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PROFESSIONAL EXPERIENCE

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|-------------------|--|
| 04/2021 - present | Full professor , starting date 1/4/2021
Eindhoven University of Technology, Eindhoven, The Netherlands. |
| 05/2025 - present | Guest full professor , 0.2 FTE
Delft University of Technology, Delft, The Netherlands. |
| 05/2021 - 04/2025 | Full professor , starting date 1/5/2021, 0.2 FTE
Delft University of Technology, Delft, The Netherlands. |
| 02/2018 - 03/2021 | Associate professor with <i>Ius Promovendi</i> and PI of research group
Eindhoven University of Technology, Eindhoven, The Netherlands. |
| 2013 - present | Trainer and shareholder
Mechatronics Academy bv, post-academic teaching. |
| 2013 - present | Owner
Oomen in Control, provides high-tech industrial consulting and teaching. |
| 2014 - 01/2018 | Assistant professor (tenured)
Eindhoven University of Technology, Eindhoven, The Netherlands. |
| 2012 - 2014 | Assistant professor (tenure track)
Eindhoven University of Technology, Eindhoven, The Netherlands. |
| 2010 - 2012 | Postdoctoral researcher
Eindhoven University of Technology, Eindhoven, The Netherlands. |
| 2011 - 2012 | Visiting research academic
The University of Newcastle, Newcastle, Australia.
<i>Hosted by:</i> prof. Brett Ninness and dr. Adrian Wills. |
| 2010 | Visiting researcher
KTH - Royal Institute of Technology, Stockholm, Sweden.
<i>Hosted by:</i> prof. Håkan Hjalmarsson and dr. Cristian R. Rojas. |
| 2005 - 2010 | Ph.D. candidate
Eindhoven University of Technology, Department of Mechanical Engineering, Eindhoven, The Netherlands.
Sponsored by Philips Applied Technologies.
<i>Thesis:</i> "System Identification for Robust and Inferential Control with Applications to ILC and Precision Motion Systems".
<i>Advisors:</i> prof. ir. Okko Bosgra and prof. dr. ir. Maarten Steinbuch.
<i>Defense date:</i> April 19, 2010. |
| 2004 - 2005 | Industrial MSc thesis project research
Philips Applied Technologies, Eindhoven, The Netherlands.
<i>Thesis:</i> "Optimal Digital Control of High-Precision Electromechanical Servo Systems: Concepts and Applications".
<i>Advisor:</i> prof. ir. Okko Bosgra. |

2003 - 2004 **Industrial internship**
Philips Optical Storage, Eindhoven, The Netherlands.

EDUCATION

2013 - 2014 **BKO (University Teaching Qualification).**
Eindhoven University of Technology, Eindhoven, The Netherlands (certificate).

2005 - 2007 **Dutch Institute of Systems and Control (DISC) course program**
Successful completion of interuniversity graduate school course program (certificate).
Graded courses: Mathematical Models of Systems, Model Predictive Control, System Identification for Control, Design Methods for Control Systems, System and Control Theory of Nonlinear Systems.
Participated courses: Model Reduction, Control and System Theory of Stochastic Systems, Linear Matrix Inequalities in Control, Summer School on Identification and Control of Linear Parameter-Varying Systems

1999 - 2005 **M.Sc. degree (*cum laude*) in Mechanical Engineering**
Eindhoven University of Technology, Eindhoven, The Netherlands.
Specialization in Systems and Control.

1993 - 1999 **Preuniversity secondary education (VWO, Atheneum)**
Mill-Hill College, Goirle, The Netherlands.
Subjects: Dutch, English, Mathematics B, Physics, Chemistry, Biology, Economics.

ADDITIONAL COURSES

2018-2019 **Academic Leadership for Associate Professors**
GITP Training & Opleiding, 5 day course, The Netherlands (certificate).

2014 **Academic Leadership for Assistant Professors**
Eva Wiltingh BV - Center for Academic Leadership, 5 day course, The Netherlands (certificate).

2014 **Stem Training**
Eindhoven University of Technology, Eindhoven, The Netherlands (certificate).

2014 **Theatervaardigheden in het onderwijs: Master Class**
Eindhoven University of Technology, Eindhoven, The Netherlands (certificate).

2013 **Using Technology in Teaching**
Eindhoven University of Technology, Eindhoven, The Netherlands (certificate).

2013 **Activating Teaching Methods**
Eindhoven University of Technology, Eindhoven, The Netherlands (certificate).

2013 **Teaching and Learning in Higher Education**
Eindhoven University of Technology, Eindhoven, The Netherlands (certificate).

2011 **EECI-HYCON Course on LMI, optimization and polynomial methods**
SUPELEC, France (certificate).

2007 **Supervising M.Sc. students**
Eindhoven University of Technology, Eindhoven, The Netherlands (certificate).

2005 **Writing articles and abstracts in English**
Center for Communication, Language & Technology, Eindhoven University of Technology, Eindhoven, The Netherlands (certificate).

HONORS AND AWARDS (INCLUDING STUDENT AWARDS)

2025	DISC best thesis award for Leontine Aarnoudse (supervisor).
2024	Best Student Paper Award of the IEEE Technical Committee on System Identification and Adaptive Control (TC-SIAC), awarded to Leontine Aarnoudse (supervisor and co-author of paper).
2024	Best Student Presentation Award at the Benelux Meeting, awarded to Max van Meer (supervisor role).
2022	Best Paper Award at MECC 2022, awarded to authors Leontine Aarnoudse and Tom Oomen.
2022	Best Student Paper Award at IFAC ALCOS, awarded to Johan Kon (supervisor and co-author of paper).
2021	7th Grand Nagamori Award (certificate and 5 million Yen), awarded by Shigenobu Nagamori and the Nagamori foundation.
2021	Finalist for the best conference paper award for the paper "Kernel-Based Learning Control for Iteration-Varying Tasks Applied to a Printer with Friction" by Maurice Poot, Jim Portegies, and Tom Oomen, at the IEEE/ASME International Conference on Advanced Intelligent Mechatronics, Delft, The Netherlands, 2021.
2020	Best paper recognition award for the paper "Suppressing position-dependent disturbances in repetitive control: with application to a substrate carrier system" by Noud Mooren, Gert Witvoet, Ibrahim Acan, Joep Kooijman, and Tom Oomen, at the IEEE 16th International Workshop on Advanced Motion Control (AMC2020), Agder, Norway.
2019	IFAC 2019 Young Researcher Award, awarded by TC 4.2 Mechatronics, awarded every three years to a researcher under the age of 40.
2019	IEEJ Journal of Industry Applications best paper award for the paper "Advanced motion control for precision mechatronics: Control, identification, and learning of complex systems" by Tom Oomen, IEEJ Transactions on Industry Applications, 7(2):127–140, 2018
2018	IEEJ Industry Applications Society Excellent Presentation Award, awarded to Nard Strijbosch (supervisor and co-author of paper).
2018	IEEJ Industry Applications Society Excellent Presentation Award, awarded to Jurgen van Zundert (supervisor and co-author of paper).
2018	Outstanding Service as Associate Editor of the IEEE Control Systems Letters (recognition only awarded to one out of 50 AEs for the year 2017).
2017	Elected as Senior Member of the Institute of Electrical and Electronics Engineers (IEEE)
2017	Personal research grant: Innovational Research Incentives Scheme VIDI grant "From Data to Complex Controlled Machines" (no. 15698) awarded by NWO (The Netherlands Organisation for Scientific Research) and STW (Dutch Science Foundation) (800 k€).
2017	Recipient of the Mechatronics Paper Prize Award over the years 2014-2016 for the paper "Joint input shaping and feedforward for point-to-point motion: Automated tuning for an industrial nanopositioning system", by Frank Boeren, Dennis Bruijnen, Niels van Dijk and Tom Oomen, Mechatronics, Vol. 24 (2014), pp. 572-581.
2016	Top 25 of New Scientist 'Wetenschapstalent' (of young researchers (≥ 1980) working in the Netherlands and Flanders).

2016	Best Poster Paper Award at IFAC Mechatronics, awarded to Lennart Blanken (supervisor and co-author of paper).
2016	Best Student Paper Award at IFAC Mechatronics, awarded to Jurgen van Zundert (supervisor and co-author of paper).
2015	Recipient of the 2015 IEEE Transactions on Control Systems Technology Outstanding Paper Award for the paper “Connecting system identification and robust control for next-generation motion control of a wafer stage”, by Tom Oomen, Robbert van Herpen, Sander Quist, Marc van de Wal, Okko Bosgra, and Maarten Steinbuch, IEEE Transactions on Control Systems Technology, 22(1): 102-118, 2014.
2017	DISC best thesis award for Frank Boeren (supervisor).
2015 - 2020	Nomination for best teacher of the Master programs for the faculty of Mechanical Engineering, 2015, 2018, 2019, 2020.
2014	Honourable mention at the 19th IFAC World Congress as one of five finalist papers for the IFAC Congress Young Author Prize for the paper “Subspace Predictive Repetitive Control with Reduced-Dimension Identification for Wind Turbine Individual Pitch Control”.
2013	Personal research grant: Innovational Research Incentives Scheme VENI grant “Precision Motion: Beyond the Nanometer” (no. 13073) awarded by NWO (The Netherlands Organisation for Scientific Research) and STW (Dutch Science Foundation) (250 k€).
2008-2011	Best session presentation award on the 2008, 2009, 2010, 2011 American Control Conference.
2005	M.Sc. thesis awarded with predicate <i>cum laude</i> .
2005	M.Sc. thesis awarded with the Corus Young Talent Graduation Award on November 24, 2005 (certificate and 10 k€), which was granted by the Koninklijke Hollandse Maatschappij der Wetenschappen and awarded by Peter Jongenburger (CTO Corus).

RESEARCH GRANTS

The following list of project proposals have been granted and are performed under my supervision (incomplete list, amount available on request).

2023	“Research Network on Learning in Machines: New Perspectives for Future Nanoscale Production”, NWO/JSPS Seminar.
2021-2025	“IMOCO4.E”, EU ECSEL project. Part consists of 2 Ph.D. positions.
2019-2023	“Control methodologies for uniform product quality by learning-based data management and control”, 1 Ph.D. position.
2019-2023	“Fault detection and isolation for predictive maintenance in high-tech semiconductor equipment”, 1 Ph.D. position.
2017-2024	“From Data to Complex Controlled Machines”, VIDI grant mentioned under “Honors and Awards”, above. 800 k€.
2017-2021	“IMech”, EU ECSEL project. Part consists of 1 Ph.D. position.
2016-2020	“ATC”, Advanced Thermal Control consortium, an industrial consortium for thermal control research. Part consists of 1 Ph.D. position.
2013-2016	“Precision Motion: Beyond the Nanometer”, VENI grant mentioned under “Honors and Awards”, above. 250 k€.
2016-2020	“Identification and Robust Control of LPV Systems in a 2D Framework”. Awarded TU/e Impuls programme 2 (jointly with Océ/Canon).

2016-2020	co-applicant on CSER proposal “A New Approach for Investigating Photo-Electrochemical Interfaces: Density Functional Theory based State-Space Modeling & Simulations”, awarded, performed at Differ, Ph.D. research of Kiran George.
2015-2019	“Repetitive Motion Control in Printing Systems”.
2014-2019	“CPS” project (topic: sampled-data and multirate aspects in identification and control). Awarded by STW (Dutch Science Foundation). Part consists of 1 Ph.D. position.
2013-2017	“Model-Based Stage Control to Compensate Dynamics and Deformation”. Awarded TU/e Impuls programme (jointly with ASML).
2012-2016	“Zero-settling Control for Beyond Rigid Body Systems”. Awarded by Philips Innovation Services.
2011-2015	“Learning and Repetitive Control of Printing Systems”. Awarded by Océ/Canon.
2008-2012	“Identification for Control of Complex Motion Systems”. Awarded by ASML Research.

ACADEMIC ACTIVITIES

Miscellaneous

2026 - ...	Member of the Scientific Committee of the Benelux Meeting on Systems and Control.
2022	Member of the TC4.2 Awards Committee.
2020 - 2022	Member of the Control Systems Technology Award Awards Sub-Committee.
2020	Member of the DISC Best Thesis Award of the Year 2019.
2018 - 2022	Member of the Eindhoven Young Academy of Engineering (EYAE).
2015 - 2018	Member of the Next-Gen Board of the High-Tech Systems Center (HTSC).
2012 - 2021	Member of the Educational Committee for the interdisciplinary Master on Systems and Control, Eindhoven University of Technology.
2006 - present	Senior Member of the IEEE (Student member since 2006, Member since 2010, Senior member since 2017).

Editorial services

2024 - present	Co-Editor-in-Chief IFAC Mechatronics. Responsibility of rapid-publication letters.
2023 - present	International Advisory Board, IEEJ Journal of Industry Applications.
2023 - present	Senior Editor on the IEEE Control Systems Letters (L-CSS) board, a new journal aiming at high quality papers (with strong interrelation with the IEEE CSS flagship conferences IEEE Conference on Decision and Control and American Control Conference).
2019- 2022	Journal guest editor of special issue of 8th IFAC Symposium on Mechatronic Systems for IFAC Mechatronics.
2018 - 2022	Associate Editor on the IEEE Transactions on Control Systems Technology board.
2017 - 2022	Associate Editor on the IEEE Control Systems Letters (L-CSS) board, a new journal aiming at high quality papers (with strong interrelation with the well-known IEEE Conference on Decision and Control). Duties include handling papers.
2016 - 2023	Associate Editor on the IFAC Mechatronics Editorial Board. Duties include handling papers.

2013 - 2017	Associate Editor on the IEEE Conference Editorial Board. Duties include handling papers for the Conference on Decision and Control, and the American Control Conference, which are the key annual conferences in my research field and indexed by ISI Web of Science.
2013 - 2014	Journal guest editor for and organizer (jointly with prof. David Trumper (Massachusetts Institute of Technology, USA) and dr. Marcel Heertjes (ASML Development and Engineering)) of special issue for IFAC Mechatronics entitled “Control of High-Precision Motion Systems”, volume 24, issue 6, 2014.

Conference organisation committee (typical duties include handling papers as Associate Editor)

2029	Financial chair for the 2029 IFAC World Congress, Amsterdam, The Netherlands, 2029.
2027	Invitation Co-Chair for 2027 IEEE International Conference on Advanced Intelligent Mechatronics (AIM2025), Boulder, CO, USA, 2027.
2024	Invited session chair for the 21th IFAC Symposium on System Identification – Learning Models for Decision and Control, Lyon, France, 2025.
2025	International Program Committee Chair for the 2025 Modeling, Estimation and Control Conference (MECC2025), Pittsburgh, PA, USA, 2025.
2025	International Program Committee for the 13th IFAC Symposium on Nonlinear Control Systems (NOLCOS), Reykjavík, Iceland, 2025.
2025	International Program Committee for the 2025 Joint IFAC Symposium on Mechatronic Systems & Robotics, Paris, France, 2025.
2025	International Program Committee for the joint 6th IFAC Workshop on Linear Parameter Varying Systems (LPVS25) and 11th IFAC Symposium on Robust Control Design (ROCOND25), Porto, Portugal, 2025.
2024	International Program Committee for the 2024 Modeling, Estimation and Control Conference (MECC2024), Chicago, IL, USA, 2022.
2024	Co-organiser of the AI Triangle Workshop on Learning in Control & Robotics: Aachen, Eindhoven, Leuven collaboration, Aachen, Germany, 2024.
2024	IPC member for the 20th IFAC Symposium on System Identification – Learning Models for Decision and Control, Boston, MA, USA, July 17-19, 2024.
2024	Program Committee for the 2024 American Control Conference (ACC2024), Toronto, Canada, 2024.
2024	Program Committee and Associate Editor at Large (AEaL) for the 2024 Conference on Control Technology and Applications (CCTA), Newcastle, United Kingdom, August 2024.
2024	Co-chair responsible for Special Sessions for the IEEE 18th International Workshop on Advanced Motion Control (AMC2024), Kyoto, Japan, February-March 2024.
2023	International Program Committee for the 2023 Modeling, Estimation and Control Conference (MECC2023), 2023.
2023	Registration chair for the 2023 Conference on Control Technology and Applications (CCTA), Bridgetown, Barbados, August 2023.
2023	General chair for the First Research Network on Learning in Machines: New Perspectives for Future Nanoscale Production, Tokyo, Japan, July 2023.
2022	Program vice chair for the 2022 Conference on Decision and Control (CDC), Cancun, Mexico, December, 2022.
2022	International Program Committee Chair for the 2022 Modeling, Estimation and Control Conference (MECC2022), Jersey City, New Jersey, 2022.

2025	International Program Committee for the 12th IFAC Symposium on Nonlinear Control Systems (NOLCOS), Newcastle, Australia, 2022.
2022	IPC member for the 9th IFAC Symposium on Mechatronic Systems (Mechatronics 2022) and 16th International Conference on Motion and Vibration Control (MoViC 2022), 2022.
2022	IPC member for the 10th IFAC Symposium on Robust Control Design (ROCOND'22), 2022.
2022	IPC member for the 5th IFAC Workshop on Linear Parameter Varying Systems (LPVS22), Montreal, Canada, 2022.
2022	IPC member for the 14th IFAC Workshop on Adaptive and Learning Control Systems (ALCOS), Casablanca, Morocco, 2022
2022	Co-chair responsible for Special Sessions for the IEEE 17th International Workshop on Advanced Motion Control (AMC2022), Padova, Italy, February 2022.
2021	Track Program Committee (TPC) for the IEEE International Conference on Industrial Informatics (INDIN) 2021, Palma de Mallorca, Spain, July 21-23, 2021, technical track 'Robotics and Mechatronics in Industrial Applications'.
2021	IPC member for the 19th IFAC Symposium on System Identification – Learning Models for Decision and Control, Padova, Italy, July 14-16, 2021.
2021	Publicity Co-Chair for the IEEE/ASME International Conference on Advanced Intelligent Mechatronics, Delft, The Netherlands, July 12-16, 2021.
2021	IPC member for the 4th IFAC Workshop on Linear Parameter Varying Systems, Milano, Italy, 2021.
2021	Program committee for the 2021 American Control Conference (ACC), New Orleans, LA, USA, May 26-28, 2021.
2021	Publicity Co-Chair for the IEEE IES International Conference on Mechatronics (ICM), Tokyo, Japan, March 7-9 2021.
2020	IPC member for the 4rd IEEE Conference on Control Technology and Application (CCTA), Montreal, Canada, August 24-26, 2020.
2020	Associate Editor for the IFAC World Congress, Berlin, Germany, July 12-17, 2020.
2020	Co-chair responsible for Special Sessions for the IEEE 16th International Workshop on Advanced Motion Control (AMC2020), Kristiansand, Norway, April 20-22, 2020.
2019	IPC member for the 13th IFAC Workshop on Adaptive and Learning Control Systems (ALCOS 2019), Winchester, United Kingdom, December 4-6, 2019.
2019	NOC member for the 3th IFAC Workshop on Linear Parameter Varying Systems, Eindhoven, The Netherlands, November 4-6, 2019.
2019	IPC member for the 8th IFAC Symposium on Mechatronic Systems, Vienna, Austria, September 4-6, 2019.
2019	IPC member for the 11th IFAC Symposium on Nonlinear Control Systems, Vienna, Austria, September 4-6, 2019.
2019	IPC member for the 12th IFAC Symposium on Advances in Control Education (ACE) 2019, Philadelphia, Pennsylvania, July 7-9, 2019.
2019	IPC member for the 3rd IEEE Conference on Control Technology and Application (CCTA), Hong Kong, August 19-21, 2019.
2018	IPC member for the 18th IFAC Symposium on System Identification (SYSID), Stockholm, Sweden, July 9-11, 2018.
2016	IPC member for the 7th IFAC Symposium on Mechatronic Systems, Loughborough, UK, September 5-8, 2016.

2016 IPC member for the 12th IFAC International Workshop on Adaptation and Learning in Control and Signal Processing, Eindhoven, The Netherlands, June 29 - July 1, 2016.

Technical committee (TC)

2022 Chair of the IEEE-IES TCMC subcommittee on High-Precision Motion Control.
 2020 - present Vice-chair of IFAC Technical Committee on Mechatronic Systems, TC4.2.
 2018 - present Member of the IEEE-IES Technical Committee on Motion Control (TCMC).
 2016 - present Member of IFAC Technical Committee on Adaptive and Learning Systems, TC1.2.
 2016 - 2019 Vice-chair of IFAC Technical Committee on Mechatronic Systems, TC4.2.
 2015 - present Member of IFAC Technical Committee on Mechatronic Systems, TC4.2.
 2015 - present Member of IFAC Technical Committee on Modelling, Identification and Signal Processing, TC1.1.
 2014 - present Member of IEEE Technical Committee on System Identification and Adaptive Control, TC-SIAC.
 2013 - present Member of National R&D Workgroup Mechatronics.
 2009 - present Member of ERNSI (European Research Network System Identification), and yearly participant of invitation-only workshop.

Workshops at international conferences

2024 Iterative learning control — Algorithms, applications and future research directions
 Tutorial at the 2024 IEEE Conference on Decision and Control. Organiser and speaker, with prof. Kevin Moore (School of Mines, Colorado, US), prof. Eric Rogers (University of Southampton, UK), prof. Bing Chu (University of Southampton, UK), prof. Ying Tan (University of Melbourne, Australia).
 2017 Iterative Learning Control and Repetitive Control: Theoretical Advances and Emerging Applications at the 2017 IFAC World Congress, Toulouse, France. Organiser and speaker, with dr. Bing Chu (University of Southampton, UK), dr. Christopher Freeman (University of Southampton, UK), Kira Barton (University of Michigan, USA), and Ying Tan (University of Melbourne, Australia).

Invited sessions at international conferences

2025 Invited session Cutting-edge technology in Precision Servo Systems for Next-Generation Mechatronics at the 2025 Joint IFAC Symposium on Mechatronic Systems & Robotics, Paris, France. With Shota Yabui, Masahiro Mae, Juan Padron, Sebastiaan van den Eijnden, and Ernst Csencsics.
 2023 Open invited track Recent Advances in Iterative Learning and Repetitive Control at the 2023 IFAC World Congress, Yokohama, Japan. With dr. Kira Barton (University of Michigan, USA), dr. Bing Chu (University of Southampton, UK), and dr. Ying Tan (University of Melbourne, Australia), dr. Pavel Pakshin, R.E. Alekseev Nizhny Novgorod State.
 2021 Special Session Smart Precision Motion Control in Mechatronic Systems at the IEEE International Conference on Mechatronics (ICM2023), Loughborough, UK. With prof. Kazuaki Ito, prof. Wataru Ohnishi.

- 2022 Invited session Mechatronics at the 61st IEEE Conference on Decision and Control (CDC). With prof. Gerardo Flores, prof. Micky Rakotondrabe, prof. Sofiane Khadraoui, prof. Marcel Heertjes, and prof. Mohammad Al Janaideh.
- 2022 Invited session Recent Advances in Iterative Learning and Repetitive Control at the 14th IFAC International Workshop on Adaptive and Learning Control Systems (ALCOS 2022). With prof. Bing Chu, prof. Kira Barton, and prof. Ying Tan.
- 2022 Invited session Mechatronics at the 2022 American Control Conference (ACC), Atlanta, Georgia, USA. With prof. Mohammad Al Janaideh, prof. Micky Rakotondrabe, prof. Marcel Heertjes, and prof. Mokrane Boudaoud.
- 2021 Invited session Control Methods for Mechatronic Systems at the 2021 American Control Conference (ACC), New Orleans, Louisiana, USA. With prof. Helon Vicente Hultmann Ayala, prof. Mohammad Al Janaideh and prof. Micky Rakotondrabe.
- 2021 Special Session Smart Precision Motion Control in Mechatronic Systems at the IEEE International Conference on Mechatronics (ICM2021), Tokyo, Japan. With prof. Kazuaki Ito, prof. Kenta Seki, prof. Wataru Ohnishi.
- 2020 Invited session Mechatronics at the 2020 Conference on Decision and Control (CDC), Jeju Island, Korea. With prof. Mohammad Al Janaideh and prof. Micky Rakotondrabe.
- 2020 Open invited track Modeling, Identification, Estimation and Control in micromechatronic systems at the 2020 IFAC World Congress, Berlin, Germany. With prof. Helon Vicente Hultmann Ayala, prof. Andrew John Fleming, prof. Micky Rakotondrabe.
- 2020 Open invited track Iterative Learning Control and Repetitive Control at the 2020 IFAC World Congress, Berlin, Germany. With dr. Kira Barton (University of Michigan, USA), dr. Bing Chu (University of Southampton, UK), and dr. Ying Tan (University of Melbourne, Australia).
- 2020 Smart Precision Motion Control in Mechatronic Systems at the 2020 AMC, Kristiansand, Norway. With prof. Kenta Seki, prof. Wataru Ohnishi, and prof. Kazuaki Ito.
- 2020 Recent Advances in Iterative Learning Control Large and Repetitive Learning Control: From Theory to Applications-I at the 2019 CDC, Nice, France. With dr. Gijo Sebastian (University of Melbourne, AU), prof. Ying Tan (University of Melbourne, AU), prof. Bing Chu (University of Southampton, UK), Christopher T. Freeman (University of Southampton, UK), Kira Barton (University of Michigan, USA).
- 2019 Precision mechatronics at the 2019 ACC, Philadelphia, PA. With dr. Andrew Fleming (University of Newcastle, Australia) and dr. Marcel Heertjes (ASML Development and Engineering).
- 2019 Smart Precision Motion Control in Mechatronic Systems at the IEEE 2019 International Conference on Mechatronics, Ilmenau, Germany. With prof. Kazuaki Ito (Gifu University, Japan), prof. Kenta Seki (Nagoya Institute of Technology, Japan), prof. Hiroshi Fujimoto (The University of Tokyo, Japan).
- 2018 Advanced Motion Control for Mechatronic Systems at the 44th Annual Conference of the IEEE Industrial Electronics Society, Washington D.C., USA. With prof. Kazuaki Ito (Gifu University, Japan), prof. Kenta Seki (Nagoya Institute of Technology, Japan), prof. Hiroshi Fujimoto (The University of Tokyo, Japan).

- 2018 Smart Precision Motion Control in Mechatronic Systems at the 2018 Workshop on Advanced Motion Control, Tokyo, Japan. With prof. Kazuaki Ito (Gifu University, Japan), prof. Kenta Seki (Nagoya Institute of Technology, Japan), prof. Hiroshi Fujimoto (The University of Tokyo, Japan).
- 2018 Iterative Learning Control at the 2018 ACC, Milwaukee, WI. With dr. Kira Barton (University of Michigan, USA), dr. Douglas A. Bristow (University of Missouri, USA), dr. Sandipan Mishra (Rensselaer Polytechnic Institute, USA), dr. Bing Chu (University of Southampton, UK).
- 2018 High precision mechatronics: modeling and identification at the 2018 ACC, Milwaukee, WI. With dr. Andrew Fleming (University of Newcastle, Australia) and dr. Marcel Heertjes (ASML Development and Engineering).
- 2018 High precision mechatronics: dynamics and control at the 2018 ACC, Milwaukee, WI. With dr. Andrew Fleming (University of Newcastle, Australia) and dr. Marcel Heertjes (ASML Development and Engineering).
- 2018 High precision mechatronics: tracking and feedforward at the 2018 ACC, Milwaukee, WI. With dr. Andrew Fleming (University of Newcastle, Australia) and dr. Marcel Heertjes (ASML Development and Engineering).
- 2017 Precision Mechatronics - Advanced Motion Control at the 2017 IFAC World Congress, Toulouse, France. With dr. Andrew Fleming (University of Newcastle, Australia) and dr. Marcel Heertjes (ASML Development and Engineering).
- 2017 Precision Mechatronics - Precision Control in Microscopy at the 2017 IFAC World Congress, Toulouse, France. With dr. Andrew Fleming (University of Newcastle, Australia) and dr. Marcel Heertjes (ASML Development and Engineering).
- 2017 Open invited session Iterative Learning Control and Repetitive Control: Theoretical Advances and Emerging Applications at the 2017 IFAC World Congress, Toulouse, France. With dr. Kira Barton (University of Michigan, USA), dr. Sandipan Mishra (Rensselaer Polytechnic Institute, USA), dr. Bing Chu (University of Southampton, UK), and dr. Christopher Freeman (University of Southampton, UK).
- 2017 Precision Mechatronics I - SPM and High-Speed Control at the 2017 ACC, Seattle, WA. With dr. Andrew Fleming (University of Newcastle, Australia) and dr. Marcel Heertjes (ASML Development and Engineering).
- 2017 Precision Mechatronics II - Precision Motion Control at the 2017 ACC, Seattle, WA. With dr. Andrew Fleming (University of Newcastle, Australia) and dr. Marcel Heertjes (ASML Development and Engineering).
- 2016 New Directions in Iterative Learning Control at the 2016 ACC, Boston, MA. With dr. David Hoelzle (University of Notre Dame, USA) and dr. Kira Barton (University of Michigan, USA).
- 2016 High Precision Systems: Modelling and Disturbance Compensation at the 2016 ACC, Boston, MA. With dr. Andrew Fleming (University of Newcastle, Australia) and dr. Marcel Heertjes (ASML Development and Engineering).
- 2016 High Precision Systems: Advances in Motion Control at the 2016 ACC, Boston, MA. With dr. Andrew Fleming (University of Newcastle, Australia) and dr. Marcel Heertjes (ASML Development and Engineering).
- 2015 Advances in Iterative Learning Control at the 2015 CDC, Osaka, Japan. With dr. Bing Chu (University of Southampton, UK), dr. Christopher Freeman (University of Southampton, UK), and Kira Barton (University of Michigan, USA).

- 2015 Precision Mechatronics - Motion Control at the 2015 ACC, Chicago, IL. With dr. Andrew Fleming (University of Newcastle, Australia) and dr. Marcel Heertjes (ASML Development and Engineering).
- 2015 Precision Mechatronics - High speed nanopositioning at the 2015 ACC, Chicago, IL. With dr. Andrew Fleming (University of Newcastle, Australia) and dr. Marcel Heertjes (ASML Development and Engineering).
- 2015 Precision Mechatronics - Control of AFMs at the 2015 ACC, Chicago, IL. With dr. Andrew Fleming (University of Newcastle, Australia) and dr. Marcel Heertjes (ASML Development and Engineering).
- 2015 Precision Mechatronics - Emerging Developments at the 2015 ACC, Chicago, IL. With dr. Andrew Fleming (University of Newcastle, Australia) and dr. Marcel Heertjes (ASML Development and Engineering).
- 2015 Emerging Trends in Iterative Learning Control at the 2015 ACC, Chicago, IL. With dr. David Hoelzle (University of Notre Dame, USA) and dr. Kira Barton (University of Michigan, USA).
- 2015 Robust and Optimal Iterative Learning Control at the 2015 ACC, Chicago, IL. With dr. David Hoelzle (University of Notre Dame, USA) and dr. Kira Barton (University of Michigan, USA).
- 2014 Emerging Topics in Iterative Learning Control at the 2014 ACC, Portland, OR. With dr. David Hoelzle (University of Notre Dame, USA) and dr. Sandipan Mishra (Rensselaer Polytechnic Institute, USA).
- 2014 Precision Mechatronics I - High Speed Nanopositioning at the 2014 ACC, Portland, OR. With dr. Andrew J. Fleming (University of Newcastle, Australia) and dr. Marcel Heertjes (ASML Development and Engineering).
- 2014 Precision Mechatronics II - Scanning Probe Microscopy at the 2014 ACC, Portland, OR. With dr. Andrew J. Fleming (University of Newcastle, Australia) and dr. Marcel Heertjes (ASML Development and Engineering).
- 2014 Precision Mechatronics III - Motion Control at the 2014 ACC, Portland, OR. With dr. Andrew J. Fleming (University of Newcastle, Australia) and dr. Marcel Heertjes (ASML Development and Engineering).
- 2013 Emerging Applications of Iterative Learning Control at the 2013 ACC, Washington, DC. With dr. Kira Barton (University of Michigan, USA) and dr. Sandipan Mishra (Rensselaer Polytechnic Institute, USA).
- 2013 New Developments in Iterative Learning Control at the 2013 ACC, Washington, DC. With dr. Kira Barton (University of Michigan, USA) and dr. Sandipan Mishra (Rensselaer Polytechnic Institute, USA).
- 2013 Advances in High-Precision Motion Stages at the 2013 ACC, Washington, DC. With dr. Marcel Heertjes (ASML Development and Engineering).

Opponent services

2026	Opponent in the Ph.D. jury for Hoang Nguyen, Technische Universiteit Eindhoven, The Netherlands.
2026-02-13	Opponent in the Ph.D. jury for Vibhor Jain, Technische Universiteit Eindhoven, The Netherlands.
2025-10-29	Opponent in the Ph.D. jury for Amr Hezagy, Technische Universiteit Delft, The Netherlands.
2025-10-08	Opponent in the Ph.D. jury for Daniel Wertjanz, TU Vienna, Austria.
2025-09-15	Opponent in the Ph.D. jury for Maximilian Stölzle, Technische Universiteit Delft, The Netherlands.
2025-06-13	Opponent in the Ph.D. jury for Wouter Weekers, Technische Universiteit Eindhoven, The Netherlands.
2025-05-14	Opponent in the Ph.D. jury for Robbert van der Kruk, Technische Universiteit Eindhoven, The Netherlands.
2025-02-17	Opponent in the Ph.D. jury for Jin Chen. Rijksuniversiteit Groningen, The Netherlands
2025-02-10	Opponent in the Ph.D. proposal jury for Deokjin Lee, Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, South Korea.
2025-01-22	Opponent in the Ph.D. jury for Ali Moradvandi, Technische Universiteit Delft, The Netherlands.
2025-01-09	Opponent in the Ph.D. jury for Taleb Bou Hamdan, Université de Poitiers, France.
2025-01-09	Opponent in the Ph.D. jury for Mojtaba Haghi, Technische Universiteit Eindhoven, The Netherlands.
2024-10-08	Opponent in the Ph.D. jury for Yorick Broens, Technische Universiteit Eindhoven, The Netherlands.
2024-06-18	Opponent in the Ph.D. jury for Chris van der Ploeg, Technische Universiteit Eindhoven, The Netherlands.
2024-05-03	Opponent in the Ph.D. jury for Philippe Schuchert, EPFL - Swiss Federal Technology Institute of Lausanne, Switzerland
2024-03-11	Opponent in the Ph.D. jury for Muhammad Almuzakki. Rijksuniversiteit Groningen, The Netherlands
2024-03-07	Opponent in the Ph.D. jury for Livia Brandetti, Technische Universiteit Delft, The Netherlands.
2024-02-22	Opponent in the Ph.D. jury for Lizan Kivits, Technische Universiteit Eindhoven, The Netherlands.
2023-11-10	Opponent in the Ph.D. jury for Hanul Jung, Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, South Korea.
2023-09-20	Opponent in the Ph.D. jury for Nima Karbasizadeh Esfahani, Technische Universiteit Eindhoven, The Netherlands.
2022-02-14	Opponent in the Ph.D. proposal jury for Hanul Jung, Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, South Korea.
2023-09-20	Opponent in the Ph.D. jury for Nima Karbasizadeh, Technische Universiteit Delft, The Netherlands.
2022-12-22	Opponent in the Ph.D. jury for Amr Mohammed Elshahawy Ibrahim, Technische Universiteit Eindhoven, The Netherlands.
2022-10-13	Opponent in the Ph.D. jury for Arnoud Delissen, Technische Universiteit Delft, The Netherlands.

2022-05-03	Opponent in the Ph.D. jury for Karthik Raghavan Ramaswamy, Technische Universiteit Eindhoven, The Netherlands.
2021-06-23	Opponent for Matias Müller, KTH, Stockholm, Sweden.
2021-02-23	Opponent in the Ph.D. jury for Yanin Kasemsinsup, Technische Universiteit Eindhoven, The Netherlands.
2020-01-27	Opponent in the Ph.D. jury for Jeffrey van Pinxteren, Technische Universiteit Eindhoven, The Netherlands.
2020-12-17	Opponent in the Ph.D. jury for Oktay Kocan, ONERA, Toulouse, France.
2020-04-30	Opponent in the Ph.D. jury for Ioannis Proimadis, Technische Universiteit Eindhoven, The Netherlands.
2020-01	Opponent in the Ph.D. jury for Johannes Hendriks, The University of Newcastle, Newcastle, Australia.
2019-12-05	Opponent in the Ph.D. jury for Dieter Verbeke, Vrije Universiteit Brussel, Brussels, Belgium.
2019-01-30	Opponent in the Ph.D. jury for Ylva Jung, Linköpings Universitet, Linköping, Sweden.
2018-01-24	Opponent in the Ph.D. jury for Hsueh-Ju Chen, University of Manchester, Manchester, UK.
2017-10-17	Opponent in the Ph.D. jury for Yijang Chen, University of Southampton, Southampton, UK.
2016-12-06	Opponent in the Ph.D. jury for Sachin Navalkar, Technische Universiteit Delft, The Netherlands.
2016-03-03	Opponent in the Ph.D. jury for Rick van der Maas, Technische Universiteit Eindhoven, The Netherlands.
2013-03-29	International opponent in the Ph.D. jury for Pieter Janssens, Katholieke Universiteit Leuven, Belgium.
2007 - present	Opponent in many M.Sc. thesis defenses, Eindhoven University of Technology.

Other

2014	Co-organiser of the DISC Summer School on Data-driven Modeling for Control, Zandvoort, The Netherlands, June 16-19, 2014.
2008 - present	Reviewer for various journals, including IEEE Transactions on Automatic Control, Automatica, International Journal of Control, IEEE Transactions on Control Systems Technology, Control Engineering Practice, and Asian Journal of Control.
2007 - present	Reviewer for various conferences, including Conference on Decision and Control, European Control Conference, American Control Conference, Symposium on System Identification, Symposium on Learning Control, and Symposium on Robust Control Design.
2006 - present	(Co-) chair on many conferences.

TEACHING EXPERIENCE

Ph.D. level

- 2019 - present Lecturer for DISC Ph.D. course on Design Methods for Control Systems. Jointly with prof. Jan-Willem van Wingerden (TUD).
- 2018 Lecturer for DISC Ph.D. course on Design Methods for Control Systems. Jointly with prof. Maarten Steinbuch (TU/e) and dr. Gjerrit Meinsma (UT).
- 2014 Lecturer for DISC Ph.D. Summer School DISC Summer School on Data-driven Modeling for Control, June 16-19, 2014.
Zandvoort, The Netherlands.
- 2012 Lecturer for Ph.D. course “Repetitive and Iterative Learning Control”
Subject: Invited lecturer for one week course on repetitive and iterative learning control
Aalborg University, Denmark. Invited by prof. Jakob Stoustrup.

M.Sc. level

- 2021 - present Invited teacher ”Learning for Precision Motion Control”
The University of Tokyo, Tokyo, Japan.
- 2019 - Present Responsible Teacher and Lecturer M.Sc. course “Learning Control” (5 ECTS)
Development and teaching of a new Challenge-Based Learning Course
Eindhoven University of Technology.
- 2016 - Present Responsible Teacher and Lecturer M.Sc. course “Advanced Motion Control” (5 ECTS)
2016 Course evaluation: 8.3/10 (overall), 8.7/10 (lecturer Oomen)
Eindhoven University of Technology.
- 2015 Responsible Teacher and Lecturer for M.Sc. course “Advanced Motion Control” (3 ECTS)
Eindhoven University of Technology.
- 2012-2015 Responsible Teacher and Lecturer for M.Sc. course “Capita Selecta in Control” (1.5 ECTS)
Eindhoven University of Technology.
- 2011-2014 Lecturer for M.Sc. course “Advanced Motion Control” (3 ECTS)
Subject: robust control and applications to motion systems
Eindhoven University of Technology.
- 2006 - 2009 Teaching assistant for M.Sc. course “System Identification”.
Eindhoven University of Technology.
- 2006 - 2007 Teaching assistant for M.Sc. course “Robust Control”.
Eindhoven University of Technology.
- 2005 - 2007 Teaching assistant for M.Sc. course “System Theory for Control”.
Eindhoven University of Technology.

B.Sc. level

2022 Lecture for first year B.Sc. course "4GA00: Introduction Mechanical Engineering"
Eindhoven University of Technology.

Post-academic/Industrial courses

2015 - present Organiser of and lecturer for post-academic industrial course "Advanced Feedforward
and Learning Control"
2015, 2018 (2x), 2019, 2022, 2024, 2025
Mechatronics Academy & The High Tech Institute, Eindhoven, The Netherlands.

2011 - present Organiser of and lecturer for post-academic industrial course "Motion Control Tun-
ing"
2011, 2012 (2x), 2013, 2014, 2015 (2x), 2016, 2018, 2019 (2x), 2021, 2022 (2x), 2023,
2024, 2025
Mechatronics Academy & The High Tech Institute, Eindhoven, The Netherlands.

2010 - present Organiser of and lecturer for post-academic industrial course "Advanced Motion
Control"
2010, 2012, 2013, 2014, 2016, 2017, 2018, 2019, 2022 (2x), 2023, 2024, 2025
Mechatronics Academy & The High Tech Institute, Eindhoven, The Netherlands.

2022 Organiser of and lecturer for post-academic industrial course "Motion Control, Dy-
namics & Learning"
Mechatronics Academy, In-company training (international).

2020 Organiser of and lecturer for post-academic industrial course "Advanced High-
Precision Control - Customized Training"
Mechatronics Academy, In-company training (international).

2013 - 2014 Organiser of and lecturer for post-academic industrial course "Iterative Learning
Control"
2013, 2014
Mechatronics Academy & The High Tech Institute, Eindhoven, The Netherlands.

SUPERVISION

Visitors (nonexhaustive list, not all short visits are mentioned)

2025 six month visit of Kentaro Tsurumoto, University of Tokyo, Tokyo, Japan.

2025 six month visit of Taejune Kong, DGIST, South Korea.

2024 six month visit of Deokjin Lee, DGIST, South Korea.

2024 six month visit of prof. Lucy Pao, University of Colorado, Boulder, USA.

2023 one week visit of dr. Aurélio T. Salton, Universidade Federal do Rio Grande do Sul
(UFRGS), Brazil.

2023 one year visit of Zhihe Zhuang MSc, Jiangnan University, China.

2023 three month visit of Edoardo Catenaro MSc, Politecnico di Milano, Milan, Italy.

2023 three month visit of prof. Jan Tommy Gravdahl, NTNU, Norway.

2023 three month visit of Kentaro Tsurumoto, University of Tokyo, Tokyo, Japan.

2022-2023 six month visit of prof. Leonid Mirkin, Technion, Israel.

2022-2023 three month visit of Hanul Jung, DGIST, South Korea.

2021 one year visit of Masahiro Mae MSc, University of Tokyo, Tokyo, Japan.

2020 one year visit of prof. Wataru Ohnishi, University of Tokyo, Tokyo, Japan.

2020	one month visit of dr. Mirko Mazzoleni, University of Bergamo, Italy.
2019	three month visit of Isaac Spiegel, University of Michigan, USA.
2016-present	long-term part-time visitor dr. John Lataire, Vrije Universiteit Brussel, Belgium.
2016	2 month visit of ir. Dieter Verbeke, Vrije Universiteit Brussel, Belgium.
2012	2 month visit of ir. Egon Geerardyn, Vrije Universiteit Brussel, Belgium.

Faculty associated with my research group

prof.dr.ir. Niek Doelman, part-time full professor, 2024-present.

dr.ir. Rodrigo González, tenure track professor, 2024-present.

dr.ir. Sebastiaan van den Eijnden, tenure track professor, 2023-present.

dr.ir. Koen Tiels, researcher/teacher, 2024-present.

dr.ir. Lennart Blanken, part-time assistant professor, 2021-present.

dr.ir. Koen Tiels, tenure-track assistant professor, 2020-2023.

dr.ir. Gert Witvoet, part-time assistant professor, 2019-present.

Postdoc

dr. Koen Classens, 2024.

dr. Paul Tacx, 2024.

dr. Rodrigo González, 2022-2024.

dr. Jean-Philippe Noël, 2019-2021.

dr. Robbert Voorhoeve, 2018-2019.

Ph.D.

Laura Barendsz.

Lotfi Chaouach.

Mathyn van Dael.

Rogier Dinkla.

Enrico Dozzi.

Raphaël Goetz.

Timo de Groot.

Abdullah Habboush.

Maarten van der Hulst.

Tjeerd Ickenroth.

Lars van de Kamp.

Arturo Morales Bugueño.

Eke Suichies.

Max van Meer, defended 2025-09-09 at Eindhoven University of Technology, supported by IMOCO4.e.

Max van Haren, defended 2025-09-03 at Eindhoven University of Technology, supported by IMOCO4.e.

Johan Kon, defended 2025-06-18 at Eindhoven University of Technology, supported by ASML and Philips.

Koen Classens, defended 2024-10-04 at Eindhoven University of Technology, supported by ASML.

Paul Tacx, defended 2024-09-18 at Eindhoven University of Technology, supported by VIDI.

Maurice Poot, defended 2024-07-03 at Eindhoven University of Technology, supported by ASMPT.

Leontine Aarnoudse, defended 2024-06-19 at Eindhoven University of Technology, awarded with DISC best thesis award.

Nic Dirkx, defended 2023-10-06 at Eindhoven University of Technology, primary affiliation ASML.

Tom Bloemers, defended 2023-03-03 at Eindhoven University of Technology.

Noud Mooren, defended 2022-05-12 at Eindhoven University of Technology, supported by IMech (Ecsel grant).

Nard Strijbosch, defended 2022-03-19 at Eindhoven University of Technology, supported by VIDL.

Joey Reinders, defended 2022-02-02 at Eindhoven University of Technology.

Enzo Evers, defended 2021-01-07 at Eindhoven University of Technology, supported by ATC (Advanced Thermal Control Consortium).

Robin de Rozario, defended 2020-04-28 at Eindhoven University of Technology, supported by TU/e Impuls programme 2.

Lennart Blanken, defended 2019-05-21 at Eindhoven University of Technology, supported by Océ.

Jurgen van Zundert, defended 2018-11-28 at Eindhoven University of Technology, supported by STW CPS project.

Robbert Voorhoeve, defended 2018-10-30 at Eindhoven University of Technology, supported by TU/e Impuls programme.

Frank Boeren, defended 2016-10-03 at Eindhoven University of Technology, awarded with DISC best thesis award, supported by Philips Applied Technologies.

Egon Geerardyn, defended 2016-06-17 (private), 2016-08-26 (public), at Vrije Universiteit Brussel.

Joost Bolder, defended 2015-09-02 at Eindhoven University of Technology, supported by Océ.

Robbert van Herpen, defended 2014-01-27 at Eindhoven University of Technology, supported by ASML Research.

Eng.D.

Quinten van den Elsen, defense date 2025-10, at Eindhoven University of Technology, supported by ASMPT.

M.Sc.

M.Sc. thesis serving as graduation professor

Kees Matthijsen, main supervisor Sebastiaan van den Eijnden, 2025.

Salim Achaoui, main supervisor Koen Tiels, 2025.

Maxim Rongen, main supervisor Koen Tiels, 2025.

Martijn Weijermans, main supervisor Sebastiaan van den Eijnden, 2025.

Cedric van Ruler, main supervisor Marcel Heertjes, 2024.

Emre Deniz, main supervisor Gert Witvoet, 2023.

Max Katzmann, main supervisor Lennart Blanken, 2023.

Aron Prinsen, main supervisor Koen Tiels, 2022.

Joey Verdonshot, main supervisor Gert Witvoet, 2022.

Bas Büthker, main supervisor Duarte Antunes, 2019.

Bart Marsman, main supervisor Gert Witvoet, 2019.

Armando Cerullo, ongoing
Adis Husanovic, ongoing
Joël Hochstenbach, ongoing
Gijs van Meerbeeck, ongoing
Teun Wijfjes, ongoing
Remco Bertels, 2025
Marjolein Daanen, 2025
Marijn van Noije, 2025
Rik Dekker, 2024
Jasper van Diepen, 2024
Isabelle Franklin, 2024
Victor van Helden, 2024
Maarten van der Hulst, 2024
Tim van Meijel, 2024
Liang Oei, 2024
Noa van Rijt, 2024
Kjell van Schie, 2024
Rikuto Suzuki, 2025
Peter den Toom, 2024
Matthijs Turk, 2024
Peter Visser, 2024
Luuk van Vliet, 2024
Matthijs van de Vosse, 2024
Guido Wolfs, 2024
Jorrit Sprik, 2023
Javi Olucha Delgado, 2023
Kevin Cox, 2023.
Tjeerd Ickenroth, 2023.
Mike Mostard, 2023.
Paul Munns, 2023.
Stan de Rijk, 2023.
Chuck Steijlen, 2023.
Matthijs Teurlings, 2023.
Shaun Boyteen Joseph, 2022.
Roel Habraken, 2022.
Jilles van Hulst, 2022.
Sjoerd Leemrijse, 2022.
Naomi de Vos, 2022.
Marcel Bosselaar, 2021.
Mathyn van Dael, 2021.
Yves Elmensdorp, 2021.
Merijn Floren, 2021.
Max van Haren, 2021.
Lars van de Kamp, 2021.
Johan Kon, 2021.
Tom van de Laar, 2021.
Max van Meer, 2021.

Bas Scheepens, 2021.
Matthijs Schotman, 2021.
Thijs Sieswerda, 2021.
Raoul Surie, 2021.
Stan Verbeek, 2021.
Abdullah Alabsawi, 2020.
David Elshove, 2020.
Berend Gort, 2020.
Stijn Langedijk, 2020.
Gijs Linskens, 2020.
Corné van Haren, 2020.
George Maleas, 2020.
Jeroen Setz, 2020.
Rens Slenders, 2020.
Leontine Aarnoudse, 2019.
Mas Geeven, 2019.
Paul Tacx, 2019.
Gijs Siebers, 2019.
Ibrahim Acan, 2019.
Ramón de Fretes, 2019.
Maurice Poot, 2019.
Ruben Verkade, 2019.
Niels van Tuijl, 2019.
Patrick Bevers, 2018.
Roel Vromans, 2018.
Juliana Langen, 2018.
Frank Heck, 2018.
Joost Peters, 2018.
Bas Bolk, 2018.
Ids van de Meijdenberg, 2017.
Remy Pelzer, 2017.
Niek Wolma, 2017.
Fons Luijten, 2017.
Ton van Bommel, 2017.
Jacco Hubregtse, 2017.
Ersat Emek, 2017.
Noud Mooren, 2017.
Goksan Isil, 2017.
Anne Krus, 2017.
Jan Romme, 2017.
Enzo Evers, 2016.
Tim Hazelaars, 2016.
Lars Huijben, 2016.
S. Cagil Mayda, 2016.
Glenn Roumen, 2016.
Pepijn Smits, 2016.
Somanna Thapanda Suresh, 2016.
Jeroen Willems, 2016.

Robin de Rozario, 2015.
Annemiek van Rietschoten, 2015.
Teun Melief, 2015.
Harm van Deursen, 2015.
Cam-Hing Dai, 2015.
Stephan Kleinendorst, 2015.
Lennart Blanken, 2015.
Abhishek Bareja, 2014.
Juan Guo, 2014.
Jan Verhaegh, 2014.
Bart van der Velden, 2014.
Jurgen van Zundert, 2014.
Bart Moris, 2013.
Leon van Breugel, 2013.
Edward Kikken, 2013.
Frank Boeren, 2012. Recipient of the KIVI-NIRIA best graduation award in mechanical engineering.
Jarno van Wijk, 2012.
Rick van der Maas, 2011.
Joris Termaat, 2011.
Janno Lunenburg, 2010.
Erik Grassens, 2010.
Sander Verhoeven, 2010. Finalist for *KIVI regeltechniekprijs*.
Sander Quist, 2010.
Ferdinand Hendriks, 2009. Finalist for *KIVI regeltechniekprijs*.
Robbert van Herpen, 2009.
Duncan Denie, 2008.

M.Sc. Internships

Michael van Alphen, Traineeship performed at University of Waterloo, Canada, 2025.
Jochem van den Broek, Traineeship performed at NTNU, Trondheim, Norway, ongoing.
Mart de Bruijn, Traineeship performed at Universidad Técnica Federico Santa María, ongoing.
Armando Cerullo, Traineeship performed at Eindhoven University of Technology, 2025.
Hessel van Gemert, Traineeship performed at University of Adelaide, 2025.
Julie Hamoen, Traineeship performed at The University of Tokyo, ongoing.
Joël Hochstenbach, Traineeship performed at Canon Production Printing, 2025.
Adis Husanovic, Traineeship performed at University of Vienna, 2025.
Bas Klis, Traineeship performed at TNO, 2025.
Gijs van Meerbeeck, Traineeship performed at University of Michigan, USA, 2025.
Tim Pansters, Traineeship performed at Canon Production Printing, ongoing.
Luuk van Sundert, Traineeship performed at The University of Tokyo, ongoing.
Teun Wijfjes, Traineeship performed at The University of Tokyo, 2025.
Remco Bertels, Traineeship performed at University of Ohio, USA, 2024.
Stijn Hanegraag, Traineeship performed at ASML, 2024.
Thijs Romberg, Traineeship performed at Precitech, NH, USA, 2024.
Rikuto Suzuki, Traineeship performed at The University of Tokyo, 2024.
Eline Wisse, Traineeship performed at Fokker Aerostructures B.V., 2024.
Pieter van Wonderen, Traineeship performed at University of Pilsen, Pilsen, Czech Republic, 2024.

Jochem Baltussen, Traineeship performed at Laplace, Toulouse, France, 2023.
Lowe Blom, Traineeship performed at Universidad de Granada, 2023.
Stijn van den Broek, Traineeship performed at Técnico Lisboa, Portugal, 2023.
Marjolein Daanen, Traineeship performed at Universidad of Washington, 2023.
Rik Dekker, Traineeship performed at EPFL, Switzerland, 2023.
Tjeerd Ickenroth, Traineeship performed at Politecnico di Milano, 2023.
Marijn van Noije, Traineeship performed at Università degli studi di Brescia, 2023.
Liang Oei, Traineeship performed at The University of Tokyo, 2023.
Noa van Rijt, Traineeship performed at The University of Stavanger, Norway, 2023.
Kjell van Schie, Traineeship performed at University of Waterloo, Canada, 2023.
Jorrit Sprik, Traineeship performed at University of British Columbia, Canada, 2023.
Matthijs van de Vosse, Traineeship performed at University of Michigan, USA, 2023.
Guido Wolfs, Traineeship performed at University of Waterloo, Canada, 2023.
Jeroen Berghs, Traineeship performed at Demcon, 2022.
Kevin Cox, Traineeship performed at Canon Production Printing, 2022.
Coen Foolen, Traineeship performed at Lightyear, 2022.
Daan den Hartog, Traineeship performed at Sioux, 2022.
Javi Olucha Delgado, Traineeship performed at TU/e, 2022.
Matthijs Teurlings, Traineeship performed at ASMPT, 2022.
Luuk Verstegen, Traineeship performed at Canon Production Printing, 2022.
Yves Elmensdorp, Traineeship performed at Canon Production Printing, 2021.
Shaun Boyteen Joseph, Traineeship performed at TU/e, 2021.
Laurens Kools, Traineeship performed at MI Partners, 2021.
Sjoerd Leemrijse, Traineeship performed at TU/e, 2021.
Pijus Leonavicius, Traineeship performed at Industrio B.V., 2021.
Jeroen van Meurs, Traineeship performed at ASML, 2021.
Mike Mostard, Traineeship performed at TU/e, 2021.
Paul Munns, Traineeship performed at TU/e, 2021.
Stan de Rijk, Traineeship performed at Politecnico di Milano, 2021.
Chuck Steijlen, Traineeship performed at ASML, 2021.
Peter Visser, Traineeship performed at VDL-ETG, 2021.
Naomi de Vos, Traineeship performed at Philips, 2021.
Abdullah Alabsawi, Traineeship performed at TNO, 2020.
Marcel Bosselaar, Universidad Autónoma de Baja California, Mexico, 2020.
Mathyn van Dael, Traineeship performed at Nikhef, 2020.
Yves Elmensdorp, Traineeship performed at Canon Production Printing, 2020.
Max van Haren, Traineeship performed at Max Planck Institute for Intelligent Systems (MPI-IS) in Stuttgart, 2020.
Stijn Langedijk, Universidad Técnica Federico Santa María, 2020.
Matthijs Schotman, Traineeship performed at ASML, 2020.
Raoul Surie, Traineeship performed at University of Pilsen, Pilsen, Czech Republic, 2020.
Joey Verdonschot, Traineeship performed at TNO, 2020.
Nick van de Wetering, Traineeship performed at Centro Nacional de Pesquisa em Energia e Materiais, Brazil, 2020.
Leontine Aarnoudse, Traineeship performed at University of Michigan, Ann Arbor, MI, USA, 2019.
Matthijs van den Burgh, Traineeship performed at University of Waterloo, Dept. of Mechanical & Mechatronics Engineering, 2019.
Berend Gort, Traineeship performed at Swiss Plasma Center, EPFL, Lausanne, Switzerland, 2019.

Gijs Linksens, Traineeship performed at University of Southampton, Southampton, UK, 2019.

Koen Scheres, Traineeship performed at Max Planck Institute, Stuttgart, Germany, 2019.

Ibrahim Acan, Traineeship performed at Sioux CCM, Nuenen, The Netherlands, 2018.

Corné van Haren, Traineeship performed at Vienna University of Technology, Automation and Control Institute, 2018.

Sven Meeusen, Traineeship performed at University of Pilsen, Pilsen, Czech Republic, 2018.

Bas Scheepens, Traineeship performed at University of Texas at Dallas, Locomotor Control Systems Lab, 2018.

Gijs Siebers, Traineeship performed at University of Waterloo, Dept. of Mechanical & Mechatronics Engineering, 2018.

Rens Slenders, Traineeship performed at University of Waterloo, Dept. of Mechanical & Mechatronics Engineering, 2018.

Paul Tacx, Traineeship performed at Thermo Fisher Scientific, Eindhoven, The Netherlands, 2018.

Niels van Tuijl, Traineeship performed at University of Waterloo, Dept. of Mechanical & Mechatronics Engineering, 2018.

Patrick Bevers, Traineeship performed at University of Waterloo, Dept. of Mechanical & Mechatronics Engineering, 2017.

Martin Cornelis, Traineeship performed at University of Waterloo, 2017.

Gijs van Erp, Traineeship performed at University of Michigan, Ann Arbor, MI, USA, 2017.

Goksan Isil, Traineeship performed at Eindhoven University of Technology, 2017.

Yunus Murat Kidil, Traineeship performed at 4pico, 2017.

Dave Kooijman, Traineeship performed at Dynamic Systems Lab, University of Toronto, 2017.

Juliana Langen, Traineeship performed at CCM - Sioux, 2017.

Noud Paes, Traineeship performed at University of Southampton, Southampton, UK, 2017.

Joost Peters, Traineeship performed at Rensselaer Polytechnic Institute, Troy, NY, USA, 2017.

Bernd van Tol, Traineeship performed at University of California, Berkeley, Dept. of Mechanical Engineering, 2017.

Sathya Narayanan Vijayakumar, Traineeship performed at ASM Centre of Competency, 2017.

Roel Vromans, Traineeship performed at Barton Research Group, University of Michigan, 2017.

Niek Wolma, Traineeship performed at Eindhoven University of Technology, 2017.

Amrith Vel Arul Kumar, Traineeship performed at TNO, 2016.

Ton van Bommel, Traineeship performed at University of Southampton, Southampton, UK, 2016.

Ersat Emek, Traineeship performed at TNO, 2016.

Jacco Hubregtse, Traineeship performed at University of California, Berkeley, CA, USA, 2016.

Robin Loose, Traineeship performed at University of Southampton, Southampton, UK, 2016.

Jan Luijten, Traineeship performed at University of Southampton, Southampton, UK, 2016.

Remy Pelzer, Internship Report, Traineeship performed at University of Michigan, Ann Arbor, MI, USA, 2016.

Jerrel Unkel, Traineeship performed at University of Southampton, Southampton, UK, 2016.

Jeroen Willems, Traineeship performed at University of Michigan, Ann Arbor, MI, USA, 2015.

Enzo Evers, Internship Report, Traineeship performed at ETEL, Switzerland, 2015.

Robin de Rozario, Internship Report, Traineeship performed at The University of Newcastle, Australia, 2014.

Bart Gysen, Internship Report, 2006.

KEYNOTE PRESENTATIONS AND INVITED PRESENTATIONS

Keynote Presentations

2025	Invited Speaker at CT Ident, Paris, France, 2025.
2025	Speaker at the Science Track, 1 st Autonomous Systems Conference, Drachten, The Netherlands, 2025.
2025	Benelux Meeting on Systems and Control Plenary Lecture, Egmond aan Zee, The Netherlands, 2025.
2024	Invited presentation at the 10 th Nagamori award ceremony, Kyoto, Japan.
2024	UKACC Plenary Lecture, Winchester, United Kingdom, April 2024.
2023	ICCAS Plenary Lecture, Yeosu, South-Korea, October 2023.
2023	IEEJ Keynote, Tokyo, Japan, July 2023, available online (password: I-am-A-member-of-IEEJIAS)
2023	Nonlinear Benchmark Workshop, Eindhoven, The Netherlands, April 2023.
2023	Webinar by the Industrial Electronics Society, Online, January 2023.
2020	Frontier Lecture at the 2020 Workshop on Advanced Motion Control (AMC), Agder, Norway, September 14-16, 2020.
2020	Half-day tutorial lecture on the 2020 ASPE Spring Topical Meeting 2020.
2017	Keynote Plenary Lecture at Workshop on Multidimensional Systems (nDS), Zielona Gora, Poland, September 13-15, 2017 (full coverage of travel and registration cost).
2017	Keynote Plenary Lecture at IEEJ international workshop on Sensing, Actuation, Motion Control, and Optimization (SAMCON2017), Nagaoka, Japan, March 6-8, 2017 (full coverage of travel and registration cost).

Selected Invited Seminars

2025	Invited presentation at TU Wien, Vienna, Austria, invited by prof. Georg Schitter.
2024	Invited presentation at EPFL, Lausanne, Switzerland, invited by prof. Alireza Karimi.
2024	Invited presentation at Four decades of data-driven modeling in systems and control: achievements and prospects, Eindhoven, The Netherlands, invited by prof. Paul Van den Hof.
2023	Invited presentation at Seoul National University, Seoul, Korea, invited by prof. Dong-il (Dan) Cho.
2023	Invited presentation at DGIST, Daegu, Korea, invited by prof. Sehoon Oh.
2023	Invited presentation at Benchmark Workshop: Session 65 years Johan, Eindhoven, The Netherlands, invited by dr. Maarten Schoukens and dr. Koen Tiels.
2021	Itility seminar.
2021	ASMPT ETG Roadmap Seminar.
2019	European Research Network on System Identification Workshop, The Netherlands. Invitation-only workshop.
2019	Université de Liège, Liège, Belgium. invited by dr. Jean-Philippe Noël.
2017	The University of Tokyo, Japan, invited by prof. Hiroshi Fujimoto.
2016	Université Catholique de Louvain, Belgium, invited by prof. Jean-Charles Delvenne.
2016	System Architecture Study Group (SASG), Nijmegen, The Netherlands, invited by Roland Mathijssen (TNO).
2015	University of Michigan, Ann Arbor, MI, Invited by prof. Kira Barton.
2015	University of Manchester, Manchester, UK, Invited by prof. Alexander Lanzon.

2014	University of California, Berkeley, United States, Invited by prof. Shankar Sastry, and dr. Henrik Ohlsson.
2011	The University of Melbourne, Melbourne, Australia, Invited by prof. Michael Cantoni.
2011	The University of Newcastle, Newcastle, Australia, Invited by prof. Brett Ninness.
2010	KTH, Royal Institute of Technology, Stockholm, Sweden, Invited by prof. Håkan Hjalmarsson.
2009	University of Illinois at Urbana-Champaign, Urbana-Champaign, Illinois, United States, Invited by prof. Andrew G. Alleyne.

Other: Popular Press Coverage

2022	Research on digital twins and fault detection covered in IEEE Control Systems Magazine, 42(4):20-23, 2022.
2021	podcast Bits&Chips part 1 https://www.listennotes.com/podcasts/bitschips/bitschips-tom-oomen-1-nl-mH1vJrX2wlo/
2021	podcast Bits&Chips part 2 https://www.listennotes.com/podcasts/bitschips/bitschips-tom-oomen-2-nl-kYK4-PZvtEd/#
2020	Zelflerende algoritmes verbeteren de prestaties van de drukregelaar in beademingsapparatuur met een factor tien, Link Magazine, 4-8-2020.
2020	TU/e ontwikkelt 'zelf-lerend beademingsapparaat', Studio 040, 31-7-2020.
2020	TU/e gebruikt techniek uit chipmachines voor beademing coronapatiënt, Algemeen Dagblad, 31-7-2020.
2020	Research on piezo stepper control covered in IEEE Control Systems Magazine, 40(6):18-20, 2020.
2019	Binnen paar minuten optimale motioncontrolprestaties halen, Mechatronica & Machinebouw 8:22-26, 2019.
2018	Lerend regelen verbetert de prestaties van motionsystemen met een factor tien, Mechatronica & Machinebouw 1: 34-35, 2018.
2017	Research on learning control covered in IEEE Control Systems Magazine, 37(4):13-16, 2017.
2016	Television, interview Studio040.
2016	University newspaper, Cursor Eindhoven University of Technology
2016	Newspaper, Eindhovens Dagblad
2014	University newspaper, Cursor Eindhoven University of Technology
2006	Magazine, Bits & Chips

PATENTS

2022	Method and system of determining at least a first respiratory system parameter, patent application 2028456, Bram Hunnekens, Joey Reinders, Tom Oomen, and Nathan van de Wouw, 2022
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PUBLICATIONS

According to the ISI Web of Knowledge Journal Citation Reports:

- Field “Automation and Control Systems” median impact factor: 2.1
- Field “Mechanical Engineering” median impact factor: 2.1.

The journals I have published in have impact factor

- IEEE Transactions on Industrial Electronics: 7.2
- Mechanical Systems Signal Processing: 8.9
- IEEE/ASME Transactions on Mechatronics: 7.3
- IEEE Transactions on Automatic Control: 7.0
- Automatica: 5.9
- IEEE Transactions on Control Systems Technology: 3.9
- International Journal of Robust and Nonlinear Control: 3.2
- IFAC Control Engineering Practice: 4.6
- IFAC Mechatronics: 3.1
- International Journal of Control: 1.6
- ASME Journal of Dynamic Systems, Measurement, and Control: 1.3

Several citation metrics include (on 2025-07)

- my h-index is 38 according to [Google Scholar](#)
- my h-index is 32 according to [Scopus](#)
- my h-index is 30 according to [ISI Web of Knowledge](#)
- my Erdős number is 3 according to [AMS](#).

Journal Publications

See www.toomen.eu for working manuscripts and early-view publications.

- [1] R. Dinkla, S. P. Mulders, T. Oomen, and van Wingerden Jan-Willem. Closed-loop data-enabled predictive control and its equivalence with closed-loop subspace predictive control. *Automatica*, 183:112556, 2026.
- [2] M. Poot, J. Sprik, M. Teurlings, W. Laarakkers, D. Kostić, J. Portegies, and T. Oomen. Learning feedforward with unmeasured performance variables: With application to a wirebonder. *Mechatronics*, 113:103422, 2026.
- [3] L. Aarnoudse and T. Oomen. Random learning leads to faster convergence in ‘model-free’ ILC: with application to mimo feedforward in industrial printing. *International Journal of Adaptive Control and Signal Processing*, 39:1521–1532, 2025.
- [4] L. Aarnoudse, A. Pavlov, and T. Oomen. Nonlinear iterative learning control for discriminating between disturbances. *Automatica*, 171:111902, 2025.
- [5] L. Aarnoudse, P. den Toom, and T. Oomen. Randomized iterative feedback tuning for fast MIMO feedback design of a mechatronic system. *Control Engineering Practice*, 154:106152, 2025.
- [6] K. Classens, R. González, and T. Oomen. Recursive identification of structured systems: An instrumental-variable approach applied to mechanical systems. *European Journal of Control*, 84:101238, 2025.
- [7] K. Classens, M. Schoukens, T. Oomen, and J.-P. Noël. Locating nonlinearities in mechanical systems: A frequency-domain dynamic network perspective. *Mechanical Systems and Signal Processing*, 224:112124, 2025.
- [8] M. van Dael, J. Casanueva Diaz, G. Witvoet, B. Swinkels, D. Bersanetti, M. Pinto, P. Ruggi, M. Mantovani, C. de Rossi, P. Spinicelli, M. Boldrini, and T. Oomen. Control of the laser frequency in the Virgo interferometer: Dynamic noise budgeting for controller optimization. *Astroparticle Physics*, 164:103028, 2025.

- [9] R. A. González, K. Classens, C. R. Rojas, J. S. Welsh, and T. Oomen. Identification of additive continuous-time systems in open and closed-loop. *Automatica*, 173:112013, 2025.
- [10] M. van Haren, L. Blanken, and T. Oomen. Parameter-varying feedforward control: A kernel-based learning approach. *Mechatronics*, 109:103337, 2025.
- [11] M. van Haren, L. Blanken, and T. Oomen. Performance analysis of multirate systems: A direct frequency-domain identification approach. *Mechanical Systems and Signal Processing*, 235:112843, 2025.
- [12] M. van Haren, L. Blanken, K. Classens, and T. Oomen. Local rational modeling for identification beyond the Nyquist frequency: Applied to a prototype wafer stage. *IEEE Transactions on Control Systems Technology*, 33(6):2052–2063, 2025.
- [13] M. van Haren, M. Mae, L. Blanken, and T. Oomen. Lifted frequency-domain identification of closed-loop multirate systems: Applied to dual-stage actuator hard disk drives. *Mechatronics*, 108:103311, 2025.
- [14] M. van Haren, R. S. Smith, and T. Oomen. System identification beyond the Nyquist frequency: A kernel-regularized approach. *Control Engineering Practice*, 164:106425, 2025.
- [15] M. van der Hulst, R. A. González, K. Classens, N. Dirkx, J. van de Wijdeven, and T. Oomen. Identification of additive multivariable continuous-time systems. *IEEE Control Systems Letters (L-CSS)*, 9:547–552, 2025.
- [16] L. van de Kamp, B. Hunnekens, T. Oomen, and N. van de Wouw. Time-series out-of-distribution data detection in mechanical ventilation. *IEEE Open Journal of Control Systems*, 4:236–249, 2025.
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- [25] L. Aarnoudse, J. Kon, K. Classens, M. van Meer, M. Poot, P. Tacx, N. Strijbosch, and T. Oomen. Cross-coupled iterative learning control: A computationally efficient approach applied to an industrial flatbed printer. *Mechatronics*, 99:103170, 2024.
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- [27] L. Aarnoudse, A. Pavlov, and T. Oomen. A design framework for nonlinear iterative learning control and repetitive control: Applied to three mechatronic case studies. *Control Engineering Practice*, 149:105976, 2024.
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Poster Presentations

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- [539] M. van Haren, R. S. Smith, L. Mirkin, L. Blanken, and T. Oomen. Non-parametric identification beyond the Nyquist frequency. Poster presentation at 26th ERNSI Workshop on System Identification, Venice, Italy, 2024.
- [540] J. Kon, R. Tóth, J. van de Wijdeven, M. Heertjes, and T. Oomen. Guaranteeing stability in transfer function identification through unconstrained parametrizations. Poster presentation at 26th ERNSI Workshop on System Identification, Venice, Italy, 2024.
- [541] T. Oomen. Advanced motion control for precision mechatronics: Identification, learning, and control. 10th Nagamori award ceremony, 2024.
- [542] M. van Haren, L. Mirkin, L. Blanken, and T. Oomen. Identifying frequency response functions: A fast and accurate approach that enables measuring above the Nyquist frequency. Poster presentation at 2023 Precisiebeurs, Den Bosch, The Netherlands.
- [543] M. van Dael, M. Poot, M. van Meer, M. van Haren, and T. Oomen. Advanced feedforward control for motion systems. Poster presentation at 2023 Precisiebeurs, Den Bosch, The Netherlands.
- [544] R. A. González, A. L. Cedeño, K. Tiels, and T. Oomen. Identification of linear state-space models subject to truncated Gaussian disturbances. Poster presentation at 2023 ERNSI Workshop on System Identification, Stockholm, Sweden.
- [545] K. Tiels, R. A. González, and T. Oomen. Control variates for multivariate truncated probability density functions with applications in system identification. Poster presentation at 2023 ERNSI Workshop on System Identification, Stockholm, Sweden.
- [546] L. Aarnoudse and T. Oomen. (Machine) learning for feedforward in precision mechatronics. Poster presentation at JSPS-NWO Seminar Research Network on Learning in Machines, Tokyo, Japan.
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- [549] M. van Haren, L. Mirkin, L. Blanken, and T. Oomen. FRF identification above the Nyquist frequency. Poster presentation at JSPS-NWO Seminar Research Network on Learning in Machines, Tokyo, Japan.
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- [551] M. van Meer, G. Witvoet, and T. Oomen. Identification and robust control for motor commutation. Poster presentation at JSPS-NWO Seminar Research Network on Learning in Machines, Tokyo, Japan.
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