Mogens Blanke - DTU Orbit (24/05/2017)

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Department of Electrical Engineering - Professor
Automation and Control

Publications:

Performance Comparison of Controllers with Fault-Dependent Control Allocation for UAVs
Publication: Research - peer-review › Journal article – Annual report year: 2017

Model-based plant-wide optimization of large-scale lignocellulosic bioethanol plants.
Publication: Research - peer-review › Journal article – Annual report year: 2017

Adaptive FTC based on Control Allocation and Fault Accommodation for Satellite Reaction Wheels
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Combined Geometric and Neural Network Approach to Generic Fault Diagnosis in Satellite Actuators and Sensors
Baldi, P., Blanke, M., Castaldi, P., Mimmo, N. & Simani, S. 2016 In : IFAC-PapersOnLine. 49, 17, p. 432–437
Publication: Research - peer-review › Journal article – Annual report year: 2016

Control-Oriented Model of Molar Scavenge Oxygen Fraction for Exhaust Recirculation in Large Diesel Engines
Publication: Research - peer-review › Journal article – Annual report year: 2016

Diagnosis for Control and Decision Support for Autonomous Vehicles
Publication: Research - peer-review › Book chapter – Annual report year: 2016

Efficient Modelling Methodology for Reconfigurable Underwater Robots
Nielsen, M. C., Blanke, M. & Schjølberg, I. 2016 In : IFAC-PapersOnLine. 49, 23, p. 74-80
Publication: Research - peer-review › Conference article – Annual report year: 2016

Exhaust Recirculation Control for Reduction of NOx from Large Two-Stroke Diesel Engines
Publication: Research › Ph.D. thesis – Annual report year: 2017

Fault Tolerant Emergency Control to Preserve Power System Stability
Publication: Research - peer-review › Journal article – Annual report year: 2015

On-Line Generation and Arming of System Protection Schemes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016
Response Analysis and Comparison of a Spar-Type Floating Offshore Wind Turbine and an Onshore Wind Turbine under Blade Pitch Controller Faults
Publication: Research - peer-review › Journal article – Annual report year: 2014

Stability Boundaries for Offshore Wind Park Distributed Voltage Control
Publication: Research - peer-review › Journal article – Annual report year: 2016

Statistical fault diagnosis of wind turbine drivetrain applied to a 5MW floating wind turbine
Publication: Research - peer-review › Conference article – Annual report year: 2016

Validation of multi-body modelling methodology for reconfigurable underwater robots
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Centralised versus Decentralised Control Reconfiguration for Collaborating Underwater Robots.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Collective Modular Underwater Robotic System for Long-Term Autonomous Operation
Christensen, D. J., Andersen, J. C., Blanke, M., Furno, L., Galeazzi, R., Hansen, P. N. & Nielsen, M. C. 2015
Publication: Research - peer-review › Paper – Annual report year: 2015

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Baldi, P., Blanke, M., Castaldi, P., Mimmo, N. & Simani, S. 2015 In : IFAC-PapersOnLine. 48, 22, p. 547-553
Publication: Research - peer-review › Conference article – Annual report year: 2015

Convex Relaxation of Power Dispatch for Voltage Stability Improvement
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Diagnosis and Fault-tolerant Control, 3rd Edition
Publication: Research - peer-review › Book – Annual report year: 2015

Diagnosis of CO Pollution in HTPEM Fuel Cell using Statistical Change Detection
Publication: Research - peer-review › Conference article – Annual report year: 2015

Diagnosis of Wing Icing Through Lift and Drag Coefficient Change Detection for Small Unmanned Aircraft
Publication: Research - peer-review › Conference article – Annual report year: 2015

Drillstring Washout Diagnosis Using Friction Estimation and Statistical Change Detection
Publication: Research - peer-review › Journal article – Annual report year: 2015
Dynamic Modeling and Validation of a Biomass Hydrothermal Pretreatment Process - A Demonstration Scale Study
Publication: Research - peer-review › Journal article – Annual report year: 2015

Dynamic Modeling, Optimization, and Advanced Control for Large Scale Biorefineries
Publication: Research › Ph.D. thesis – Annual report year: 2016

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Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

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Publication: Research - peer-review › Conference article – Annual report year: 2015

Fault diagnosis of downhole drilling incidents using adaptive observers and statistical change detection
Publication: Research - peer-review › Journal article – Annual report year: 2015

Fault Tolerance for Industrial Actuators in Absence of Accurate Models and Hardware Redundancy
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Publication: Research - peer-review › Journal article – Annual report year: 2014

Nonlinear Adaptive Control of Exhaust Gas Recirculation for Large Diesel Engines
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Ofshore Wind Park Control Assessment Methodologies to Assure Robustness
Publication: Research › Ph.D. thesis – Annual report year: 2015

Parametric roll resonance monitoring using signal-based detection
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Short-Range Sensor for Underwater Robot Navigation using Line-lasers and Vision
Hansen, P. N., Nielsen, M. C., Christensen, D. J. & Blanke, M. 2015 In : IFAC-PapersOnLine. 48, 16, p. 113–120
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A Framework for Diagnosis of Critical Faults in Unmanned Aerial Vehicles
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Calculation of critical fault recovery time for nonlinear systems based on region of attraction analysis
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Compositional Finite-Time Stability analysis of nonlinear systems
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

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Publication: Research - peer-review › Journal article – Annual report year: 2014

Experimental Grey Box Model Identification of an Active Gas Bearing
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Fault Diagnosis for Electrical Distribution Systems using Structural Analysis
Publication: Research - peer-review › Journal article – Annual report year: 2014

L1 Adaptive Speed Control of a Small Wind Energy Conversion System for Maximum Power Point Tracking
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L1 Adaptive Manoeuvring Control of Unmanned High-speed Water Craft
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Control by damping Injection of Electrodynamic Tether System in an Inclined Orbit
Larsen, M. B. & Blanke, M. 2009 American Control Conference: ACC '09. IEEE
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DIAGNOSIS OF PITCH AND LOAD DEFECTS
Blanke, M., Dalsgaard, S. & Brath, P. 2009
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Fault-tolerant and Diagnostic Methods for Navigation

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Structural Analysis - A case study of the Rømer Satellite

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Fine-pointing control for the Rømer Satellite
Ziegler, B., Blanke, M. & Niemann, H. H. 2002

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Lorentzen, T., Blanke, M. & Niemann, H. H. 2002

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Flight Results and Lessons Learned from the Ørsted Attitude Control System
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Fault Monitoring and Re-configurable Control for a Ship Propulsion Plant
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Hearns, G. & Blanke, M. 1998 *4th IFAC Symposium on Control Applications in Marine Systems*. p. 115-120
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Publication: Research - peer-review › Journal article – Annual report year: 1997

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Izadi-Zamanabadi, R., Blanke, M. & Bøgh, S. A. 1996 KOREMA.
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Publication: Research - peer-review › Journal article – Annual report year: 1989
Identification of a class of nonlinear state-space models using RPE techniques
Publication: Research - peer-review › Article in proceedings – Annual report year: 1986

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Projects:

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Barkhordari, P., Galeazzi, R. & Blanke, M.
01/06/2016 → 31/05/2019
Project: PhD

Intelligent Quality Assessment of Railway Switches and Crossings
Galeazzi, R., Blanke, M., Hansen, S., Juul Jensen, D., Santos, I., Danielsen, H. K., Tejada, A. D. M., Erbsbøll, B. K. & Kulahci, M.
01/03/2015 → 28/02/2019
Project

Fault-Tolerant Control with Coarse Models in industrial Application
Papageorgiou, D., Blanke, M. & Niemann, H. H.
15/08/2014 → 15/08/2017
Project: PhD

Fault-tolerance and reconfiguration fpr collaborating heterogeneous underwater robots
Nielsen, M. C., Blanke, M. & Christensen, D. J.
15/08/2014 → 14/02/2018
Project: PhD

Fault-Tolerant Control with Coarse Models in industrial Application
Papageorgiou, D., Blanke, M., Niemann, H. H. & Richter, J. H.
15/08/2014 → 14/08/2017
Project: PhD

Modular Robotics for Underwater Environments
Furno, L., Blanke, M. & Christensen, D. J.
15/12/2013 → 14/03/2017
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Nielsen, K. V., Blanke, M., Hoffmann, M., Laursen, M., Galeazzi, R., Johansen, T. A. & Theotokatos, G.
01/09/2013 → 12/04/2017
Project: PhD

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Pedersen, A. S., Blanke, M., Jóhannsson, H., Tabatabaeipour, M., Niemann, H. H., Erlich, I. & Stoustrup, J.
01/11/2012 → 20/01/2016
Project: PhD

Offshore Wind Park Control Assessment Methodologies to Assure Robustness and Fault tolerance
Performance Monitoring, Diagnosis and Advanced Control for Bio-Refinery
Prunescu, R. M., Blanke, M., Jakobsen, J. G., Sin, G., Huusom, J. K., Lidén, G. & Skogestad, S.
01/04/2012 → 17/02/2016
Project: PhD

Secure Operation of Sustainable Power Systems
01/01/2012 → 31/03/2016
Project: PhD

Power Management for Refrigeration Systems
01/04/2010 → 24/05/2013
Project: PhD

Fejldiagnose og fejlhåndtering til autonome fly
Hansen, S., Blanke, M., Adrian, J., Niemann, H. H., Gustafsson, F. & Henry, D.
01/06/2009 → 21/02/2013
Project: PhD

Direct vision based molten pool feature extraction in automated arc welding
Liu, J., Fan, Z., Christensen, K. H., Klæstrup Kristensen, J., Olsen, S. I., Blanke, M., Lucas, W. & Sporring, J.
01/07/2008 → 25/01/2012
Project: PhD

Robotic Manipulation of Offshore Drilling Equipment
Choux, M., Blanke, M., Hovland, G., Poulsen, N. K., Andersen, T. O. & Egeland, O.
01/02/2008 → 19/04/2012
Project: PhD

Automated Design of Advanced Mechatronic Systems
Dupuis, J., Fan, Z., Goodman, E., Sigmund, O., Blanke, M., Jin, Y. & Zhang, Q.
15/05/2007 → 11/05/2011
Project: PhD

Nonlinear Methods for Spacecraft Orbit Control using an Electrodynamic Tether
Larsen, M. B., Blanke, M., Santos, I., Ortega, R. & Wisniewski, R.
01/05/2007 → 30/09/2010
Project: PhD

Fault Diagnosis for Identification of Deviant Behavior
Jönsson, R. I., Blanke, M., Højsgaard, S., Poulsen, N. K., Madsen, H., Gustafsson, F. & Mol, R. M. D.
01/04/2007 → 22/06/2011
Project: PhD

Fault-tolerant Guidance for Precision Farming using 2D/3D Vision and Computer-Based Learning
Blas, M. R., Blanke, M., Madsen, T. E., Lind, M., Christensen, H. I. & Schilling, K.
01/09/2006 → 30/06/2010
Project: PhD

Autonomous Supervision and Control to Prevent Parametric Resonance
Galeazzi, R., Blanke, M., Jensen, J. J., Santos, I., Kinnaert, M. & Nijmeijer, H.
Building a Fast Time Numerical Navigator for Assessing Collision and Grounding Frequencies in a Given Navigational Area
Seborg, A. V., Friis-Hansen, P. & Blanke, M.
01/10/2004 → 31/05/2006
Project: PhD

Experimental Contribution to the Problem of Model Parameter Identification in Rotating Machines via Active Magnetic Bearings
Kjølhede, K. K., Santos, I., Braun, M. J., Blanke, M. & Dmochowski, W. M.
01/02/2004 → 11/04/2008
Project: PhD

Menneske-maskine samarbejde i distribuerede automatiseringssystemer
Olsen, M. H., Lind, M., Ravn, O., Rose, M., Blanke, M., Andersen, P. B. & Johnsen, T.
01/07/2003 → 30/03/2007
Project: PhD

Fault-tolerant Regulering med Anvendelser indenfor Rumfart
Ziegler, B. L., Blanke, M. & Niemann, H. H.
01/09/2002 → 30/09/2003
Project: PhD

Design and Implementation of Automatic Ckoæntrol in High Efficiency Tractors for Agricultural Applications
Christensen, R. H., Santos, I., Klit, P., Blanke, M., Keogh, P. S. & Nordmann, R.
01/09/2001 → 11/02/2005
Project: PhD

Dynamics and control of thrusters for ships and underwater vehicles
Blanke, M., Fossen, T. I. & Lindegaard, P.
01/01/2000 → 01/01/9999
Project

Fault-tolerant control for complex systems
Blanke, M., Åström, K. J., Schaufelberfer, W., Albertos, P., Zang, Z. & Zamanabadi, R.
01/01/2000 → 01/01/9999
Project

Ultrasound actuator for aerospace applications
Blanke, M., Helbo, J. & Andersen, B.
01/01/2000 → 01/01/9999
Project

Real-Time 'Plant-Wide' Diagnosis
Petersen, J., Lind, M. & Blanke, M.
01/05/1997 → 27/03/2000
Project: PhD

Navigation
Larsen, M. B., Andersen, N. A., Lind, M., Blanke, M., Holst, J. & Pascoal, A. M.
01/03/1997 → 04/12/2002
Project: PhD
Analyse af ruteoptimeringssystemer for skibe
Andersen, N. A. & Blanke, M.
01/08/1982 → 04/09/1996
Project: PhD

Activities:

Professorship evaluation (External organisation)
Blanke, M. (Member)
15 Oct 2016 → 15 Dec 2016
Activity: Membership › Membership in committee, council, board

10th IFAC Conference on Manoeuvring and Control of Marine Craft
Blanke, M. (Organizer)
24 Aug 2015
Activity: Participating in or organising an event › Participating in or organising a conference

In committee for PhD thesis evaluation at Linköping University, Sweden (External organisation)
Blanke, M. (Member)
22 May 2015
Activity: Membership › Membership in review committee

Professorship Evaluation for NTNU - International Chair (External organisation)
Blanke, M. (Member)
1 May 2015 → 30 Jun 2015
Activity: Membership › Membership in review committee

Evaluation for University of Cambridge (External organisation)
Blanke, M. (Member)
25 Jan 2015 → 6 Feb 2015
Activity: Membership › Membership in review committee

IFAC Technical Committee on Marine Systems (External organisation)
Blanke, M. (Member)
2014 → 2017
Activity: Membership › Membership in committee, council, board

University of Bordeaux (External organisation)
Blanke, M. (Member)
19 Nov 2014
Activity: Membership › Membership in review committee

Aarhus University (External organisation)
Blanke, M. (Member)
12 Nov 2014
Activity: Membership › Membership in review committee

University of Cambridge (External organisation)
Blanke, M. (Member)
3 Nov 2014
Activity: Membership › Membership in review committee

Linköping University (External organisation)
Blanke, M. (Member)
25 Apr 2014
Activity: Membership › Membership in review committee
Referee, Professor in Robotics at Queensland University of Technology (External organisation)
Blanke, M. (Member)
28 Jan 2014 → 10 Feb 2014
Activity: Membership › Membership in review committee

International Journal of Adaptive Control and Signal Processing (Journal)
Blanke, M. (Editor)
1 Jan 2014 → 1 May 2015
Activity: Research › Editor of Research journal

Aalborg University (External organisation)
Blanke, M. (Member)
5 Oct 2012 → 18 Dec 2012
Activity: Membership › Membership in review committee

Linköping University (External organisation)
Blanke, M. (Member)
15 Jun 2012
Activity: Membership › Membership in review committee

Aalborg University (External organisation)
Blanke, M. (Member)
21 Mar 2012
Activity: Membership › Membership in review committee

Member IFAC Technical Committee on Marine Systems (External organisation)
Blanke, M. (Member)
2011 → 2014
Activity: Membership › Membership in committee, council, board

Linköping University (External organisation)
Blanke, M. (Member)
28 Dec 2011 → 1 Mar 2012
Activity: Membership › Membership in review committee

Control Engineering Practice (Journal)
Blanke, M. (Reviewer)
Oct 2008 → …
Activity: Research › Editor of Research journal

I E E E Transactions on Aerospace and Electronic Systems (Journal)
Blanke, M. (Editor)
Oct 2007 → Dec 2016
Activity: Research › Editor of Research journal