CURRICULUM VITAE

August 12, 2025

Professor Bo Wahlberg

- Born March 1, 1959 in Norrköping, Sweden. Swedish citizenship.
- Family status: Married since 1983 with Carina with three children (Kristina, born 1985; Stefan, born 1987; Niklas, born 1992). Grandfather to Diana (born 2007) and Miranda (born 2011).

Academic Degrees:

- Master of Science, *Civilingenjör*, (Applied Mathematics), June 1983, Linköping University, Linköping, Sweden.
- Licentiate of Engineering (Automatic Control), June 1985, Linköping University, Linköping, Sweden.
- Doctor of Philosophy (Automatic Control), June 5, 1987, Linköping University, Linköping, Sweden. Supervisor: Lennart Ljung.

Awards:

- The Tryggve Holm scholarship from SAAB SCANIA AB, 1986, for outstanding performance as a graduate student.
- "The O. Hugo Schuck Best Paper Award" of the 1986 American Control Conference, Seattle 1986.
- The 1995 KTH Award for outstanding contribution to the undergraduate education program at the KTH Royal Institute of Technology.
- Senior Fulbright Scholar, 1997.
- IEEE Fellow for contributions to system identification using orthonormal basis functions, 2007.
- Best New Application Paper Award, IEEE Transactions on Automation Science and Engineering, 2016.
- Plenary Speaker, The 35th Chinese Control Conference, 2016
- IFAC Fellow for contributions to system identification and the development of orthonormal basis function, 2019
- Best Paper Award, IEEE ICDL-EpiRob, 2020
- Fellow of the Royal Swedish Academy of Engineering Sciences, Division II, Electrical Enginnering, 2023.
- Janne Carlssons stipendium for Academic Leadership, 2024.

Academic Appointments:

- Teaching assistant at the Department of Mathematics, Linköping University, Linköping, Sweden, 1981 – 1983.
- Teaching assistant at the Department of Electrical Engineering, Linköping University, Linköping, Sweden, 1983 – 1987.
- Visiting Scholar, University of Cambridge, U.K., August – December, 1985. Host: Prof. Keith Glover.
- Research Associate at the Department of Electrical Engineering, Linköping University, Linköping, Sweden, June 1987 – December 1987.
- Visiting Research Fellow (post-doc) at the Department of Electrical and Computer Engineering, University of Newcastle, Australia, 1988. Host: Prof. Graham Goodwin
- Visiting Research Fellow (post-doc) at the Department of Systems Engineering, Research School of Physical Sciences, Australian National University, Australia, February 1989. Host: Prof. John Moore.
- Research Associate at the Department of Electrical Engineering, Linköping University, Linköping, Sweden, March 1989 – December 1991.
- *Professor of the Chair of Automatic Control at the KTH Royal Institute of Technology in Stockholm, Sweden. December 1991 – (current position)*
- Visiting Research Fellow at the Department of Systems Engineering, Research School of Physical Sciences, Australian National University, Australia, October - December 1993. Host: Prof. John Moore.
- Co-founder, Member of the Board for the Centre of Autonomous Systems (CAS) at KTH 1996 – 2016.
- Head of Department of Signals, Sensors & Systems at KTH, March 1996 – March 1997.
- Visiting Fulbright Professor at the Information Systems Lab, Stanford University, USA, August 1997 – July 1998. Host: Prof. Tom Kailath.
- Vice-President (*Prorektor*) for Development of Education at KTH, January 1999 – December 2001.
- Member of the Board of Center for Wireless Systems, KTH, 2001 – 2004.
- Head of Department of Signals, Sensors & Systems at KTH, January – December 2005.
- Head of the Department of Automatic Control and Member of the Executive Committee of the School of Electrical Engineering, KTH,
  2005 – 2017.
- Member of the Board of the School of Electrical Engineering, KTH, 2005 – 2008 .
- Member of the Board of the Center for Vehicle Research at KTH, 2006 – 2012.
- Co-founder and Member of the Board of the VR Linnaeus Center ACCESS, KTH, 2006 – 2017. Responsible for the ACCESS Distinguished Lecture Series.

- Visiting Professor at the Information Systems Lab, Stanford University, USA, August 2009 – July 2010. Host: Prof. Stephen Boyd.
- Member of the Strategic Committee for the School of Electrical Engineering, KTH, 2009–2012.
- Member of KTH Central Faculty Evaluation Committee (Anställningsutskott), 2012 – .
- Member of the Steering Committee for the Arena for Strategic Partnership (ASP), KTH and Scania, 2013 –.
- Visiting Professor at the University of Newcastle, Australia, October 2013 – March 2014. Host: Prof. James Welsh.
- Co-PI, KTH Director and Member of the Program Management Group (PMG) of the Wallenberg AI, Autonomous Systems and Software Program (WASP), 2015 – 2021.
- Member of the KTH Rector Nomination Committee, 2015.
- Member of the Integrated Transport Research Lab (ITRL) Research Advisory Committee, 2015 – 2017.
- Visiting Professor at the University of British Columbia (UBC), June – August, 2015. Host: Prof. Vikram Krishnamurthy.
- Head of the Department of Automatic Control and Member of the Executive Committee of the School of Electrical Engineering and Computer Science, KTH, 2018.
- Head of the Division of Decision and Control Systems, School of Electrical Engineering and Computer Science, KTH, 2019 – 2023-
- WASP KTH Director, Member of the Executive Management Committee , Chair of the International Management Group, Chair of the Arena Management Group, Chair of the University Representative Group of the Wallenberg AI, Autonomous Systems and Software Program (WASP), 2021 – .

Selected Teaching Activities:

- Nonlinear Control (EL2620), KTH 2004 – 2007.
- Basic Course in Automatic Control (EL1000) for Electrical Engineering and Engineering Physics, KTH, around 200 students each year, 2007 –2023
- 131 Masters thesis projects.

Theses

- Wahlberg B. : On Model Simplification in System Identification. 1985, Licentiate thesis, LiU-Tek-Lic-1985-12, Linköping University, Sweden.
- Wahlberg B. : On the Identification and Approximation of Linear Systems. 1987, Ph.D. thesis, Linköping Studies in Science and Technology, No. 163, Linköping University, Sweden.

Selected External Activities:

- Reviewer for a large number of international journals.
- Associate Editor for the IFAC Journal *Automatica*, 1990 – 1996.
- Guest Editor for the IFAC Journal *Automatica*, Special Issue on "Statistical Signal Processing and Control". January 1994.
- Founding Chairman of the IFAC's Technical Committee on Modelling, Identification and Signal Processing. 1993 – 1999.
- Member of IPC for the 10th IFAC Symposium on System Identification, Copenhagen, 1994.
- Member of IPC for the 5th IFAC Symposium, Adaptive Systems in Control and Signal processing, Budapest, Hungary, 1995.
- PhD opponent for Henrik Meelgard, DTU, Danemark, 28 August, 1994.
- PhD opponent for Per-Olof Källén, Lund University, 25 November, 1994.
- Member of IPC for the 11th IFAC Symposium on System Identification, Japan, 1997.
- Member of IPC for the European Control Conference, Belgium 1997.
- PhD opponent for Urban Forsell, Linköping University, March, 1999.
- Member of IPC for the 12th IFAC Symposium on System Identification, USA, 2000.
- Program Co-Chairman for the 13th IFAC Symposium on System Identification, The Netherlands, 2003.

- PhD opponent for Thomas de Hoog, Delft Institute of Technology, The Netherlands, 2001.
- Member of the EUCA Council, 2001–2003.
- Member of STFI Scientific Committee, 2001–2003.
- PhD opponent for Erik G. Larsson, Uppsala University, 2004.
- Coordinator of the European Research Network System Identification (ERNSI), 2003 –.
- Expert for the European Commission, DG Information Society Dir.C Components and Subsystems. Applications. Embedded Systems. Reviewer of IST-2001-35304 AMETIST, 2003 – 2005.
- Guest Co-Editor of the IFAC Journal *Automatica*, Special Issue on Data-Based Modeling and System Identification, March 2005.
- EU project: Recsys, 2003 – 2005.
- Member of IPC for the 14th IFAC Symposium on System Identification, Australia, 2006.
- PhD opponent for Tuomas Paatero, Helsinki University of Technology, 2005.
- SSF Mobility Grant to work at Cinnober Financial Technology, March 2007 – June 2007.
- Senior Advisor, Cinnober Financial Technology, 2007 – 2013.
- Member of IPC for the European Control Conference, Hungary, 2009.
- Member of IPC for the 15th IFAC Symposium on System Identification, France, 2009.
- PhD opponent for Roland Toth, Delft University of Technology. Delft Institute of Technology, The Netherlands, 2008.
- EU project: WIDE, 2008 – 2011.
- Chairman of the Swedish Research Council (VR) Committee on Signals and Systems, 2010.
- PhD Opponent for Henrik Ohlsson, LiTH, Sweden 2010.
- Associate Editor for invited sessions CDC-ECC 2011.
- Member of IPC for the 16th IFAC Symposium on System Identification, Belgium, 2012.
- EU Project AutoProfit, 2010 – 2013.
- ERC Advanced Grant Project LEARN 2011 – 2015 (PI Lennart Ljung, LiTH).
- Member of the Evaluation Committee for ICT Research in Norway (the Research Council of Norway), 2011.
- Member of ICT Referee Panel for Funding of Researcher-initiated Independent Basic Research Projects in Mathematics, Physical Science, and Technology (FRINATEK), the Research Council of Norway, 2012.
- Member of the Nomination Committee for the Board and for the Scientific Council for Natural and Engineering Sciences of the Swedish Research Council, 2012.

- Member of IPC for 12th biannual European Control Conference, Switzerland 2013.
- Chair of the IEEE Fellow Evaluation Committee of the Control Systems Society, 2014.
- Member of the PhD Committee for Marco Forgione, Delft University of Technology, The Netherlands, 2014.
- PhD Opponent for Mojtaba Soltanalian, Uppsala University, 2014.
- Member of IPC for 13th European Control Conference, France 2014.
- KTH PI for the FFI project iQMatic coordinated by Scania AB, 2014 – 2017. (iQMatic was a project in collaboration between KTH, Linköping University, Autoliv, Saab, Combitech and Scania CV AB with the aim of developing a fully autonomous heavy vehicle for goods transport and other industrial applications).
- Member of Expert Panel Evaluations of RI-applications in the field of Petroleum technologies, the Research Council of Norway, 2014.
- Chair of the IEEE Fellow Evaluation Committee of the Control Systems Society, 2015.
- Member of IPC for 14th European Control Conference, Austria 2015.
- Member of IPC for the 17th IFAC Symposium on System Identification, Beijing 2015.
- Member of Expert panel evaluations of ICT applications, the Research Council of Norway, 2015.
- Member of the Nomination committee for the Board of the Swedish Research Council (VR), 2015.
- Chairman of the Nomination Committee for the Scientific Council for Natural and Engineering Sciences of the Swedish Research Council(VR), 2015.
- Member of the IEEE Fellow Committee, 2016.
- Member of IPC for 15th European Control Conference, Aalborg, 2016.
- Member of ICT referee panel for funding of researcher-initiated Independent Basic Research Projects in Mathematics, Physical Science, and Technology (FRINATEK), the Research Council of Norway, 2016.
- Member of the IEEE Fellow Committee, 2017.
- Member of ICT referee panel for funding of researcher-initiated Independent Basic Research Projects in Mathematics, Physical Science, and Technology (FRINATEK), the Research Council of Norway, 2017.
- Co-Chair for the 18th IFAC Symposium on System Identification, Stockholm 2018.
- Member of the IEEE Fellow Committee, 2018.
- Member of IPC for 16th European Control Conference, Cyprus 2018.
- Member of ICT Referee Panel for Funding of Researcher-initiated Independent Basic Research Projects in Mathematics, Physical Science, and Technology (FRINATEK), the Research Council of Norway, 2018

- Member of the Expert Committee for Position as Professor/Associate Professor in Systems Engineering for Control at NTNU, 2018.
- General Chair of the Swedish Control Meeting, 2018.
- Chair of the Swedish IFAC National Member Organization (Svenska IFAC-Kommitten), 2018 –
- Member of the Portfolio Board of Natural Sciences and Technology, the Research Council of Norway, 2019 –2023.
- Member of the PhD Committee for Ankit Gupta, Chalmers University of Technology, Sweden, 2021.
- Member of the PhD Committee for Shengling Shi, TU Eindhoven, The Netherlands, 2021.
- Member of the Scientific Committee for Technical and Natural Sciences and of the Villum Foundation in Denmark, 2022 –
- Member of the Evaluation Committee of Mathematics, ICT and Technology, the Research Council of Norway, 2023-2024.

Examiner, Master of Science Degree:

1. Tomas Hultquist: Specifications of a testing equipment for LvKv. LiTH, October 1989.
2. Peter Lindskog: System identification by means of Laguerre models. LiTH, October 1990.
3. Anders Nelsson: Algorithms for inertia navigation. LiTH, May, 1991.
4. Erik Westberg: Intelligent planering och genomförande av uppdrag för autonom undervattensfarkost, KTH, 1992.
5. Thomas Johansson: Reglerstrategi för Gantrykranar, KTH, 1992.
6. Staffan Eriksson and Jörgen Hult: Modellering och simularing av reglersystem för nätsynkronisering, KTH, 1992.
7. John Patring: Multivariabel tjockleksregulator i ett kallvalsverk, KTH, 1992.
8. Kenneth Dahlberg: Simulering och utvärdering av askhaltsstyrning på pappersmaskin, KTH, 1993.
9. Per-Henry Olsson: Trimmning av längsregeringen på en pappersmaskin, KTH, 1993.
10. Stefan Rohlin: Positioneringsystem för gruvhiss, KTH, 1993.
11. Christer Sundin: Digital Ångturbinsregering, KTH, 1994.
12. Tobias Franson and Mattias Andersson: Modellering och Simulering av Synkroniseringsfunktionen i Korskopplingssystemet SDXC4/1, KTH, 1994
13. Susanne Halvarsson: Samtidig detection av ekovägsförändring och double talk, KTH, 1994.
14. Roger Ström: Windowbasered styrning av undervattensfarkost MacAROV, KTH, 1995.
15. Annika Johansson and Henrik Högström: Design of virtual control laboratory devices, KTH 1995
16. Hans Persson: Identification of a model for robot manipulation of flexible material, KTH 1995.
17. Ola Markusson: Similarity measures and algorithms for non-linear system identification, KTH 1995.
18. Hans Rundquist: Design of a simulation program for wiener filters based on the Matlab/Simulink program package, KTH 1995.
19. Rafael Abarca-Pereda: Driving strategy for automatic train operation systems based on fuzzy logic, KTH 1995.
20. Magnus Jansson and Niklas Gradin: Man-maskin gränssnitt enligt skogsindustriella standardiseringsgruppens standard, KTH 1995.
21. Olivier Havelange: Grey-box modeling of a cement milling curcuit, KTH 1995.
22. Kasper Ezelius: Pilot induced oscillations, KTH 1995.

23. Lennart Cormin: Real-time control using LabVIEW, KTH 1995.

24. Björn Olsson: Utveckling och implementering av styrning av pump, KTH 1995.

25. Pernilla Jansson: On tuning of fuzzy logic controllers appled to an electric arc furnace, KTH 1995.

26. Johan Karlsson: Active magnetic bearings in traction application, KTH 1996.

27. Olle Wijk: Hybrid control of walking robot, KTH 1996.

28. Malin Lodman: A computer model of the vestibulo-ocolar reflex, KTH 1996.

29. Anders Söderlund: ECME algorithms for error-in-variables models and narrowband interference rejection in CDMA, KTH 1996.

30. Martin Aronsson: Compact DMC kernal and PAC control of induction motors, KTH 1996.

31. Patric Jensfelt: Sensory processing for control of a simple robot model, KTH 1996.

32. Peter Mellberg: Power control with harmonic suppresiion for AC/AC traction vehicles, KTH 1996.

33. Stefan Johansson: Suppression of harmonics in the DC-intermediate link for AC/AC traction vehicles, KTH 1996.

34. Annika Johansson Dumoulin: Utveckling av programvara till nytt gaspedalssystem i tunga fordon, KTH 1997.

35. Joachim Sällvin: Anesthetic agent control, 1997.

36. Karl-Henrik Henriksson : LFT-modeling of a rolling missile, KTH, 1999.

37. Henrik Jansson: System identification of mixed linear and nonlinear systems, 1999.

38. Björn Aldenius: Signed LMS algorithms for blind multiuser detection in DS/CDMA systems, 1999.

39. Ronnie Backlund: Charge control of DC-DC converters, 1999.

40. Oskar Sander: Real-time GPS attitude determination for control of an unmanned aricraft, 1999.

41. Carl-Johan Larsson: A control system for a robotarm with cylindrical workspace, 1999.

42. Andreas Wallberg: Computer Control of an Infusion Pump for Positron Emissions Tomography, 2000.

43. Matteo Parodi: A feedback control system for reversing a radio-controlled truck, 2000.

44. Magnus Hagström: Pose estimation of a robot platform using an extended kalman filter, 2000.

45. Alberto Speranzon: A feedback controller for reversing a multibody vehicle, 2000.

46. Jan Brolinsson: Konstruktion av tågsimulator styrd av verklig börvärdesgenerator, 2001.

47. Martin Björk: Evaluation of an Extended Kalman Filter for space craft attitude estimation, 2002

48. Jenny Berglund: American sign language recognition using probabilistic models, 2002.

49. Johan Holmquist: Digital control of a rudder servo, 2002.

50. David Elfvik: Modeling of a diesel engine with VGT for control design simulations, 2002.

51. Bo Kindell: Line converter control, 2003.

52. Emil Birgersson, Towards Stealthy Behaviors, 2003.

53. Jorge Caro Terron, Web-based Virtual Laboration of Water Tanks Control System, 2003.

54. Fredrik Herrlin, Karakterisering och optimering av ny röntgenundersökningsmetod som visar densitetsvariationer, 2003.

55. Josefin Törnevik: Hardware in the loop simulation, 2003.

56. Magnus Svensson: An automatic defroster function for automobiles, 2003.

57. Jakob Granath: Dynamisk Modell av Människohjärtat, 2004.

58. Homan Bromand, Hybrid Control System for Reversing a Multibody Vehicle, 2004.

59. Pedro Pinies Rodriguez: Estimation of Three-dimensional Models of Indoor Environments with a Mobile Robot and Laser Scan, 2004.

60. Tobias Jorborn: DSIM - diabetes simulator: Fysiologisk datormodell och programvara för simulering av glukosmetabolismen, 2004.

61. Marika Andersson: Investigation of dynamic information in reactor noise measurements, 2004.

62. Elisabeth Lindell: On the Influence of Sensor Dynamics in Estimation of Reactor Noise Signals Date, 2004.

63. Stefan Piedrahita:: Development of a real-time measurement system for exhaust gas turbocharger speed estimation, 2004.

64. Marcus Åberg: 4xFanSaucer, 2004.

65. Per-Ove Edvinsson: Analys av användning av intelligent power modules för motorstyrning, 2005.

66. Per Back: Simulering av simulinkmodeller med kalmanfilter, 2005.

67. Mikael Norberg: Simulering av simulinkmodeller med kalmanfilter, 2005.

68. Daniel Fellke: Conceptional Design and Control of an Alternative Active Suspension System, 2005.

69. Theresia Jonsson: Control of Expert Robots for Advanced In-Space Operations, 2005.

70. Erik Rundqvist: Control of Underwater Docking Sequence with Autonomous Underwater Vehicles, 2005.

71. Per Hillerborg: Dynamisk modell av en diselmotor för diagnos och balansering, 2005.

72. Alejandro Morate Villagrasa: People tracking for a personal robot, 2005.

73. Marcus Hammar: Icke linjär styrlagsutveckling - flygplan och UAV. 2005.

74. Sarah Hallgren: Modellering av batteritemperatur, 2006.

75. Johan Classon: Map Building using Mobile Robots, 2006.

76. Isabel Serrano Vicente: Human Action Recognition based on Linear and Non-linear Dimensionality Reduction using PCA and ISOMAP, 2006

77. Joel Andersson: Minimering av förväntad reparationskostnad, I, 2007

78. Thomas Gustavsson: Minimerng av förväntad reparationskostnad, II, 2007.

79. Martin Torelm: A Comparison of Isolation Algorithms on a Benchmark System, 2007

80. Vivek Sharma: Development of Control Lab Interface for Data Acquisition using LabVIEW, 2007.

81. Eric Blanquer: LADAR proximity fuze, 2007.

82. Pontus Olsson: Real-time and Off line Filters for Eye Tracking, 2007

83. Lionel Astier: A management system for the electrical network of the French parliament building, 2007.

84. Mary Lam: A Benchmark of Probabilistic Fault Isolation Methods, 2007.

85. Samer Haddad: Structure Learning of Bayesian Networks for Fault Diagnosis, 2007.

86. Viviana Blois: Engine Control to Improve Transient Response: Theoretical study of control limitations, 2007

87. Roberto Argolini: Engine Control to Improve Transient Response: Theoretical study of control limitations, 2007

88. André Carvalho Bittencourt: Friction change detection in industrial robot arms, 2007

89. Anders Selhammer: Probabilistic fault isolation in embedded systems using prior knowledge of the system, 2008.

90. Johan König: Cylinder-Pressure Based Injector Calibration for Diesel Engines School, 2008.

91. Niklas Willemsen: Estimating Rotational Speed with a Phase - Locked Loop, 2008.

92. Axel Cornell: Probabilistic fault isolation in embedded systems using training data, 2008

93. Camilla Ljungström: Manipulator, Mounting and Integration, and Communication Brick Collection, 2008

94. Chiara Brighenti: Input design for system identification, 2009

95. Andreas Eriksson: Implementation and Evaluation of a Mass Estimation Algorithm, 2009

96. Emil Sigursveinsson: Temperature control in an x-ray sensor, 2009.

97. Per Hägg: Model based parameter estimation for a missile, 2009.

98. Stefan Wester: Dynamic system identification of a strain field, 2010

99. Mariette Annergren: Optimal Input Signal Design and MPC of Nonlinear Dynamical Systems, 2010

100. Maria Makarov: Multi-sensor data fusion for a long-reach robot, 2010

101. Andreas Lindgren: A Driverless Control System for the Beijing Yizhuang Metro Line, 2011

102. Kim Vizins: Modeling and Control of Dual Arm Robotic Manipulators, 2011

103. Antonio Balsemin: Applications Oriented Input design for MPC: An analysis of a quadruple water tank process, 2012

104. Francesco Scotton: Modeling and Identification for HVAC Systems, 2012

105. Eric Anderrsson: Motion Classification and Step Length Estimation for GPS/INS Pedestrian Navigation, 2012.

106. Adélie Busson: Immobility Control for Magnetic Gear Tooth Speed Sensing: Applied to Automatic Metros, 2013

107. Fredrik Grönberg: Fredrik: Crowd Control of Nonlinear Systems, 2013

108. Phillipp Heer: Decentralized Model Predictive Control for Smart Grid Applications, 2013

109. Nils Landin: Semi-Active Axle Suspension for Heavy Trucks, 2013

110. Jens Lycke: Simulation and Control of Auxiliary Devices in Heavy-Duty Vehicles, 2013

111. Matteo Vanin: Modelling, Identification and Navigation of Autonomous Air Vehicles, 2013,

112. Francisco Martucci, On-board recursive state estimation for dead-reckoning in an autonomous truck, 2014.

113. Rui Oliveira, Planning and Motion Control in Autonomous Heavy-Duty Vehicles, 2014.

114. Robert Mattila, On Identification of Hidden Markov Models Using Spectral and Non-Negative Matrix Factorization Methods, 2015.

115. Christopher Lundin, Modeling of a Hydraulic Braking System, 2016.

116. Linnea Persson, Cooperative Control for Landing a Fixed-Wing Unmanned Aerial Vehicle on a Ground Vehicle, 2016.

117. Oskar Eliasson, Monitoring of doors, door handles and windows using inertial sensors, 2017

118. Ioannis Tilaveridis, Detection of friction variations in bolted joints during tightening, 2017

119. Melih Güldogus, Proof of Concept of Closed Loop Re-Simulation (CLR) Methods in Verification of Autonomous Vehicles, 2017

120. Patrik Sjöberg, Design and Implementation of an Exogenous Kalman Filter for UAVs, 2018

121. Hoang Thai Do, Energy Management of Parallel Hydraulic Hybrid Wheel Loader, 2018

122. Patrik Sjöberg, Design and Implementation of an Exogenous Kalman Filter for UAVs, 2019

123. Robert Bereza-Jarocinski, Distributed Model Predictive Control for Rendezvous Problem, 2019

124. Arasto Shams, Sensor based measurements of a single phase AC/DC converter to estimate lifetime, 2020

125. Rebecka Winqvist, Neural Network Approaches for Model Predictive Control, 2020

126. Karl Hemlin, Development of Sensor Concept to Regulate Fuel Supply During Priming of Water to Air Heater in Production, 2021

127. Luca Garegnani, Autonomous Landing of a UAV on a Moving UGV Platform using Co-operative MPC, 2021

128. Oleguer Canal Anton, Automatic game-testing with personality: Multi-task reinforcement learning for automatic game-testing, 2022

129. Anna Wilhelmsson, The Implementation and Evaluation of Learning Approaches to State Filtering, 2022

130. Albin Gustafsson, Dynamic Modeling of Heat Power System: Modeling of a Heat Power System Using Physical and Data-driven Methods and Investigation of a Moving Boundary Method, 2023

131. Mathias Schmekel, Model Predictive Urea Dosing Control Strategy for Heavy-Duty Diesel Vehicles, 2023

Graduated Licentiate of Engineering Degrees:

1. Jonas Funkquist: On modelling and control of a continuous pulp digester, KTH, March 1993.
2. Jim Sorlie: On the interfacing of software for identification of grey box models, June 1994 (jointly with Professor Torsten Bohlin).
3. Per-Göran Eriksson: On control performance assesment and disturbance classification, March 1995.
4. Per Bodin: On wavelets and orthonormal bases in system identification, May 1995.
5. Magnus Jansson: On Performance analysis of subspace methods in system identification and sensor array processing, June 1995.
6. Catharina Carlemalm: On model-based detection and estimation methods with application in communication, September 1996.
7. Olle Wijk: Navigation of mobile robots using natural landmarks extracted from sonar data, September 1998.
8. Jens Pettersson: On model based estimation of quality variables for paper manufacturing, November 1998.
9. Patric Jensfelt: Localization using laser scanning and minimalistic environmental models, April 1999.
10. Henrik Mosskull: Stabilization of an Induction Machine Drive, 2003.
11. Frank Lingelbach: Path Planning using Probabilistic Cell Decomposition, 2005.
12. Märta Barenthin, On Input Design in System Identification for Control, 2006.
13. Paul Sundvall, Mobile Robot Fault Detection using Multiple Localization Modules, 2006.
14. Anna Pernestål, A Bayesian approach to fault isolation with applications to diesel engine diagnosis, 2007.
15. Per Hägg, Using Structural Information in System Identification, 2012.
16. Mariette Annergren, ADMM for l_1 Regularized Optimization Problems and Applications Oriented Input Design for MPC, 2012.
17. Afrooz Ebadat, On Application Oriented Experiment Design for Closed-Loop System Identification, 2015.
18. Niclas Blomberg, On Nuclear Norm Minimization in System Identification, 2016.
19. Pedro Lima, Predictive control for autonomous driving: With experimental evaluation on a heavy-duty construction truck, 2016.
20. Robert Mattila, Hidden Markov models: Identification, control and inverse filtering, 2018
21. Linnea Persson, Autonomous and Cooperative Landings Using Model Predictive Control, 2019

22. Rui Oliveira, Motion Planning for Heavy-Duty Vehicles, 2019

23. Ines De Miranda De Matos Lourenco, Forward and Inverse Decision-Making in Adversarial, Cooperative, and Biologically-Inspired Dynamical Systems, 2021

24. Dzenan Lapandic , Trajectory Tracking and Prediction-Based Coordination of Underactuated Unmanned Vehicles, 2022

Graduated PhDs:

1. Björn Sohlberg: Supervision and control of a steel rinsing process, KTH, October 1993.
2. Jonas Funkquist: Modelling and Identification of a distributed parameter process: the continuous digester, September 1995.
3. Magnus Jansson: On subspace methods in system identification and sensor array signal processing, October 1997.
4. Per Bodin: On the selection of best orthonormal basis in system identification and signal processing, October 1997.
5. Catharina Carlemalm: On model-based detection and estimation schemes in statistical signal processing, October 1998.
6. Olle Wijk: Triangulation Based Fusion of Sonar Data with Application in Mobile Robot Mapping and Localization, April 2001. '
7. Patric Jensfelt: Approaches to Mobile Robot Localization in Indoor Environments, June 2001.
8. Morten Strandberg: Robot Path Planning: An Object-Oriented Approach, October 2004.
9. Henrik Mosskull: Robust Control of an Induction Motor Drive, April 2006.
10. Märta Barenthin Syberg: Complexity Issues, Validation and Input Design for Control in System Identification, December 2008.
11. Per Hägg: On structured system identification and nonparametric frequency response estimation, October 2014.
12. Mariette Annergren: Application-Oriented Input Design and Optimization Methods Involving ADMM, September 2016.
13. Afrooz Ebadat, Experiment Design for Closed-loop System Identification with Applications in Model Predictive Control and Occupancy Estimation, September 2017.
14. Pedro Lima, Optimization-Based Motion Planning and Model Predictive Control for Autonomous Driving: With Experimental Evaluation on a Heavy-Duty Construction Truck, September 2018
15. Robert Mattila, Hidden Markov Models: Identification, Inverse Filtering and Applications, 2020
16. Linnea Persson, Model Predictive Control for Cooperative Rendezvous of Autonomous Unmanned Vehicles, 2021
17. Rui Filipe De Sousa Oliveira, Motion Planning and Decision Making with applications to Truck-Trailers and Buses, 2022

Google Scholar: Bo Wahlberg

Publications: Journal Papers, Book Chapters and Conference Papers

[1] B. Wahlberg and L. Ljung. Design variables for bias distribution in transfer function estimation. *IEEE Trans.on Automatic Control*, AC-31:134–144, 1986.

[2] B. Wahlberg. Limit results for sampled systems. *International Journal of Control*, 48:1267–1283, 1988.

[3] B. Wahlberg. Model reduction of high-order estimated models: The asymptotic ML approach. *International Journal of Control*, 49:169–192, 1989.

[4] B. Wahlberg. Estimation of ARMA models via high-order autoregressive approximations. *Journal of Time Series Analysis*, 10:283–299, 1989.

[5] E. J. Hannan and B. Wahlberg. Convergence rates for inverse Toeplitz matrix forms. *Journal of Multivariate Analysis*, 31:127–135, 1989.

[6] B. Wahlberg. The effects of rapid sampling in system identification. *Automatica*, 26:167–170, 1990.

[7] B. Wahlberg. ARMA spectral estimation of narrow band processes via model reduction. *IEEE Trans.Acoustics, Speech and Signal Processing*, 38(7):1144–1154, 1990.

[8] V. Krishnamurthy, B. Wahlberg, and J. Moore. Factorizations that relax the positive real condition in continuous-time and fast-sampled ELS schemes. *Int.J.on Adaptive Control and Signal Processing*, 4(5):389–414, 1990.

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