

PERSONAL INFORMATION

Vaagen, Hajnalka
 Born: 05.04.1968
 Sex: Female
 Nationality: Norwegian, ethnic Hungarian

EDUCATION

2009 PhD in quantitative logistics: **Disputation date: 31.08.2009**
 Molde University College, Department of Logistics, Supervisor Professor Stein W. Wallace.
 2005 Master of Science in Logistics,
 Molde University College, Department of logistics, Norway.
 2003 1-year study programme in Logistics and Supply, Molde University College, Norway.
 1992 Diploma Engineer in Chemistry and Technology of Textiles
 Gh. Asachi Technical University of Iasi, Romania, 135 ECT.
 2007 – Licenced Engineer of the Textile Institute (LTI), Manchester.

CURRENT POSITIONS

2016 August – Associate Professor full-time, Norwegian University of Science and Technology, NTNU
 Ålesund, Faculty of Engineering Science, Department of Ocean Operations and Civil
 Engineering
 2016 August – Senior Researcher part time, SINTEF Applied Economics and Operations Research, Trondheim,
 Norway.

PREVIOUS POSITIONS

2010 – 2016 Senior Researcher (Researcher 2010-2014) SINTEF Applied Economics and Operations
 Research, Trondheim, Norway.
 2009 – 2016 Associate Professor in Logistics, Molde University College, Norway.
 1998 – 2003 Entrepreneur, design and trade, Hajni D Design and Møbler, Molde, Norway
 1995 – 1997 Production department leader, Øranprodukter, Åndalsnes, Norway.
 1992 – 1994 Entrepreneur, Product Development Manager, Eurotex Ltd; Hungary

AWARDS

2010– Finalist in the 2010 COSP Student Paper Competition, The Committee On Stochastic
 Programming of the Mathematical Optimization Society
 2005 – Award “Master’s student of the year 2005”, MUC.

MOBILITY

2006 Research fellow, David Eccles School of Business, Salt Lake City, Utah, United State

SUPERVISION OF GRADUATE STUDENTS AND RESEARCH FELLOWS

2014 –2018 Co-Supervisor for 2 PhD students at the Norwegian Business School BI
 2012 – 2017 Supervised research fellows in the MAROFF Knowledge Building project NextShip, under
 grant NRC grant agreement 216418/O70, MAROFF program.
 2009– 2018 Supervised 15 master students at Molde University College, 7 students at NTNU Ålesund
 supervised/under supervision.

TEACHING ACTIVITIES

2018 - Operations Management and Flexibility (7,5 ECT). Master level. Developed and taught
 from 2018. NTNU, Faculty of Engineering Science, Department of Ocean Operations and
 Civil Engineering, Norway.
 2017 – Project Risk Management (3,75 ECT). Master level. Developed and taught from 2017.
 NTNU, Faculty of Engineering Science, Department of Ocean Operations and Civil

- Engineering, Norway.
- 2017 - Scientific theory and methods (3,75 ECT). Master level. Developed and taught from 2017. NTNU, Faculty of Engineering Science, Department of Ocean Operations and Civil Engineering, Norway.
- 2017 Lean in project-based production systems, NTNU Ålesund, Contribution to 'Lean – best practice' class in the Product and System Design master program. NTNU, Faculty of Engineering Science, Department of Ocean Operations and Civil Engineering, Norway.
- 2016 Maritime Purchasing and Logistics (7,5 ECT). Lower degree. Developed and taught in 2016. NTNU Faculty of Engineering Science, Department of Ocean Operations and Civil Engineering, Norway.
- 2010 – 2013 Decision Making under Uncertainty (7,5 ECT), co-developed and taught. BSc level, Molde University College, Norway.
- 2009 Applied Statistics, contribution to the master level course Applied statistics. Molde University College, Norway.
- 2009 Value Chain Analysis under Uncertainty (3,75, one-week intensive), developed and taught. Engineering Master's program in Product and Systems Design. Høgskolen i Ålesund, Norway.
- 2006 – 2007 Decision Making under Uncertainty, Master level, Molde University College, Norway.

Guest lectures

- 2017- Design problems in shipbuilding planning, in the course 'Operations Risk Management' NHH, Department of Business and Management Science, Norway.
- 2017- Design-based consumer goods: Portfolio and operations planning problems, in the course 'Operations Risk Management' NHH, Department of Business and Management Science, Norway.
- 2016 - 2017 Lean Project Planning and Uncertainty, in the course 'Operations Management' NHH, Department of Business and Management Science, Norway.

Experience from examinations

- 2017 Master's theses examination (written and oral) at Molde University College, 2 theses
- 2017 External grader, Master level course 'Operations Risk Management' at NHH, Department of Business and Management Science, Norway.
- 2017 External grader, master level course 'Digitalisation in Shipping' at Vestfold College, Maritime studies.

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

- 2016- Member of research network NORS, The Norwegian Operations Research Society
- 2017- Member of the Lean Construction Institute LCI working group LPS development to include uncertainty and flexibility
- 2016 - The global research network SMART, Sustainable Market Actors, UiO, Faculty of Law.
- 2014-2017 European Sporting Goods Innovation Technology Platform (EPSI), Brussels

MAJOR COLLABORATIONS after PhD

- Professor Stein Wallace, 'Design problems in Operations Management shipbuilding', Department of Business and Management Science, Norwegian School of Economics NHH, Norway.
- Glenn Ballard, Lean and Flexible project delivery, director Lean Project Delivery Laboratory, University of California Berkeley.
- Major industry collaboration: VARD Group AS, Helly Hansen, Norwegian Rooms Cluster
- Professor Nils Rudi, Yale School of management, Planned collaboration on analytics research for new product introduction and forecasting.

SELECTED RESEARCH PROJECTS (with project manager role)

- 2016-2017 T76 MARCOM 2020 (Maritime competence building), NTNU – Extending the master program Management of demanding marine operations, from experience-based to discipline-based. Budget 760 kNOK.

- 2018 MARCOM2020 (Maritime competence building), NTNU –Integrated Project Delivery. Budget 560 kNOK.
- 2012 –2016 NextShip (SINTEF) – Competence building project "Robustness in shipbuilding planning and operations", under NRC grant agreement 216418/O70, MAROFF program. Budget 14 Mill NOK.
- 2015- 2017 CRAFT (SINTEF) –Innovation project "Shipbuilding engineering networks for industrialisation through craftsmanship", under NRC grant agreement 245868, MAROFF program. Budget 4 Mill NOK.

Project applications submitted or under development

- 2018 Flexibility and Virtual Project Delivery in cruise vessel construction (Initiator and project manager role). Submitted to NRC FRINATEK 04.18.
- 2018 Blue Circular Economy (Participant role. Initiative led by NTNU– EU Northern Periphery and Arctic Programme initiative.– submitted 02.18.
- 2018 Competence building project “Digital user-driven design and business model innovation for circular economy in creative industries”. – to be submitted to NFR BIA 04.18 (project idea approved)
- 2018 Operations management Analytics for new product-service introduction – Preproject BIA Bærekraft, Main project proposal to be submitted February 2019.

H2020 initiatives and project proposals (with coordinator and project manager role) that achieved evaluation over threshold but failed for funding.

- 2014 I-Wear@Risk (SINTEF) - Risk-controlled design and operations planning of personalised product-services, using engineering- and market intelligence. Call Identifier: H2020-FoF-2014, Topic: FoF-05-2014, Type of action: RIA. EUR 6,2 Mill.
- 2012 MERICO (SINTEF) - Meta-product demand and operations modelling in risk controlled environment for high-tech industries. FP7-2013-NMP-ICT-FoF, Large-scale integrating project (IP) proposal. Call identifier: Innovative design of personalized product-services and of their production. EUR 6,4 Mill.

REPRESENTATIVE PUBLICATIONS - refereed journal articles, refereed conference publications and book chapters

Currently, Vaagen has 17 refereed publications, of which 5 are journal articles (in European Journal of Operational Research, International Journal of Production Economics, Production Planning and Control, Springer International Handbooks on Information Systems), 1 book chapter, 11 refereed conference publications (among others in IFAC-PapersOnLine Elsevier, IGLC, APMS, ProjMan), and 1 ORMS Today popular science publication.

The track record also includes 9 project reports and 6 working papers (3 of which full journal papers under review).

Vaagen, H., Kaut, M., & Wallace, S. W. (2017). The impact of design uncertainty in engineer-to-order project planning. *European Journal of Operational Research*, 261(3), 1098-1109.

Ballard, G. & Vaagen, H. , 2017. Project Flexibility and Lean Construction. *IGLC, 25th Annual Conference of the International Group for Lean Construction*, 2017 Heraklion, Greece. 589-596.

Vaagen, H., Borgen, E., & Hansson, M. (2016). A social-behavioural approach to project work under uncertainty. *IFAC-PapersOnLine*, 49(12), 203-208.

Vaagen, Hajnalka; Wallace, Stein W.; Kaut, Michal, 2011. Modelling consumer-directed substitution. *International Journal of Production Economics*. 134(2) pp. 388-397.

Vaagen, H., Aas B., 2014. A multidisciplinary framework for Robust Planning and Decision-Making in Dynamically Changing Engineering Construction Projects. *I: Proceeding of the APMS 2014 Conference Ajaccio, France*; Volume 1 pp.

Morten, H., Vaagen, H., 2016. Collective Intelligence in Groups: Reflections From the Field. *Procedia Computer Science ProjMAN 2016*, International Conference in Project Management, 5 - 7 October 2016, Porto, Portugal.

Vaagen Hajnalka, 2016. Design problems in specialized shipbuilding. *ORMS Today*, Special issue: Rockin' O.R. 'round the world, 43(2). <https://informs.org/ORMS-Today/Public-Articles/April-Volume-43-Number-2/Design-problems-in-specialized-shipbuilding>

Vaagen, H., Kaut, M., 2015. A mockup stochastic program to study the impact of design uncertainty on ETO shipbuilding planning. *Advances in Production Management Systems: Innovative Production Management Towards Sustainable Growth*, At Tokyo, Japan, Volume: IFIP WG 5.7 International Conference, APMS 2015, Tokyo, Japan, September 7-9, 2015, Proceedings, Part II.

Vaagen, Hajnalka, Stein Wallace, 2012. A Multidimensional Newsboy Problem with Substitution. *I: Modeling with Stochastic Programming*. Springer 2012 ISBN 9780387878164. s. 123-138.

Vaagen, Hajnalka; Wallace, Stein W.; Kaut, Michal, 2011. The value of numerical models in quick response assortment planning. *Production Planning & Control* (Print). 22(3) pp. 221-236

H. Vaagen, SW. Wallace, 2009. Product variety arising from hedging in the fashion supply chains. *International Journal on Production Economics* 114 (2008) 431–455.

Vaagen, H., Wallace, S.W., 2010. The value of information in quick response supply chains – An assortment planning view. *Innovative Quick Response Programs in Logistics and Supply Chain Management, International Handbooks on Information Systems*, Part 2, 91-121, DOI: 10.1007/978-3-642-04313-0_5.

Borgen, E. K., Vaagen, H., 2013. Multi-item Picking Methodology in Warehouses. *I: Proceedings of the 21st Annual Conference of the International Group for Lean Construction*; Volume 1, pp 165-174.

Relevant work-in-progress

Morten, J.H., van Orsoth, K., and Vaagen, H. *Team collective intelligence in complex dynamically changing projects – A shipbuilding case*. Under review

Vaagen H., Ballard G. *Lean and Flexible Project Delivery: Extending Last Planner to master planning with options*. Under review

Vaagen H., Kaut M., Wallace S.W. *Engineer-to-order project planning with uncertainty in design and task duration*. To be presented at Computational Management Science CMS 2018, full paper to be developed/submitted in 2018.

Vaagen H., Hansson, M. *Innovation-led team responsiveness in complex dynamically changing projects*. To be submitted.

Vaagen H. *Planning and design function integration: A decision-modelling perspective and managerial implications*. Work-in-progress.

Vaagen H. *Uncertainty and Flexibility in Projects - literature study*. LCI working group draft paper on task 'LPS improvement master planning'

PhD thesis

Vaagen, H., 2009. Assortment planning under uncertainty. PhD Theses in Logistics 2009:2. Molde University College, Molde, Norway. ISBN-13: 978-82-7962-114-0. ISSN: 0908-9588.

Selected project reports

Hajnalka Vaagen, 2017. Resultatrapport NextShip – Robustness in shipbuilding planning and operations. (NextShip), SINTEF (to be registered, submitted to NFR)

Eirik Borgen, Hajnalka Vaagen, 2017. SUPPLIER-IZE: A data application tool to support supplier risk analysis and procurement planning in shipbuilding (CRAFT). Confidential, SINTEF (to be registered).

Hajnalka Vaagen, Eirik Borgen, Morten Hatling, 2014. Nettverksanalyse i VARD Søviknes Engineering (NextShip). Confidential, SINTEF F27155.

Bjørnar Aas, Eirik Borgen, Hajnalka Vaagen, 2014. VARD SØ Engineering – an exploratory study. Confidential, SINTEF 2017:00111

Bjørnar Aas, Eirik Borgen, Hajnalka Vaagen, 2014. VARD SØ Production – an exploratory study. Confidential, SINTEF 2017:00112

Eirik Borgen, Hajnalka Vaagen, Bjørnar Aas, 2014. VARD Tulcea Engineering - An explorative study (NextShip). Confidential, SINTEF F27156.

Eirik Borgen, Hajnalka Vaagen, 2012. Introducing flexibility in building block sequencing (NextShip). Confidential, SINTEF MEMO-S27353.

Kaut, Michal; Werner, Adrian; Lium, Arnt-Gunnar; Flatberg, Truls; Vaagen, Hajnalka; Crainic, Teodor Gabriel, 2014. Socio-Economic Optimal Pricing of Railroad Infrastructure (SOPJI). Mathematical Model Formulation and Implementation. : SINTEF 2014 (ISBN 978-82-14-05667-9) 56 s. SINTEF Rapport (A25843).

Invited presentations to internationally established conferences and/or meetings

2017, 25th Annual Conference of the International Group for Lean Construction, IGLC Heraklion, Greece Project Flexibility and Lean Construction (with Glenn Ballard, Berkeley)

2016 (invited), IFAC MIM 2016, June. France. The social-behavioural drivers of responsiveness to changes in dynamically changing engineer-to-order projects.

2015 (invited stakeholder view), EC organized Stakeholder Event on IoT/ Smart Wearables, 4. December, Brussels. Enabling technologies for economically sustainable industrialization of smart wearables.

Other conference presentations and meetings

CPM 2018, Trondheim, Norway (Computational management Science, with Michal Kaut)

APMS 2015, Tokyo, Japan (Advances in Production Management Systems)

APMS 2014, Ajaccio, France (Advances in Production Management Systems)

IFORS 2014, Barcelona, Spain (International federation of Operational Research Societies)

EURO 2013, Roma, Italy (European operational research Society)

ISIR 2010, Budapest (International Society of Inventory research)

H2020 brokerage events and FoF workshops

European Outdoor group conferences: 2012 and 2013 Annecy France, 2014 Stockholm Sweden

Leadership in industrial research and innovation is demonstrated through the above listed research & innovation project initiatives with project manager role.