Sørensen, A. J. (2004), "Computer-based systems on ships and offshore vessels: The Software Problem ++", joint report by Marine Cybernetics, Det Norske Veritas, Statoil, Smedvig Offshore, Kongsberg Maritime, Norsk Hydro, Stolt Offshore, Eidesvik, Subsea 7, Solstad Offshore, Ulstein, ABB, PSA Norway, and Norw. Maritime Dir., Trondheim, Oct. 27 2004.

Journal and magazine articles!

- 1. Lu, C., J. Yang, B.J. Leira, R. Skjetne, J. Mao, Q. Chen, and W. Xu. "High-traversability and efficient path optimization for deep-sea mining vehicles considering complex seabed environmental factors." Elsevier Ocean Eng., Vol. 313, pp. 119500, 2024. DOI: 10.1016/j.oceaneng.2024.119500
- Marley, M., R. Skjetne, and A.R. Teel, "Hybrid control barrier functions for continuous-time systems." IEEE Transactions on Automatic Control, Vol.69, No.10, pp.6605-6619, 2024. DOI: 10.1109/TAC.2024.3374265
- Marley, M., R. Skjetne, and A.R. Teel, "Sufficient conditions for uniform asymptotic stability and input-to-state stability using high-order control barrier functions." IEEE Transactions on Automatic Control, Vol.69, No.4, pp.2352-2366, 2024. DOI: 10.1109/TAC.2023.3332018
- Cardaillac, A., R. Skjetne, and M. Ludvigsen, "ROV-Based Autonomous Maneuvering for Ship Hull Inspection with Coverage Monitoring." J. Intelligent & Robotic Systems, Vol.110, No.59 (2024). DOI: 10.1007/s10846-024-02095-2
- 5. Torben, T., A.R. Teel, Ø.K. Kjerstad, E.H.T. Wittemann, and R. Skjetne, "A resetting observer for linear time-varying systems with application to dynamic positioning of marine surface vessels." IEEE Trans. Control Systems Techn., Vol.32, No.3, pp. 1048-1056, 2024. DOI: 10.1109/TCST.2023.3331338
- Reddy, N.P., R. Skjetne, Os, O.S., and D. Papageorgiou, "A Comparison of the State-of-the-Art Reinforcement Learning Algorithms for Health-Aware Energy & Emissions Management in Zero-emission Ships." IEEE J. Emerging and Selected Topics in Industrial Electronics, Vol.5, No.1, pp.149-166, 2023. DOI: 10.1109/JESTIE.2023.3331230
- Dirdal, J.A., R. Skjetne, J. Roháč, and T.I. Fossen. "A Phase-Time-Path-Difference Approach for Online Wave Direction and Wave Number Estimation from Measured Ship Motions in Zero and Forward Speed using a Single Inertial Measurement Unit." Elsevier Ocean Eng., Vol. 288, pp. 116131, 2023. DOI: 10.1016/j.oceaneng.2023.11613
- 8. Marley, M., R. Skjetne, M. Gil, and P. Krata. 2023. "Four Degree-of-Freedom Hydrodynamic Maneuvering Model of a Small Azipod-Actuated Ship With Application to Onboard Decision Support Systems." IEEE Access, Vol. 11, pp. 58596-58609. DOI: 10.1109/ACCESS.2023.3284684
- 9. Dugan S., Skjetne R., Wróbel K., Montewka J., Gil M., Utne I.B. 2023. "Integration Test Procedures for a Collision Avoidance Decision Support System Using STPA." TransNav, Int. J. Marine Navigation and Safety of Sea Transportation, Vol. 17, No. 2, pp. 375-381. DOI:10.12716/1001.17.02.14
- 10. Ren, Z., X. Han, X. Yu, R. Skjetne, B.J. Leira, S. Sævik, and M. Zhu. "Data-driven simultaneous identification of the 6DOF dynamic model and wave load for a ship in waves." Mechanical Systems and Signal Processing, Vol. 184, pp.109422, 2023. DOI: 10.1016/j.ymssp.2022.109422
- 11. Heyn, H.-M. and R. Skjetne, "Fast onboard detection of ice drift changes under stationkeeping in ice." Cold Regions Science and Technology, Vol. 196, pp. 103483, 2022. DOI: 10.1016/j.coldregions.2022.103483
- 12. Zhou, H., Z. Ren, M. Marley, and R. Skjetne, "A Guidance and Maneuvering Control System Design With Anti-Collision Using Stream Functions With Vortex Flows for Autonomous Marine Vessels." IEEE Trans. Control Systems Techn., Vol.30, No.6, pp.2630-45, 2022. DOI: 10.1109/TCST.2022.3161844
- Dirdal, J.A., R. Skjetne, J. Roháč, and T.I. Fossen, "Online wave direction and wave number estimation from surface vessel motions using distributed inertial measurement arrays and phase-time-path-differences." Ocean Engineering, Vol. 249, pp. 110760, 2022. DOI: 10.1016/j.oceaneng.2022.110760
- 14. Bjørnø, J., M. van den Berg, W. Lu, R. Skjetne, R. Lubbad, and S. Løset, "Performance quantification of icebreaker operations in ice management by numerical simulations." Cold Regions Science and Technology, Vol. 194, pp. 103435, 2022. DOI: 10.1016/j.coldregions.2021.103435
- Thorat, L., R. Skjetne, and O.L. Osen, "Genset Scheduling in a Redundant Electric Power System for an Offshore Vessel Using Mixed Integer Linear Programming." J. Offshore Mechanics and Arctic Eng., Vol.143, No.6, p.061401, 2021. DOI: 10.1115/1.4050643
- 16. Ren, Z., X. Han, A. S. Verma, Z. J. A. Dirdal, and R. Skjetne, "Sea state estimation based on vessel motion responses: Improved smoothness and robustness using Bézier surface and L1 optimization." Marine Structures, Vol. 76, p. 102904, 2021. DOI: 10.1016/j.marstruc.2020.102904
- 17. Ueland, E., T. Sauder, and R. Skjetne. 2021. "Force Tracking Using Actuated Winches With Position-Controlled Motors for Use in Hydrodynamical Model Testing." IEEE Access, Vol. 9, pp. 77938-77953. DOI: 10.1109/ACCESS.2021.3083539
- Ueland, E., T. Sauder, and R. Skjetne. 2021. "Optimal Actuator Placement for Real-Time Hybrid Model Testing Using Cable-Driven Parallel Robots." MDPI J. Mar. Sci. Eng. 9(2): 191. DOI: 10.3390/jmse9020191
- 19. Ren, Z., R. Skjetne, A. S. Verma, Z. Jiang, Z. Gao, and K. H. Halse, "Active heave compensation of floating wind turbine installation using a catamaran construction vessel." Marine Structures, Vol. 75, p.102868, 2021 (online from 2020). DOI: 10.1016/j.marstruc.2020.102868
- Ueland, E., T. Sauder, and R. Skjetne. 2021. "Optimal Force Allocation for Overconstrained Cable-Driven Parallel Robots: Continuously Differentiable Solutions with Assessment of Computational Efficiency." IEEE Trans. On Robotics, (online from 2020). DOI: 10.1109/TRO.2020.3020747
- 21. Skjetne, R. and Z. Ren, "A survey on modeling and control of thruster-assisted position mooring systems." Marine Structures, Vol. 74, p.102830, 2020. DOI: 10.1016/j.marstruc.2020.102830
- 22. Sørensen, M. E. N., M. Breivik, and R. Skjetne, "Comparing Combinations of Linear and Nonlinear Feedback Terms for Ship Motion Control." IEEE Access, Vol. 8, pp. 193813-193826, 2020. DOI: 10.1109/ACCESS.2020.3033409
- 23. Ren, Z., R. Skjetne, Z. Jiang, and Z. Gao, "Active Single-Blade Installation Using Tugger Line Tension Control and Optimal Control Allocation." International Journal of Offshore and Polar Engineering, Vol. 30, No. 2, pp.220-227, June 2020. DOI: 10.17736/ijope.2020.jc759
- 24. Borisov, O. I., A. R. Dahl, A. A. Pyrkin, F. B. Gromova, and R. Skjetne, "Consecutive Compensator in Station-Keeping of a Surface Vessel." Mechatronics, Automation, Control, Vol. 21, No. 10, pp.566-574, 2020. DOI: 10.17587/mau.21.566-574
- Heyn, H.-M., M. Blanke, and R. Skjetne, "Ice condition assessment using onboard accelerometers and statistical change detection." IEEE J. Oceanic Engineering, Vol. 45, No. 3, pp. 898-914, 2020 (online from 2019). DOI: 10.1109/JOE.2019.2899473

CV: Roger Skjetne

- Kim, E., G. S. Dahiya, S. Løset, and R. Skjetne, "Can a computer see what an ice expert sees? Multilabel ice objects classification with convolutional neural networks." Elsevier, Results in Engineering, Vol. 4, 2019. DOI: 10.1016/j.rineng.2019.100036
- 27. Reddy, N.P., M.K. Zadeh, C.A. Thieme, R. Skjetne, A.J. Sørensen, S.A. Aanondsen, M. Breivik, and E. Eide, "Zero-emission autonomous ferries for urban water transport: Cheaper, Cleaner Alternative to Bridges and Manned Vessels." IEEE Electrification Magazine, 7(4), pp. 32-45, Dec. 2019.
- 28. Værnø, S.A., A.H. Brodtkorb, and R. Skjetne, "Compensation of bias loads in dynamic positioning of marine surface vessels." Ocean Eng., V.178, 2019.
- Værnø, S.A., R. Skjetne, Ø. K. Kjerstad, and V. Calabrò, "Comparison of control design models and observers for dynamic positioning of surface vessels." IFAC Control Engineering Practice, Vol. 85, pp. 235--245, 2019. DOI: 10.1016/j.conengprac.2019.01.015
- 30. Ren, Z., R. Skjetne, Z. Jiang, Z. Gao, and A.S. Verma "Integrated GNSS/IMU hub motion estimator for offshore wind turbine blade installation." Mechanical Systems and Signal Processing, Vol. 123, pp.222-243, 2019. DOI: 10.1016/j.ymssp.2019.01.008
- 31. Ren, Z., R. Skjetne, Z. Gao, "A crane overload protection controller for blade lifting operation based on model predictive control." Energies, 12(1), 2019.
- 32. Ren, Z., Z. Jiang, Z. Gao, and R. Skjetne, "Active tugger line force control for single blade installation." Wind Energy, 21(12), pp.1344-1358, 2018.
- 33. Norgren, P. and R. Skjetne, "A multibeam-based SLAM algorithm for iceberg mapping using AUVs." IEEE Access, Vol. 6, No. 1, pp.26318-26337, 2018.
- Heyn, H.-M. and R. Skjetne, "Time-frequency analysis of acceleration data from ship-ice interaction events." Cold Regions Science and Technology, Vol. 156, pp. 61-74, 2018.
- 35. Kjerstad, Ø.K., W. Lu, R. Skjetne, and S. Løset, "A Method for the Real-time Estimation of Full-scale Global Ice Loads on Floating Structures." Cold Regions Science and Technology, Vol. 156, pp. 44-60, 2018.
- Brodtkorb, A.H., S.A.T. Værnø, A.R. Teel, A.J. Sørensen, and R. Skjetne, "Hybrid Controller Concept for Marine Vessels with Experimental Results." Automatica, Vol. 93, pp. 489-497, 2018. DOI: 10.1016/j.automatica.2018.03.047
- 37. Ren, Z., Z. Jiang, R. Skjetne, and Z. Gao, "Development and application of a simulator for offshore wind turbine blades installation." Ocean Engineering, Vol. 166, pp. 380-395, 2018. DOI: 10.1016/j.oceaneng.2018.05.011
- Xu, J., Z. Ren, Y. Li, R. Skjetne, and K. H. Halse, "Dynamic Simulation and Control of an Active Roll Reduction System Using Free-Flooding Tanks With Vacuum Pumps." Journal of Offshore Mechanics and Arctic Eng., 140(6), pp. 9, 2018.
- Kjerstad, Ø.K., S. Løset, R. Skjetne, and R. Skarbø, "An Ice-Drift Estimation Algorithm Using Radar and Ship Motion Measurements." IEEE Trans. Geoscience and Remote Sensing, 56(6), pp. 3007-3019, 2018. DOI: 10.1109/TGRS.2017.2787996
- 40. Sørensen, A.J., R. Skjetne, T. Bø, M.R. Miyazaki, T.A. Johansen, I.B. Utne, and E. Pedersen, "Toward Safer, Smarter, and Greener Ships: Using hybrid marine power plants." IEEE Electrification Magazine, Vol. 5, No. 3, pp. 68-73, 2017.
- 41. Værnø, S.A., A. H. Brodtkorb, R. Skjetne, and V. Calabrò, "Time-Varying Model-Based Observer for Marine Surface Vessels in Dynamic Positioning." IEEE Access, Vol. 5, pp. 14787-14796, 2017.
- 42. Kjerstad, Ø.K. and R. Skjetne, "Disturbance rejection by acceleration feedforward for marine surface vessels." IEEE Access, Vol.4, pp.2656-2669, 2016.
- Veksler, A., T.A. Johansen, R. Skjetne, and E. Mathiesen, "Thrust Allocation With Dynamic Power Consumption Modulation for Diesel-Electric Ships." IEEE Trans. Control Systems Technology, Vol. 24, No.2, pp. 578–593, 2016.
- 44. Bø, T.I., A.R. Dahl, T.A. Johansen, E. Mathiesen, M. R. Miyazaki, E. Pedersen, R. Skjetne, A. J. Sørensen, L. Thorat, and K. K. Yum, "Marine Vessel and Power Plant System Simulator." IEEE Access, Vol. 3, pp. 2065-2079, 2015.
- 45. Jørgensen, U. and R. Skjetne, "Online reconstruction of drifting underwater ice topography: The 2D case." Asian J. Control, 17(5), pp.1509-1521, 2015.
- 46. Kjerstad, Ø.K., I. Metrikin, S. Løset, and R. Skjetne, "Experimental and phenomenological investigation of dynamic positioning in managed ice." Cold Regions Science and Technology, Vol. 111, pp. 67-79, 2015.
- 47. Zhang, Q. and R. Skjetne, "Image processing for identification of sea-ice floes and the floe size distributions." IEEE Trans. Geoscience and Remote Sensing, 53(5), pp. 2913-2924, 2015.
- 48. Zhang, Q., R. Skjetne, I. Metrikin, and S. Løset, "Image Processing for Ice Floe Analyses in Broken-ice Model Testing." Cold Regions Science and Technology, Vol. 111, pp. 27-38, 2015.
- 49. Skjetne, R., L. Imsland, and S. Løset, "The Arctic DP Research Project: Effective Stationkeeping in Ice." Modeling, Identification & Control (MIC), 35(4), pp. 191-210, 2014.
- 50. Kjerstad, Ø.K. and R. Skjetne, "Modeling and Control for Dynamic Positioned Marine Vessels in Drifting Managed Sea Ice." Modeling, Identification & Control (MIC), 35(4), pp. 249-262, 2014.
- 51. Norgren, P. and R. Skjetne, "Using Autonomous Underwater Vehicles as Sensor Platforms for Ice-Monitoring." Modeling, Identification & Control (MIC), 35(4), pp. 263-277, 2014.
- 52. Zhang, Q. and R. Skjetne, "Image Techniques for Identifying Sea-Ice Parameters." Modeling, Identification & Control (MIC), 35(4), pp. 293-301, 2014.
- Zhao, B. and R. Skjetne, "A unified framework for fault detection and diagnosis using particle filter." Modeling, Identification & Control (MIC), 35(4), 2014.
 Su, B., R. Skjetne, and T.E. Berg, "Experimental and Numerical Investigation of a Double-Acting Offshore Vessel Performance in Level Ice." Modeling,
- Identification & Control (MIC), 35(4), pp. 317-332, 2014. 55. Ruud, S. and R. Skjetne, "Verification and Examination Management of Complex Systems." Modeling, Identification & Control (MIC), 35(4), 2014.
- 56. Su, B., R. Skjetne, and T.E. Berg, "Numerical assessment of a double-acting offshore vessel's performance in level ice with experimental comparison." Cold Regions Science and Technology, 106-107 (Oct.-Nov.), pp.96-109, 2014.
- 57. Zhao, B., R. Skjetne, M. Blanke, and F. Dukan, "Particle Filter for Fault Diagnosis and Robust Navigation of Underwater Robot," IEEE Trans. Control Systems Technology, 22(6), pp. 2399-2407, 2014. DOI: 10.1109/TCST.2014.2300815
- 58. Skjetne, R. and O. Egeland, "Hardware-in-the-loop testing of marine control systems." Modeling, Identification & Control (MIC), 27(4), pp. 239-258, 2006.
- 59. Skjetne, R., T.I. Fossen, and P.V. Kokotovic, "Adaptive Maneuvering, with Experiments, for a Model Ship in a Marine Control Laboratory." Automatica, 41(2), pp. 289-298, 2005.
- Skjetne, R., Ø.N. Smogeli, and T.I. Fossen, "A nonlinear ship maneuvering model: Identification and adaptive control with experiments for a model ship." Modeling, Identification & Control (MIC), 25(1), pp. 3-27, 2004.
- 61. Skjetne, R., T.I. Fossen, and P.V. Kokotovic, "Robust Output Maneuvering for a Class of Nonlinear Systems." Automatica, 40(3), pp. 373-383, 2004.
- 62. Skjetne, R., "Ship Maneuvering: The past, the present and the future." Sea Technology, 44(3): 33-37, March, 2003.

International conference papers!

 Gezer, E.C. and R. Skjetne, "Maneuvering-based Dynamic Thrust Allocation for Fully-Actuated Vessels." In proc. 15th IFAC Conf. Control Applications in Marine Systems, Robotics, and Vehicles (CAMS 2024), Blacksburg, Virginia, USA, Sept. 3-5, 2024. DOI: xxx

CV: Roger Skjetne

- Hangerhagen, P., E. Brekke, R. Skjetne, and E. Eide, "A Radar Dataset from the Trondheim City Canal." In proc. 27th Int. Conf. Information Fusion (FUSION 2024), Venice, Italy, July 7-11, 2024. DOI: xxx
- Veggeland, O.G., E. Kim, and R. Skjetne. "Multi Modal Mapping of Sea Ice Fields from Remote Shipborne Instrumentation." In proc. ASME 43rd Int. Conf. Ocean, Offshore and Arctic Eng. (OMAE). Vol. 6: Polar & Arctic Sci. Tech., Singapore, June 9–14, 2024. DOI: 10.1115/OMAE2024-125706
- 4. Fruzzetti, C., M. Martelli, A. Lekkas, R. Skjetne, and M. Breivik, "Model-Based Motion Control Design for the Milliampere1 Prototype Ferry." In proc. 22nd European Control Conf. (ECC24), Stockholm, Sweden, June 25-28, 2024. DOI: 10.23919/ECC64448.2024.10591071
- 5. Kim, E., R. Skjetne, and K.V. Høyland, "Quadruple Helix Framework for Sea Ice Monitoring: Next Steps". ESA's 2023 Workshop on Coastal and Marine applications of SAR (ESA SP-565), May 2-5, 2023, Longyearbyen, Svalbard, Norway, Organizers: ESA, NERSC, UNIS.
- Najjaran, S., R. Skjetne, and J.M.K. Godø, "Optimal Energy Management for Zero-Emission High-Speed Passenger Vessels." Proc. ASME 42nd Int. Conf. Ocean, Offshore & Arctic Eng., Vol. 5: Ocean Eng. Melbourne, Australia, June 11–16, 2023. DOI: 10.1115/OMAE2023-104731
- Reddy, N.P., R. Skjetne, and D. Papageorgiou, "A Decentralized Droop-Based Power Management System for Ship Power Systems Using Hybrid Dynamical Systems Framework." Proc. ASME 42nd Int. Conf. Ocean, Offshore & Arctic Eng., Vol. 5: Ocean Eng. Melbourne, Australia, June 11–16, 2023. DOI: 10.1115/OMAE2023-102570
- Panchi, N., E. Kim, R. Skjetne, and N. Hughes, "Assist Observations 2017-2021: Uncertainty, Comparison with Sea Ice Charts, and Ice Concentration from Deep Learning Models." Proc. ASME 42nd Int. Conf. Ocean, Offshore & Arctic Eng., Vol. 6: Polar and Arctic Sciences and Technology. Melbourne, Australia, June 11–16, 2023. DOI: 10.1115/OMAE2023-101757
- 9. Dugan, S.A., R. Skjetne, K. Wróbel, J. Montewka, M. Gil, and I.B. Utne, "Integration Test Procedures for a Collision Avoidance Decision Support System Using STPA." 15th Int. Conf. on Marine Navigation and Safety of Sea Transportation (TransNav), 21-23 June 2023, Gdynia, Poland.
- 10. Marley, M. and R. Skjetne, "Mitigating Force Oscillations in a Wave Energy Converter Using Control Barrier Functions." Proc. ASME 41st Int. Conf. Ocean, Offshore and Arctic Eng., Vol. 8: Ocean Renewable Energy. Hamburg, Germany. June 5–10, 2022. DOI: 10.1115/OMAE2022-82707.
- Reddy, N.P., Y. Cai, R. Skjetne, and D. Papageorgiou, "Voltage Sensor Fault Detection in Li-ion Battery Energy Storage Systems." 2022 IEEE Transportation Electrification Conference & Expo (ITEC), Anaheim, CA, USA, 2022, pp. 1314-1320. DOI: 10.1109/ITEC53557.2022.9813853.
- 12. Dugan, S.A., I. B. Utne, R. Skjetne, J. Montewka, M. Gil, and K. Wrobel, "STPA-based hazard analysis of a ship collision avoidance and stability monitoring system." Proc. 10th European STAMP Workshop and Conference, 29-30 September 2022, Gdynia, Poland.
- 13. Krata, P., T. Hinz, M.H. Marley, S.A. Dugan, M. Gil, J. Montewka, R. Skjetne, and J. Matusiak, "DSA-inspired assessment of autonomous ships stability during turning maneuver." Proc. 18th Int. Ship Stability Workshop, 12-14 September 2022, Gdańsk, Poland.
- 14. Marley, M., R. Skjetne, E.A. Basso, and A.R. Teel, "Maneuvering with safety guarantees using control barrier functions." In proc. 13th IFAC Conf. Control Applications in Marine Systems, Robotics, and Vehicles (CAMS 2021), Oldenburg, Germany, Sept. 22-24, 2021.
- 15. Marley, M., R. Skjetne, and A.R. Teel, "Synergistic control barrier functions with application to obstacle avoidance for nonholonomic vehicles." In proc. 2021 American Control Conference (ACC), 2021, pp. 243-249, doi: 10.23919/ACC50511.2021.9482979.
- 16. Kim, E., and R. Skjetne, "Artificial intelligence for ship speed management during navigation in the Arctic." In proc. 26th Int. Conf. Port & Ocean Eng. Arctic Conditions (POAC2021), Moscow, Russia, June 14-18, 2021.
- 17. Marley, M., R. Skjetne, and A.R. Teel, "A kinematic hybrid feedback controller on the unit circle suitable for orientation control of ships." In proc. 59th IEEE Conf. Decision and Control (CDC 2020), Jeju Island, Korea (South), 2020, pp. 1523-1529, DOI: 10.1109/CDC42340.2020.9304108.
- Marley, M., R. Skjetne, M. Breivik, and C. Fleischer, "A hybrid kinematic controller for resilient obstacle avoidance of autonomous ships." Int. Conf. Maritime Autonomous Surface Ship (ICMASS 2020), IOP Conf. Ser.: Mater. Sci. Eng. Vol. 929, 2020. DOI: 10.1088/1757-899X/929/1/012022
- 19. Bjørnø, J., M. Marley, and R. Skjetne, "Guidance model representing and ice field for path-planning in ice management." In proc. 39th Int. Conf. Ocean, Offshore & Arctic Eng. (OMAE 2020), Vol. 8 Polar and Arctic Sci and Tech. Online, Aug. 3-7, 2020. DOI: 10.1115/OMAE2020-19117
- 20. Bjørnø, J., M. van den Berg, W. Lu, R. Skjetne, R. Lubbad, and S. Løset, "Quantifying Icebreaker Performance in Ice Management Operations by High-Fidelity Numerical Simulations." In proc. 30th Int. Ocean and Polar Eng. Conf. (ISOPE), pp. 824-830. Shanghai, China, Oct. 11-16, 2020.
- Thyri, E.H., E.A. Basso, M. Breivik, K. Y. Pettersen, R. Skjetne, and A. M. Lekkas, "Reactive collision avoidance for ASVs based on control barrier functions". In proc. IEEE Conf. on Control Technology and Applications (CCTA), Montreal, Canada, pp. 380-387, Aug. 24-26, 2020.
- 22. Basso, E.A., E. H. Thyri, K.Y. Pettersen, M. Breivik, and R. Skjetne, "Safety-Critical Control of Autonomous Surface Vehicles in the Presence of Ocean Currents". In proc. IEEE Conf. on Control Technology and Applications (CCTA), Montreal, Canada, pp. 396-403, Aug. 24-26, 2020.
- 23. Park, D., M.K. Zadeh, and R. Skjetne, "DC-DC Converter Control for Peak-Shaving in Shipboard DC Power System via Hybrid Control." In proc. IEEE Conf. Industrial Electronics and Appl. (ICIEA), Kristiansand, Norway. Nov. 9-13, 2020.
- 24. Reddy, N.P., D. Pasdeloup, M.K. Zadeh, and R. Skjetne, "An Intelligent Power and Energy Management System for Fuel Cell/Battery Hybrid Electric Vehicle Using Reinforcement Learning." IEEE Transportation Electrification Conf. and Expo (ITEC), Detroit, USA. June 19-21, 2019.
- 25. Dahl, A.R., L. Thorat, and R. Skjetne, "Model Predictive Control of Marine Vessel Power System by Use of Structure Preserving Model." In proc. 11th IFAC Conf. Control Applications in Marine Systems (CAMS 2018), Opatija, Croatia, Sept. 10-12, 2018.
- Ueland, E.S., R. Skjetne, and S.A. Vilsen, "Force Actuated Real-Time Hybrid Model Testing of a Moored Vessel: A Case Study Investigating Force Errors." In proc. 11th IFAC Conf. Control Applications in Marine Systems (CAMS 2018), Opatija, Croatia, Sept. 10-12, 2018.
- 27. Thorat, L. and R. Skjetne, "Optimal online configuration and load-sharing in a redundant electric power system for an offshore vessel using mixed-integer linear programming." In proc. 37th Int. Conf. Ocean, Offshore & Arctic Eng. (OMAE 2018), Vol. 1 Offshore Tech. Madrid, Spain, June 17-22, 2018.
- Wu, Z., L. Thorat, and R. Skjetne, "Comparison of fuel consumption on a hybrid marine power plant with low-power versus high-power engines." In proc. 37th Int. Conf. Ocean, Offshore & Arctic Eng. (OMAE 2018), Vol. 1 Offshore Tech. Madrid, Spain, June 17-22, 2018.
- 29. Heyn, H.-M. and R. Skjetne, "Distributed sensing of loads acting against the hull of a stationkeeping vessel in ice." In proc. 37th Int. Conf. Ocean, Offshore & Arctic Eng. (OMAE 2018), Vol. 8 Polar and Arctic Science and Technology. Madrid, Spain, June 17-22, 2018.
- 30. Ren, Z., Z. Jiang, R. Skjetne, and Z. Gao, "Single Blade Installation Using Active Control of Three Tugger Lines." In proc. 28th Int. Ocean and Polar Eng. Conf. (ISOPE 2018), pp. 594-601. Sapporo, Hokkaido, Japan, June 10-15, 2018.
- 31. Jiang, Z., Z. Ren, Z. Gao, P. C. Sandvik, K. H. Halse, and R. Skjetne, "Mating Control of a Wind Turbine Tower-Nacelle-Rotor Assembly for a Catamaran Installation Vessel." In proc. 28th Int. Ocean and Polar Eng. Conf. (ISOPE 2018), pp.584-593. Sapporo, Hokkaido, Japan, June 10-15, 2018.
- 32. Ruud, S. K. and R. Skjetne, "Ice management and design philosophy." Proc. 13th Int. Marine Design Conf. (IMDC 2018), Helsinki, Finland, June, 2018.
- Ueland, E. S. and R. Skjetne, "Effect of Time Delays and Sampling in Force Actuated Real-Time Hybrid Testing; A Case Study." MTS/IEEE OCEANS, Anchorage, Alaska, Sept. 18-21, 2017.
- 34. Heyn, H.-M., G. Udjus, and R. Skjetne, "Distributed acceleration sensing on ships." MTS/IEEE OCEANS, Anchorage, Alaska, Sept. 18-21, 2017.
- 35. Thorat, L. and R. Skjetne, "Load-dependent start-stop of gensets modeled as a hybrid dynamical system." In proc. 20th IFAC World Congress, Toulouse, France, July 9-14, 2017.

CV: Roger Skjetne

- Skjetne, R., M. E. N. Sørensen, M. Breivik, S. A. T. Værnø, A. H. Brodtkorb, A. J. Sørensen, Ø. K. Kjerstad, V. Calabrò, and B. O. Vinje, "AMOS DP Research Cruise 2016: Academic full-scale testing of experimental dynamic positioning control algorithms onboard R/V Gunnerus." In proc. 36th Int. Conf. Ocean, Offshore & Arctic Eng. (OMAE 2017), Trondheim, Norway, June 25-30, 2017.
- Bjørnø, J., H.-M. Heyn, R. Skjetne, A. R. Dahl, and P. Frederich, "Modeling, parameter identification and thruster-assisted position mooring of C/S Inocean Cat I Drillship." In proc. 36th Int. Conf. Ocean, Offshore & Arctic Eng. (OMAE 2017), Trondheim, Norway, June 25-30, 2017.
- Heyn, H.-M., M. Knoche, Q. Zhang, and R. Skjetne, "A system for automated vision-based sea-ice concentration detection and floe-size distribution indication from an icebreaker." In proc. 36th Int. Conf. Ocean, Offshore & Arctic Eng. (OMAE 2017), Trondheim, Norway, June 25-30, 2017.
- Norgren, P. and R. Skjetne, "A particle filter SLAM approach to online iceberg drift estimation from an AUV." In proc. 36th Int. Conf. Ocean, Offshore & Arctic Eng. (OMAE 2017), Trondheim, Norway, June 25-30, 2017.
- 40. Dahl, A. R., R. Skjetne, and T. A. Johansen, "A structure preserving power system frequency model for dynamic positioning vessels." In proc. 36th Int. Conf. Ocean, Offshore & Arctic Eng. (OMAE 2017), Trondheim, Norway, June 25-30, 2017.
- 41. Ren, Z., R. Skjetne, and Z. Gao, "Modeling and control of crane overload protection during marine lifting operation based on model predictive control." In proc. 36th Int. Conf. Ocean, Offshore & Arctic Eng. (OMAE 2017), Trondheim, Norway, June 25-30, 2017.
- 42. Ueland, E. S., R. Skjetne, and A. R. Dahl, "Marine autonomous exploration using a Lidar and SLAM." In proc. 36th Int. Conf. Ocean, Offshore & Arctic Eng. (OMAE 2017), Trondheim, Norway, June 25-30, 2017.
- 43. Xu, J., Z. Ren, Y. Li, R. Skjetne, and K. H. Halse, "Dynamic simulation and control of an active roll reduction system using free-flooding tanks with vacuum pumps." In proc. 36th Int. Conf. Ocean, Offshore & Arctic Eng. (OMAE 2017), Trondheim, Norway, June 25-30, 2017.
- 44. Lu, W., R. Lubbad, S. Løset, and R. Skjetne, "Parallel Channel Tests during Ice Management Operations in the Arctic Ocean." In proc. Arctic Technology Conference (ATC 2016), St. John's, Canada, Oct. 24-26, 2016.
- 45. Lu, W., Q. Zhang, R. Lubbad, S. Løset, and R. Skjetne, "A Shipborne Measurement System to Acquire Sea Ice Thickness and Concentration at Engineering Scale." In proc. Arctic Technology Conference (ATC 2016), St. John's, Canada, Oct. 24-26, 2016.
- Ludvigsen, M., S. M. Albrektsen, K. Cisek, T. A. Johansen, P. Norgren, R. Skjetne, A. P. Zolich, P. S. Dias, S. Ferreira, J. B. Sousa, T. O. Fossum, Ø. Sture, T. R. Krogstad, Ø. Midtgaard, V. E. Hovstein, and E. Vågsholm, "Network of heterogeneous autonomous vehicles for marine research and management." In proc. MTS/IEEE OCEANS 2016, Monterey, USA, Sept. 19-23, 2016.
- 47. Kjerstad, Ø. K., S. A. T. Værnø, and R. Skjetne, "A Robust Dynamic Positioning Tracking Control Law Mitigating Integral Windup." In proc. 10th IFAC Conf. Control Applications in Marine Systems (CAMS 2016), Trondheim, Norway, Sept. 13-16, 2016.
- 48. Ren, Z. and R. Skjetne, "An On-site Current Profile Estimation Algorithm for a Moored Floating Structure." In proc. 10th IFAC Conf. Control Applications in Marine Systems (CAMS 2016), Trondheim, Norway, Sept. 13-16, 2016.
- 49. Ren, Z. and R. Skjetne, "A Tension-based Position Estimation Solution of a Moored Structure and its Uncertain Anchor Positions." In proc. 10th IFAC Conf. Control Applications in Marine Systems (CAMS 2016), Trondheim, Norway, Sept. 13-16, 2016.
- 50. Værnø, S. A. T., A. H. Brodtkorb, R. Skjetne, and A. J. Sørensen, "An Output Feedback Controller with Improved Transient Response of Marine Vessels in Dynamic Positioning." In proc. 10th IFAC Conf. Control Applications in Marine Systems (CAMS 2016), Trondheim, Norway, Sept. 13-16, 2016.
- 51. Brodtkorb, A. H., S. A. T. Vernø, A. R. Teel, A. Sørensen, and R. Skjetne, "Hybrid observer for improved transient performance of a marine vessel in dynamic positioning." In proc. 10th IFAC Symp. Nonlinear Control Systems (NOLCOS 2016), Monterey, California, USA, Aug. 23-25, 2016.
- 52. Heyn, H.-M. and R. Skjetne, "A system for measuring ice-induced accelerations and identifying ice actions on the CCGS Amundsen and a Swedish Atleclass icebreaker." In proc. 35th Int. Conf. Ocean, Offshore & Arctic Eng. (OMAE 2016), Busan, Korea, June 19-24, 2016.
- 53. Candeloro, M., E. Valle, M. R. Miyazaki, R. Skjetne, M. Ludvigsen, and A. J. Sørensen (2015), "HMD as a new Tool for Telepresence in Underwater Operations and Closed-Loop Control of ROVs," in Proc. MTS/IEEE OCEANS, Washington DC, USA, Oct. 19-22, 2015.
- 54. Ren, Z., R. Skjetne, and Kjerstad, Ø. K., "A Tension-based Position Estimation Approach for Moored Marine Vessels." In proc. 10th IFAC Conf. Manoeuvring and Control of Marine Craft (MCMC 2015), Copenhagen, Denmark, August 24-26, 2015.
- 55. Ren, Z., R. Skjetne, and V. Hassani, "Supervisory Control of Line Breakage for Thruster-Assisted Position Mooring System." In proc. 10th IFAC Conf. Manoeuvring and Control of Marine Craft (MCMC 2015), Copenhagen, Denmark, August 24-26, 2015.
- 56. Tutturen, S. A. and R. Skjetne, "Hybrid Control to Improve Transient Response of Integral Action in Dynamic Positioning of Marine Vessels." In proc. 10th IFAC Conf. Manoeuvring and Control of Marine Craft (MCMC 2015), Copenhagen, Denmark, August 24-26, 2015.
- 57. Norgren, P. and R. Skjetne, "Line-of-sight iceberg edge-following using an AUV equipped with multibeam sonar." In proc. 10th IFAC Conf. Manoeuvring and Control of Marine Craft (MCMC 2015), Copenhagen, Denmark, August 24-26, 2015.
- Lubbad, R., S. Løset, and R. Skjetne, "Numerical Simulations Verifying Arctic Offshore Field Activities." In proc. 23rd Int. Conf. Port & Ocean Eng. Arctic Conditions (POAC'15), Trondheim, Norway, June 14-18, 2015.
- 59. Norgren, P. and R. Skjetne, "Iceberg Detection and Edge-Following using AUV with Multibeam Sonar." In proc. 23rd Int. Conf. Port & Ocean Eng. Arctic Conditions (POAC'15), Trondheim, Norway, June 14-18, 2015.
- 60. Kjerstad, Ø. K., I. Metrikin, and R. Skjetne, "Description and Numerical Simulations of Dynamic Positioning In Reversing Managed Ice." In proc. 23rd Int. Conf. Port & Ocean Eng. Arctic Conditions (POAC'15), Trondheim, Norway, June 14-18, 2015.
- 61. Heyn, H.-H. and R. Skjetne, "Estimation of Forces caused by Ship-Ice Interaction using on-board Sensor Measurements." In proc. 23rd Int. Conf. Port & Ocean Eng. Arctic Conditions (POAC'15), Trondheim, Norway, June 14-18, 2015.
- Bø, T. I., T. A. Johansen, A. R. Dahl, M. R. Miyazaki, E. Pedersen, B. Rokseth, R. Skjetne, A. J. Sørensen, L. Thorat, I. B. Utne, K. K. Yum, and E. Mathiesen, "Real-Time Marine Vessel and Power Plant Simulation." In proc. 34th Int. Conf. Ocean, Offshore & Arctic Eng. (OMAE 2015), St. John's, Newfoundland, Canada, May 31-June 5, 2015.
- 63. Orsten, A., P. Norgren, and R. Skjetne (2014), "LOS guidance for towing an iceberg along a straight-line path." In proc. 22nd IAHR Int. Symp. on Ice, Singapore, August 11-15, 2014.
- 64. Norgren, P., R. Lubbad, and R. Skjetne (2014), "Unmanned underwater vehicles in Arctic operations." In proc. 22nd IAHR Int. Symp. on Ice, Singapore, August 11-15, 2014.
- 65. Veksler, A., T. A. Johansen, R. Skjetne, and E. Mathiesen (2014), "Reducing power transients in diesel-electric dynamically positioned ships using repositioning". In proc. 40th Annual Conf. IEEE Industrial Electronics Society, 2014, Dallas, Texas, Oct 28-Nov 01, 2014.
- 66. Jørgensen, U. and R. Skjetne (2013), "Real-time 3D Reconstruction of Underwater Sea-ice Topography by Observations from a Mobile Robot in the Arctic," in Proc. IFAC Conf. Control Applications Marine Systems., IFAC, Osaka, Japan, Sept. 2013.
- 67. Skjetne, R. and Ø. K. Kjerstad (2013), "Recursive nullspace-based control allocation with strict prioritization for marine craft," in Proc. IFAC Conf. Control Applications Marine Systems., IFAC, Osaka, Japan, Sept. 2013.

CV: Roger Skjetne

- Chabaud, V., S. Steen, and R. Skjetne (2013), "Real-time hybrid testing for marine structures: Challenges and strategies". In proc. 32nd Int. Conf. Ocean, Offshore & Arctic Eng. (OMAE 2013), Nantes, France, June 09-14, 2013.
- 69. Kjerstad, Ø. K., R. Skjetne, and B. O. Berge (2013), "Constrained nullspace-based thrust allocation for heading prioritized stationkeeping of offshore vessels in ice". In proc. 22nd Int. Conf. Port & Ocean Eng. Arctic Conditions (POAC 2013), Helsinki, Finland, June 09-13, 2013.
- 70. Su, B., Ø. K. Kjerstad, R. Skjetne, and T. E. Berg (2013), "Ice-going capability assessment and DP-Ice Capability Plot for a double acting intervention vessel in level ice". In proc. 22nd Int. Conf. Port & Ocean Eng. Arctic Conditions (POAC 2013), Helsinki, Finland, June 09-13, 2013.
- Zhang, Q., R. Skjetne, and B. Su (2013), "Automatic image segmentation for boundary detection of apparently connected sea-ice floes". In proc. 22nd Int. Conf. Port & Ocean Eng. Arctic Conditions (POAC 2013), Helsinki, Finland, June 09-13, 2013.
- 72. Jørgensen, U. and R. Skjetne (2013), "Dynamic estimation of drifting ice topography over a 2D area using mobile underwater measurements". In proc. 22nd Int. Conf. Port & Ocean Eng. Arctic Conditions (POAC 2013), Helsinki, Finland, June 09-13, 2013.
- 73. Veksler, A., T. A. Johansen, and R. Skjetne (2013), "Governor principles for increased safety on vessels with diesel-electric propulsion". In proc. 12th biannual European Control Conf. (ECC'13), Zurich, Switzerland, July 17-19, 2013.
- 74. Scibilia, F. and R. Skjetne (2012), "Constrained Control Allocation for Vessels with Azimuth Thrusters". In proc. 9th IFAC Conf. Manoeuvring and Control of Marine Craft (MCMC), Arenzano, Italy, September 19-21, 2012.
- 75. Zhao, B., M. Blanke, and R. Skjetne (2012), "Fault Tolerant ROV Navigation System Based on Particle Filter using Hydro-acoustic Position and Doppler Velocity Measurements". In proc. 9th IFAC Conf. Manoeuvring and Control of Marine Craft (MCMC), Arenzano, Italy, September 19-21, 2012.
- 76. Veksler, A., T. A. Johansen, and R. Skjetne (2012), "Transient power control in dynamic positioning governor feedforward and dynamic thrust allocation". In proc. 9th IFAC Conf. Manoeuvring and Control of Marine Craft (MCMC), Arenzano, Italy, September 19-21, 2012.
- 77. Jørgensen, U. and R. Skjetne (2012), "Generating Safe and Equally Long Trajectories for Multiple Unmanned Vessels". In Proc. 20th Mediterranean Conference on Control and Automation (MED), Barcelona, Spain, July 3-6, 2012.
- 78. Kjerstad, Ø. K. and R. Skjetne (2012), "Observer design with disturbance rejection by acceleration feedforward". In proc. 7th IFAC Symp. Robust Control Design (Rocond'12), Aalborg, Denmark, June 2012.
- 79. Kjerstad, Ø. K. and R. Skjetne (2012), "Feedforward linearization and disturbance rejection of mechanical systems using acceleration measurements," In proc. 7th IFAC Symp. Robust Control Design (Rocond'12), Aalborg, Denmark, June 2012.
- Scibilia, F., U. Jørgensen, and R. Skjetne (2012), "AUV Guidance System for Dynamic Trajectory Generation". In proc. IFAC Workshop on Navigation, Guidance and Control of Underwater Vehicles (NGCUV'2012), Porto, Portugal, April 10-12, 2012. DOI: 10.3182/20120410-3-PT-4028.00033
- Scibilia, F., U. Jørgensen, and R. Skjetne (2012). "AUV Guidance System for Subsurface Ice Intelligence". In Proc. 31st International Conference on Ocean, Offshore and Arctic Engineering (OMAE), Rio de Janeiro, Brazil, July 1-6, 2012.
- Zhang, Q., R. Skjetne, S. Løset, and A. Marchenko (2012), "Digital image processing for sea ice observations in support to Arctic DP operations". In proc. 31st Int. Conf. Ocean, Offshore and Arctic Eng. (OMAE 2012), Rio de Janeiro, Brazil, July 1-6, 2012.
- Zhang, Q., S. van der Werff, I. Metrikin, S. Løset, and R. Skjetne (2012), "Image processing for the analysis of an evolving broken-ice field in model testing". In proc. 31st Int. Conf. Ocean, Offshore Arctic Eng. (OMAE 2012), Rio de Janeiro, July, 2012.
- 84. Jørgensen, U. and Skjetne, R. (2012), "Dynamic Estimation of Drifting Ice Topography Using Underwater Mobile Measurements," in Proc. American Control Conf., AACC, Montréal, Canada, June 2012.
- 85. Zhao, B., Blanke, M., and Skjetne, R. (2012), "Particle Filter ROV Navigation using Hydroacoustic Position and Speed Log Measurements," in Proc. American Control Conf., AACC, Montréal, Canada, June 2012.
- Veksler, A., Johansen, T. A., and Skjetne, R. (2012), "Thrust allocation with power management functionality on dynamically positioned vessels," in Proc. American Control Conf., AACC, Montréal, Canada, June 2012.
- 87. Skjetne, R., Jørgensen, U., and Teel, A.R. (2011), "Line-of-sight path-following along regularly parametrized curves solved as a generic maneuvering problem," in Proc. IEEE Conf. Decision & Control, IEEE, Orlando, USA, Dec. 2011.
- 88. Thorvaldsen, C. F. L. and Skjetne, R. (2011), "Formation control of fully-actuated marine vessels using group agreement protocols," in Proc. IEEE Conf. Decision & Control, IEEE, Orlando, USA, Dec. 2011.
- 89. Kjerstad, Ø. K., Skjetne, R., and Jenssen, N. A. (2011), "Disturbance rejection in dynamic systems by use of acceleration feedforward: Application to dynamic positioning," in Proc. 18th IFAC World Congress, Milano, Italy, Aug.–Sept. 2011.
- 90. Haugen, J., Imsland, L., Løset, S., and Skjetne, R. (2011), "Ice Observer System for Ice Management Operations," in Proc. 21st Int. Offshore (Ocean) and Polar Engineering Conf. (ISOPE-2011), Maui, Hawaii, USA, June 2011.
- 91. Skjetne, R., and Egeland, O. (2005), "Hardware-in-the-loop testing of marine control systems," in Proc. 46th Conf. Simulation and Modeling (SIMS), Trondheim, Norway, Oct. 2005.
- 92. Skjetne, R., and Egeland, O. (2005), "Hardware-In-the-Loop Simulation for Testing of DP Vessels," Int. Conf. Technology and Operation of Offshore Support Vessels (OSV), Singapore, Sept. 2005.
- Ihle, I.-A.F.; Skjetne, R.; Fossen, T.I. (2005); "Output feedback control for maneuvering systems using observer backstepping," in Proc. 2005 IEEE Int. Symp. Intel. Contr. (ISIC) & 13th Mediterr. Conf. Contr. Autom. (MED), pp.1512-1517, Cyprus, June 2005.
- 94. Ihle, I.-A. F., Skjetne, R., and Fossen, T. I. (2004), "Nonlinear formation control of marine craft with experimental results," in Proc. IEEE Conf. Decision & Control, IEEE, Paradise Island, Bahamas, Dec. 2004.
- 95. Skjetne, R., Smogeli, Ø., and Fossen, T. I. (2004), "Modeling, identification, and adaptive maneuvering of CyberShip II: A complete design with experiments," in Proc. IFAC Conf. Control Applications Marine Systems., IFAC, Ancona, Italy, July 2004.
- 96. Skjetne, R. and Teel, A. R. (2004), "Maneuvering dynamical systems by sliding-mode control," in Proc. American Control Conf., AACC, Boston, USA, June 2004. (Best student speaker award at conference session).
- 97. Skjetne, R. and Fossen, T. I. (2004), "On integral control in backstepping: Analysis of different techniques," in Proc. American Control Conf., AACC, Boston, USA, June 2004.
- 98. Johansen, V., Skjetne, R., and Sørensen, A. J. (2003), "Maneuvering of Towed Interconnected Marine Systems," in Proc. 6th IFAC Conf. Manoeuvering and Control of Marine Crafts, Girona, Spain, Sept. 2003.
- 99. Fossen, T. I., Breivik, M., and Skjetne, R. (2003), "Line-of-Sight Path Following of Underactuated Marine Craft," in Proc. 6th IFAC Conf. Manoeuvering and Control of Marine Crafts, Girona, Spain, Sept. 2003.
- 100. Skjetne, R., Ihle, I.-A. F., and Fossen, T. I. (2003), "Formation Control by Synchronizing Multiple Maneuvering Systems," in Proc. 6th IFAC Conf. Manoeuvering and Control of Marine Crafts, Girona, Spain, Sept. 2003.
- 101. Skjetne, R., Moi, S., and Fossen, T. I. (2002), "Nonlinear Formation Control of Marine Craft," in Proc. 41st IEEE Conf. Decision and Control, pp. 3926-3931, Las Vegas, NV, USA, Dec. 2002.

CV: Roger Skjetne

- 102. Skjetne, R., Teel, A. R., and Kokotovic, P. V. (2002), "Nonlinear Maneuvering with Gradient Optimization," in Proc. 41st IEEE Conf. Decision and Control, pp. 3926-3931, Las Vegas, NV, USA, Dec. 2002.
- 103. Skjetne, R., Teel, A. R., and Kokotovic, P. V. (2002), "Stabilization of Sets Parametrized by a Single Variable: Application to Ship Maneuvering," in Proc. 15th Int. Symp. Mathematical Theory of Networks and Systems, Notre Dame, IN, USA, Aug. 2002.
- 104. Fossen, T. I., Lindegaard, K. P., and Skjetne, R. (2002), "Inertia Shaping Techniques for Marine Vessels Using Acceleration Feedback," in Proc. 15th IFAC World Congress Automatic Control, Barcelona, Spain, July 2002.
- 105. Skjetne, R., Fossen, T. I., and Kokotovic, P. (2003), "Output Maneuvering for a Class of Nonlinear Systems," in Proc. 15th IFAC World Congress Automatic Control, Barcelona, Spain, July 2002.
- 106. Skjetne, R. and Fossen, T. I. (2001), "Nonlinear Maneuvering and Control of Ships," in Proc. MTS/IEEE OCEANS, pp. 1808-1815, Honolulu, Hawaii, Nov. 2001.
- 107. Skjetne, R. and Shim, H. (2001), "A systematic nonlinear observer design for a class of Euler-Lagrange systems," in Proc 9th Mediterranean Conf. Control and Automation (Med'01), Dubrovnik, Croatia, June 2001.

Other dissemination activities!

- 1. Marine Technology Innovation Seminar, "Marine technology education at NTNU Faculty of Engineering." Viinistu, Tallinn, Estonia, Aug. 25th, 2023.
- 2. ENDURE workshop, "4DOF Maneuvering Model and Decision Support concepts." Gdynia, Poland, June 20th, 2023.
- 3. Plenary presentation AMOS Day: "An AMOS Journey: Some results in DP and autonomous maneuvering." Trondheim, Nov. 9th, 2022.
- 4. Norwegian SciTech News. "Using ships themselves to monitor and predict waves." URL: <u>https://norwegianscitechnews.com/2021/03/using-ships-themselves-to-monitor-and-predict-ocean-conditions</u>. Published March 18, 2021.
- Guest lecture at Center for Control, Dynamical systems, and Computation (CCDC, "Control and Estimation for Effective Stationkeeping Operations in Seaice", University of California at Santa Barbara, USA, Nov. 3, 2017.
- Pres. Tekna DP og forankring av offshore installasjoner 2015, "Design and Verification of Control Systems for Safe and Energy-efficient Vessels with Hybrid Power Plants", Trondheim, Feb. 11-12, 2015. Presentation together with Torstein I. Bø.
- 7. Pres. SAMCoT Scientific seminar, "Overview WP5 Ice Management and Design Philosophy", Trondheim, May 7, 2015.
- 8. Pres. NTNU Oceans Week, AUR-Lab workshop, "NEPTUNUS a student project to design a consumer grade mini-ROV", Trondheim, May 6, 2015.
- 9. Pres. Kvaerner Concrete Solution Ice workshop, "Ice survey and surveillance for Arctic offshore operations: Development of the AUV technology for use for ice survey", Oslo, March 4, 2015.
- 10. Pres. AMOS Oppdal Workshop, "Highlights of the Skjetne Research Group", Oppdal, Feb. 9, 2015.
- 11. Guest lecture at Seoul National Univ., "Part 1: The Maneuvering Control Problem; Part 2: Control and Estimation for Effective Stationkeeping Operations in Sea-ice", Seoul, Oct. 30, 2014.
- 12. Pres. NFA Servomøtet 2014, "Dynamic positioning in ice for offshore vessels: Results from the Arctic DP Project", Kongsberg, Oct. 22-23, 2014.
- 13. Lecture at MARINTEK-skolen, "Topics in marine control engineering by Professor Roger Skjetne", Trondheim, Sept. 25, 2014.
- 14. Pres. NTNU AUR-Lab workshop, "Recursive nullspace-based control allocation with strict prioritization for marine craft", Trondheim, Mar. 3-4, 2014.
- 15. Plenary lecture on "Dynamisk posisjonering i is", Marintekniske Dager 2013, MTS, Trondheim, Oct. 10-11, 2013.
- 16. Lecture at BEST seminar on Arctic marine technology, "Control strategies for effective stationkeeping in ice", Trondheim, Sept. 18, 2013.
- 17. Lecture at CeSOS Highlights and AMOS Visions Conference, "Designing for effective stationkeeping in ice", Trondheim, May 27-29, 2013.
- Lecture at Tekna Kursdagene: Oil and gas production in a cold climate, "Control strategies for effective stationkeeping in ice", Trondheim, Jan. 8, 2013.
 Pres. NFA Servomøtet 2011, "Control strategies for stationkeeping in ice", Trondheim, Oct. 19-20, 2011.
- 20. Lecture at Statoil Research Summit, Seminar on Arctic Marine Operations, "Control strategies for stationkeeping in ice", Trondheim, Sept. 28-29, 2011.
- 21. Pres. NFA Servomøtet 2010, "Utfordringer med kraftproduksjon og kraftkonsumering ombord i fartøy", Ålesund, Oct. 20-21, 2010.