Curriculum vitae with track record for prof. dr. ing. Kristian Martinsen

ROLE IN PROJECT

Project manager ☒ Collaborator ☐

PERSONAL INFORMATION

Name: Kristian Martinsen
Address: Vårstien 34, 2611 Lillehammer, Norway
Born: Oslo, Norway, Sept 10th 1964
Nationality: Norwegian
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EDUCATION

Siv. Ing. from NTH (NTNU) 1989, Dr. ing. from NTH 1995.

CURRENT AND PREVIOUS POSITIONS

Present position: Professor and manager for the research group for sustainable manufacturing at department for Manufacturing and civil engineering, NTNU in Gjøvik.
Previous positions:.Scientific assistant at institute for quality and production engineering, NTH (NTNU) 1989-1991, Dr. Ing. Candidate 1991-1995, post doctoral fellow at Mechanical Engineering Laboratory, AIST, Tsukuba, Japan 1995-1996. Researcher on manufacturing engineering at Raufoss ASA 1996 to 2001, Raufoss Technology and Industrial Management AS /SINTEF Raufoss Manufacturing AS, 2001 to 2010. Research Manager for production technology department at SINTEF Raufoss Manufacturing from 2010 to 2012. Research Director at SINTEF Raufoss Manufacturing from 2012 to 2015. Professor at Gjøvik University College (HiG)/ 2010 to 2016 (merged with NTNU in 2016) Vice dean research at TØL, NTNU Gjøvik from Sept 2015 to Des. 2016. Research manager at NTNU Gjøvik, Dep. for manufacturing and civil Engineering (IVB) 2016 to 2018.

MOBILITY, FELLOWSHIPS AND AWARDS

1 year stay at Neu Technicum Buchs, in Buchs, St. Gallen, Switzerland during Dr. ing. studies 1991-92. 1 year STA fellowship in Japan, AIST, MEL, Tsukuba 1995-1996 and JSPS fellow at AIST, Tsukuba for 3 months in 2009.

SUPERVISION OF GRADUATE STUDENTS AND RESEARCH FELLOWS

All PhD supervision (except Oleksandr Seminuta) is made at the faculty of Engineering, NTNU.
Doctoral students supervised: Oliver Krimmel: Efficient and Reliable Machining in Large Series. Geir Ringen: Organizational Learning and Knowledge in the Norwegian Automotive Supplier Industry, Halvor Holtskog: How Industry Makes Knowledge: Facilitative Management , Lars Krogstie: Closed Loop Tolerance Engineering, Catrine Eleonor Larsson: Information Systems in Manufacturing, Inger Gamme: Continous Improvements across organisations. Oleksandr Seminuta: Machine Vision systems in flexible automated manufacturing (Chalmers)
Doctoral students currently supervising:, , Anastasiia Moldavska: Sustainability assessment in manufacturing industry and Ivanna Baturynska: Analysis of Process variations in Additive manufacturing using Machine Learing, Olga Ogorodnyk: Process monitoring and control of injection molding using machine learning. Torbjørn Leirmo; Optimal location and orientation of parts in PBF additive manufacturing.

TEACHING ACTIVITIES

Main developer of the Master in Sustainable Manufacturing at HIG/ NTNU Gjøvik and teaching courses on sustainable manufacturing systems, sustainable manufacturing technology and information systems strategy

ORGANISATION OF SCIENTIFIC MEETINGS

Chairman of the CIRP sponsored 6th Conference on Learning Factories June 29th-30th. 2016. Guest Editor for the Elsevier Procedia CIRP Vol 54, Special Issue on Learning Factories, Nov. 2016. http://www.sciencedirect.com/science/journal/22128271/54

INSTITUTIONAL RESPONSIBILITIES

Research director at SINTEF Raufoss, Vice dean research at the Faculty for Technology, Economy and Management, research manager at department for manufacturing and civil engineering.

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

Member of EU Manufuture High Level Group and Implementation Support Group. Chairman of Manufuture Sub-group on joining, corporate member in the CIRP: International Academy of Production Research.

MAJOR COLLABORATIONS

Proposal writing: Main editor of several successful proposals including several IPN –projects, SFI NORMAN, SFI Manufacturing, KPN SUM, EU FP7 projects SupLight (Sustainable Production of light weight solution, # 263302, NMP-2010-3.1-1]) and IC2 (Intelligent and Customized Tooling, # 246172, NMP-2009-4.0-5, MANULAB, INMAN INTPART project and Raufoss Catapult proposal.
Industry projects (IPN) funded by the Norwegian Research Council.
Project manager for planning and installing a new manufacturing plant for Raufoss ASA in 1999-2000. Project manager for implementing SCADA/MES-system at Raufoss Technology AS 2001-2002. Manager of the Competence Project (KPN) for Industry SUM (Sustainable manufacturing). Coordinator of the EU FP7 projects SupLight (Sustainable Production of light weight solution, # 263302, NMP-2010-3.1-1]) and IC2 (Intelligent and Customized Tooling, # 246172, NMP-2009-4.0-5). WP Manager for Robust and Adaptive Manufacturing Processes in SFI NORMAN, Manager for international collaboration in SFI Manufacturing.

TRACK RECORD

1. Martinsen, K.,"Vectorial Tolerancing for all types of surfaces", Advances in Design Automation 1993, vol. 2, p. 187-198. ASME
2. Martinsen, K., "Statistical Process Control Using Vectorial Tolerancing", 4th CIRP Seminar on Computer Aided Tolerancing, 1994.
3. Martinsen, K., "Statistical Process Control Using Vectorial Tolerancing", Computer Aided Tolerancing, Edited by F. Kimura. (Chapmann & Hall) 1995, ISBN 978-94-010-7183-3
4. Vectorial Tolerancing in Manufacturing Systems, PhD thesis, NTH 1995:72, ISBN : 82-71119-820-3 ISSN: 0802-3271
5. Martinsen, K., "The Tolerance Cycle in Quality Manufacturing", JSPE General Meeting 1996, Mito, Japan, August 1996
6. Martinsen, K., "Vectorial Tolerancing in Manufacturing Process Analysis and Control", JSPE General Meeting 1996, Mito, Japan, August 1996
7. Martinsen, K., Kojima T., "EXPRESS definition of Vectorial Tolerancing in product modeling", DIISM '96 - Design of Information Infrastructure Systems for Manufacturing, Eindhoven September 16.-18., 1996
8. Krimmel, O., Martinsen, K., Tønnessen, K., Rasch, F.O., "Machinability evaluation of brass for large volume production", 4th International Conference on Behaviour of Materials in Machining: Opportunities and Prospects for Improved Operations, Stratford-upon-Avon, United Kingdom, 12 – 13 November, 1998, ISBN 1-86125-086-X, pp 228-237.
9. Krimmel, O., Martinsen, K., "Industrial Application of Vectorial Tolerancing to Improve Clamping of Forged Workpieces in Machining", 6th CIRP International Seminar on Computer Aided Tolerancing, LPDE of the University of Twente, Netherlands, 22-24 March 1999.
10. Krimmel, O., Martinsen, K., Tønnessen, K., Rasch, F.O., "Increased Efficiency Resulting from a Detailed Analysis of the Interface between Forging and Manufacturing", 5th International Conference on advanced manufacturing systems and technology (AMST´99), Udine, Italy, June 3-4, 1999, AMST´99 - CISM Courses and Lectures No 406, Springer Verlag, 1999, pp 427-436.
11. Krimmel, O., Blikø, I., Håkonsen, G., Martinsen, K., "Organisational Learning Supports the Production System Development – An Approach To Systematically Develop Knowledge of Skilled Machine Operators", The Third World Congress on Intelligent Manufacturing Processes and Systems, Cambridge MA, June 28-30, 2000

12. Krimmel, O., Tønnessen, K., Zhong Wen Li, "Potentials and Limitations of Tool Condition Monitoring for MoS2- and TiN-coated Drills with Acoustic Emission in Dry Machining", XI Workshop on Supervising and Diagnostics of Machining Systems, Karpacz 12th-17th March 2000
13. Krimmel, O., Skjelstad, L., Martinsen, K., "Promotion of Worker Commitment in a Production System", 33rd CIRP International Seminar on Manufacturing Systems in Stockholm, Sweden, June 5-7 2000
14. Krimmel, O., Martinsen, K., "Just-in-Time Philosophy in Mass Production", International Working Conference on Information and Communication Technology (ICT) in Logistics and Production Management, Tromsø, Norway, 28-30 June 2000
15. Krimmel, O., Rausand, M., Martinsen, K., 'Assuring Production System Reliability Through Rational Investment Planning', 4th International Congress on Quality and Reliability, Annecy, France, 22 – 23 March, 2001
16. Martinsen, K., Sørby, K., "Process control on Chassis Components Machining using Vectorial Tolerancing", Proceedings of the 3rd CIRP International Seminar on Intelligent Computations in Manufacturing Engineering, July 2002 ISBN 88-87030-44-8
17. Martinsen, K., Strandhagen, J.O., Knutstad, G., "Organizational challenges in the implementation of a transparent automotive supply chain", Proceeding of the Fourth International Meeting for Research in Logistics, Lisboa, oct. 2002
18. Strandhagen, J.O., Horten, A., Martinsen, K., Bolseth, S., "Achieving a Transparent and Visual Automotive Value Chain by ICT-support", Proceedings of the Advanced Production Management Systems 2002, IFIP WG 5.7, Eindhoven sept 2002
19. Martinsen, K., Strandhagen, J.O., Bolseth, S., "The transparent and visual automotive supply chain", Presented at the NOFOMA conference 2003.
20. Martinsen, K., Knutstad, G., "Socio-techinal aspects of Machine Tool Porcess Monitoring", Proceeding of the CIRP ISMS03, Saarbrucken 2003
21. Alfnes, E., Martinsen, K. 2006, "Modeling and Design of Flow Manufacturing System for SMEs", Proceedings of the 5th 3rd CIRP International Seminar on Intelligent Computations in Manufacturing Engineering, Ischia, 25 - 28 July 2006
22. L. E. Wetterwald, S. Dransfeld, K. Martinsen 2006, Development of Highly Flexible Pick and Place Assembly with Short Cycle Time using Event Logging, Force Measurement and Vision, The 1st CIRP-International Seminar on Assembly Systems, 15-17 November 2006, Stuttgart, Germany
23. Geir Ringen, Kristian Martinsen, 2006., Burr formation on aluminium profiles, WG on Burr an Burr formation, CIRP General Assembly, Kobe 2006
24. Silje H. Aschehoug, Kristian Martinsen 2007, EcoDesign of an industrial community in a 100 year perspective, 5th International Symposium on Environmentally Conscious Design and Inverse Manufacturing, Tokyo, Des. 10-13
25. Kristian Martinsen and Halvor Holtskog, 2008, Social aspects of Plant Monitoring and Visualization. The 41st CIRP Conference on Manufacturing Systems, Tokyo, Japan, May 26th -28th
26. Geir Ringen, Knut Sørby and Kristian Martinsen, 2008, High pressure coolant chip control in boring of aluminum alloys. 8th International conference on Advanced manufacturing systems and technology, Udine, Italy, June 12th -13th
27. Martinsen, K., Haga E., Dransfeld S., Wetterwald. L. E. ,2008, Robust, flexible and fast reconfigurable assembly system for automotive air-brake couplings, Proceedings of the 6th CIRP International Conference on Intelligent Computation in Manufacturing Engineering, Naples, Italy July 2008
28. Dransfeld, S.; Wetterwald, L. E.; Martinsen, K., 2008, Assembly Evaluation and Traceability of Low Cost Safety Components for Commercial Vehicles, 2nd CIRP Conference on Assembly Technologies & Systems, Toronto, Canada, September 21th-23rd 2008.
29. Martinsen K., Ringen G., 2009, Burr formation and Avoidance for Robust Circular Blade Sawing of Thin Walled Extruded Aluminum Profiles (Keynote), Proceedings of the CIRP International Conference on Burrs, 2nd-3rd April, 2009, Springer Verlag, ISBN: 978-3-642-00567-1
30. Larsson, C; Martinsen, K (2010). Human centered Requirements Management for Adaptive Intelligent Manufacturing Systems. Paper for the *7th CIRP Conference on Intelligent Computation in Manufacturing Engineering*, Naples, Italy.
31. Martinsen, K; et al. (2010). Robust Detection and Positioning of Forged Parts Using Machine Vision System. Paper for the *7th CIRP Conference on Intelligent Computation in Manufacturing Engineering*, Naples, Italy.

32. Dransfeld, S. Martinsen, K., Raabe, H., (2011) Agile Manufactuirng systems with flexible assembly systems, Proceedings of DET20117th International Conference on Digital Enterprise Technology, Athens, Greece, 28-30 September 2011
33. Krogstie, L., Martinsen, K. (2012). Closed Loop Tolerance Engineering – A Relational Model Connecting Activities of Product Development. Procedia CIRP, 3(0), 519-524. doi: 10.1016/j.procir.2012.07.089
34. Martinsen, K., Holtskog, H. and Larsson, C.E. (2012) *Social Aspects of Process Monitoring in Manufacturing Systems*, 45th CIRP Conference on Manufacturing Systems. May 2012 Athens, Greece.
35. Ringen, Geir; Holtskog, Halvor; Martinsen, Kristian. User Friendly Framework for Measuring Product and Process Novelty in the Early Stages of Product Development. Procedia CIRP 2012 ;Volum 3. s. 513-518
36. Krogstie, Lars; Martinsen, Kristian. Beyond Lean and Six Sigma; Cross-collaborative Improvement of Tolerances and Process Variations-A Case Study. *Procedia CIRP* 2013 ; Volum 7. P. 610-615
37. Krogstie, Lars; Martinsen, Kristian; Andersen, Bjørn, Approaching the Devil in the Details; A Survey for Improving Tolerance Engineering Practice. Procedia CIRP 2014 ;Volum 17. s. 230-235
38. Martinsen, K., Hu, J., Carlson, B., 2015, Joining of Dissimilar Materials, Keynote paper, Annals of the CIRP, Vol 2, 2015
39. Martinsen, K., Gulbrandsen-Dahl, S.; 2015, Use of post-consumer scrap in aluminium wrought alloy structural components for the transportation sector, Procedia CIRP, Volume 29, 2015, Pages 686–691
40. Martinsen, K., Downey, J., Baturynska, I, 2016, Human-Machine Interface for Artificial Neural Network based Machine Tool Process Monitoring, Procedia CIRP Volume 41, 2016, Pages 933-938
41. Tvenge, N., Martinsen, K., 2016, Selection of ICT tools for manufacturing education, Procedia CIRP, Volume 41, 2016, Pages 1096-1100
42. Holtskog, H., Martinsen, K., Skogsrød,T., Ringen, G., 2016, The Pivoting Problem of Lean, Procedia CIRP, Volume 41, 2016, Pages 591-595
43. Mitsutaka Matsumoto , Shanshan Yang, Kristian Martinsen, Yasutaka Kainuma, 2016, Trends and research challenges in remanufacturing, International Journal of Precision Engineering and Manufacturing-Green Technology, January 2016, Volume 3, Issue 1, pp 129-142
44. Nina Tvenge, Kristian Martinsen, Sri Sudha Vijay Keshav Kolla, 2016, Combining learning factories and ICT- based situated learning, Procedia CIRP Procedia CIRP, Volume 54, 2016, Pages 101–106
45. Martinsen, Kristian; Gellein, Lars Tore; Boivie, Klas Magnus, Sensors Embedded in Surface Coatings in Injection Moulding Dies. Procedia CIRP 2017 ;Volum 62. s. 386-390
46. Book chapter on Brazing and Soldering in the CIRP Encyclopedia of Production Engineering ISBN: 978-3-642-35950-7
47. Baturynska, Ivanna; Semeniuta, Oleksandr; Martinsen, Kristian. Optimization of Process Parameters for Powder Bed Fusion Additive Manufacturing by Combination of Machine Learning and Finite Element Method: A Conceptual Framework. Procedia CIRP 2018 ;Volum 67. s. 227-232
48. Haavi, Thomas; Tvenge, Nina; Martinsen, Kristian, CDIO design education collaboration using 3D-desktop printers. Procedia CIRP 2018 ;Volum 70. s. 325-330
49. Moldavska, Anastasiia; Martinsen, Kristian, Defining Sustainable Manufacturing Using a Concept of Attractor as a Metaphor. Procedia CIRP 2018 ;Volum 67. s. 93-97
50. Semeniuta, Oleksandr; Dransfeld, Sebastian; Martinsen, Kristian; Falkman, Petter, Towards increased intelligence and automatic improvement in industrial vision systems. Procedia CIRP 2018 ;Volum 67. s. 256-261
51. Tvenge, Nina; Martinsen, Kristian, Integration of digital learning in industry 4.0. Procedia Manufacturing 2018 ;Volum 23. s. 261-266