

Christian Johansson

May 2018

Personal information

Name: Erik Christian Martin Johansson Askling
Date of birth: 1980-05-21 in Motala, Östergötland, Sweden
Gender: Male
Address: Ordensgatan 5H
SE-371 38 Karlskrona
E-mail: cihjoh0@gmail.com, christian.m.johansson@bth.se
Telephone: +46-455-385576
Mobile: +46-70-9343873
URL: <https://www.bth.se/eng/staff/christian-johansson-cmj/>
URL: <https://www.christianmjohansson.com>
ORCID: <http://orcid.org/0000-0003-4875-391X>
Google Scholar: <https://scholar.google.se/citations?user=j89a4PwAAAAJ&hl=en>

Short biography

Christian Johansson (CMJ), got his PhD at Luleå University of Technology in 2009 within the area of knowledge-based decision support in a product development context. The applications were primarily within product development in the aerospace manufacturing sector, which is required to be risk averse and have a high degree of process formalization.

CMJ is presently a Senior Lecturer (Assistant Professor) at the Department of Mechanical Engineering at Blekinge Institute of Technology, BTH. The research is organized in the Product Development Research Lab.

Current position

November 2013 onwards Senior Lecturer, Department of Mechanical Engineering, Blekinge Institute of Technology.

Previous positions

January 2010 – October 2013 Post Doc, Division of Functional Product Development/Product innovation, Department of Business Administration, Technology and Social Sciences (ETS), Luleå University of Technology.

April 2005 – December 2009 PhD Student, Division of Computer Aided Design/Functional Product Development, Department of Applied Physics and Mechanical Engineering (TFM), Luleå University of Technology.

January 2005 – March 2005 Research Engineer, Division of Computer Aided Design, Department of Applied Physics and Mechanical Engineering (TFM), Luleå University of Technology.

Research focus

(To be updated)

Generally, the work is based out of the Engineering Design Research area, where the focus is to support engineers with knowledge-based methods and tools, often for situations of high degrees of uncertainty. In this context, the topics of Product-Service Systems as well as Design Thinking is related and of interest.

Formal higher education:

Doctoral exam

2009 PhD in Functional Product Development, Luleå University of Technology. Thesis: "Knowledge Maturity as Decision Support in Stage-Gate Product Development: A Case From the Aerospace Industry"

University degrees

2012 Utbildning för Forskningshandledare – Docentkurs (Steg 2), Luleå University of Technology.

2008 Forskarutbildningsprocessen – Att handleda och handledas, Utbildning för Forskningshandledare (Steg 1), Luleå University of Technology.

2007 Tech Lic. in Functional Product Development, Luleå University of Technology. Thesis: "Knowledge Engineering in the Virtual Enterprise: Exploring a Maturity Based Decision Support".

2006 Högskolepedagogik 5 Hp (7,5 ECTS), Luleå University of Technology

2004 Master of Science (MSc) (Civilingenjör) in Mechanical Engineering, Luleå University of Technology. Thesis: "Virtual Meeting Services".

Further education

Other education

2010 UGL, Utveckling av Grupp och Ledare

2008 Foresight & Innovation Program, Stanford Center for Foresight & Innovation, Stanford University.

Professional academic experience:

2010-2013 Researcher in Division of Functional Product Development/Product Innovation, Luleå University of Technology

2007-2009 PhD Student in Division of Functional Product Development, Luleå University of Technology.

2005-2007 PhD Student in Division of Computer Aided Design, Luleå University of Technology

Research responsibilities:

Projects:

MD3S – Model Driven Development and Decision Support (2013-2019)

- This project will in co-production mode develop, disseminate, and integrate relevant, user-friendly and efficient support methods and tools for sustainable product-service system innovation into business leaders, business developers and product developers working environments that enable and inspire industry to thrive in the changing global context.
- Use Case leader – UC5: PSS for Online Functional Offering of Automotive Fixtures (Holje International).
- <http://www.productdevelopment.se/?p=68>.

Finalized projects

CiiR – Centre for interorganizational innovation Research (2013)

- Responsible for web-based communication platform. Development of annotated dissemination video player.
- <https://www.ltu.se/research/subjects/product-innovation/Forskningsprojekt/CiiR-Centre-for-Interorganisational-Innovation-Research-1.124938?l=en>

Fuel Efficient Transmission Technology Concept (2010-2012)

- 4-year FFI (Vehicle Industry Research Programme) Vinnova project focusing on the development new transmission technology concept.
- Senior researcher and LTU project leader.
- <https://www.ltu.se/research/subjects/product-innovation/Projektarkiv/Fuel-Efficient-Transmission-Technology-Concepts-Design-Methodology-1.51185?l=en>

CRESCENDO (2009-2012)

- 3-year EU FP7 project within Aerospace manufacturing industry
- Enterprise collaboration
- Value modelling and simulation
- Training and dissemination (task leader) – responsible for training development for the research project.
- <https://www.ltu.se/research/subjects/product-innovation/Projektarkiv/CRESCENDO-1.51386?l=en>

Faste Laboratory (2006-2016)

- 10-year VINNOVA VINNEX centre with focus on functional product innovation.

- PhD student working on knowledge sharing in functional product development context.
- <https://www.ltu.se/research/subjects/product-innovation/Projektarkiv/Fastelaboratoriet-Ett-VINN-Excellence-Center-1.27743?!=en>

VIVACE (2004-2007)

- 4-year EU FP6 project within Aerospace manufacturing industry
- Knowledge Enabled Engineering – development of knowledge-based tools and methods for reduced lead-times and improved aerospace product development.
- Collaboration Hub for Heterogeneous Enterprises – Work package developed the Virtual Enterprise Collaboration Hub, which coordinated and shared development of aerospace products in a heterogeneous enterprise of cooperating companies.
- Business modelling for reduced offering lead-times – Work package developed a rapid proposal development process for aerospace products as well as business models for the virtual heterogeneous enterprise.
- <https://www.ltu.se/research/subjects/product-innovation/Projektarkiv/VIVACE-1.16273?!=en>

Reviewer responsibilities

Journal review responsibilities

Reviewer for: Journal of Engineering Design
 International Journal of Quality and Innovation
 International Journal of Innovation and Technology Management
 Procedia CIRP
 IFAC Symposium on Information Control Problems in Manufacturing

For more info: <https://publons.com/author/1431505/christian-johansson-phd#profile>

Ability to apply for and fund research:

Evaluations:

2013 Successfully evaluated for the position of Senior Lecturer at Blekinge Institute of Technology.

Academic assignments

Master in Sustainable Product-Service System Innovation (BTH) – Program Director;
 more info – URL: <http://www.mspsi.se>

Supervisor responsibilities

CMJ is supervisor for N PhD candidates:

- MD Shafiqul Islam – Lic 2016, PhD planned for 2019, in research subject Mechanical Engineering, BTH.
- Sravan Tatipala – Lic planned for 2019, in research subject Mechanical Engineering, BTH)
- Jenny Elfsberg – Lic planned for May 2018, in research subject Mechanical Engineering, BTH; industrial PhD student at Volvo Construction Equipment.
- Ryan Ruvald – Lic planned for 2019, in research subject Mechanical Engineering, BTH.
- Martin Frank – Lic planned for 2018, in research subject Mechanical Engineering, BTH; industrial PhD student at Volvo Construction Equipment.

CMJ has been co-supervisor for the following degrees (3 PhD, NN Lic):

- Md Shafiqul Islam (Lic)
- Massimo Panarotto (PhD)
- Alessandro Bertoni (Lic, PhD)
- Koteswar Chirumalla (Lic, Phd)
- Anna Karlsson (Lic)
- Åsa Kastensson (Lic)

Pedagogic skills

Development

- Master in Sustainable Product-Service System Innovation (BTH) <http://www.mspi.se>.
 - Program team participant and ongoing development of the international master's program.
 - Course responsibility.
 - Examiner and supervisor for master's thesis.
 - Program director 2013-

Teaching

Master Thesis supervision

CMJ has been supervisor (S) or examiner (E) for the following Master Thesis:

Student(s)	Year	Title	

Karlsson, Louise	2018	A product-oriented Product Service System for tracing materials on autonomous construction sites: A product development for today's and future construction sites	S
Bugga, Hemanth; Challa, Aravind Kumar	2017	Development of Tools for Automating Standardization of Cable way using Knowledge Based Engineering	S
Yi, Xin	2017	Data visualization in conceptual design: developing a prototype for complex data visualization	E
Ruvald, Ryan	2017	Supporting product development with a tangible platform for simulating user scenarios	S/E
Kosovari, Fatmir	2017	Appropriate standing-leaning backward angle for healthier posture while working in front of the computer	S
Ottosson, Ellen	2017	Framtagning av verktyg för integrering av Hållbar Utveckling: En explorativ studie kring hur hållbarhet kan integreras i Semcons projektprocess	S
Ameen, Noor; Safawizadeh, Hassan	2017	Visualizing Material on Site for Machines and Humans: A Step toward an Autonomous Construction Site	S
Sun, Yufeng; Yonghao, Yang	2017	How does environment and facilities influence people during team work? – The design of a multifunctional desk to enhance creativity	E
Winqvist, David	2016	Augmenting communication channels toward the evolution of autonomous construction sites	S
Hallberg Lyggemark, Hillevi	2016	Designing for an autonomous future: How to support and maintain trust through PSS design with an emphasis on heavy construction equipment worksites	S
Chengqi, Li	2016	PSS for Functional Offering of Automotive Fixtures using Knowledge Enabled Engineering Techniques	S
Tao, Cheng	2016	Decision-Making Support by a Value-Driven Design Model	E
Jaghbeer, Yasmeen; Motyka, Yvonne	2016	Roadmap towards a Lean and Sustainable Production for Medium Sized Manufacturers: A Case Study	E
Li, Xin	2016	Building a Business Model to Increase Funding for Karlskrona Makerspace	S
Persson, Andreas; Holmberg, Daniel	2016	How to create affordable and sustainable facilities for companies	S
Erlingsson, Oskar; Dahlqvist, Karin	2015	Designing for the Unknown: Exploring Urban Mining as a case study	S
Kågesson, Gustav; Tahir, Zainalabidin	2015	Manufacturing processes and materials selection for a sustainable future	S
Nilsson, Niklas; Söderberg, Victor	2015	How to future proof a Business Model: Capture and capitalize value in the field of Urban Mining	S
Ha, Simon	2015	Construction industry market segmentation: Foresight of needs and priorities of the urban mining segment	S
Chai, Yi; Gao, Zhenqing	2014	Product-Service System Innovation in Urban Mining-A case study with Volvo CE	S/E
Jönsson, Jens	2011	A Lightweight Approach for Sharing Lessons Learned: Development of a supporting tool for sharing Lesson Learned in early stages of product development	S
Mossing, Erik	2008	Product development path: development of a supportive method focusing on design rationale	S

Military service:

1999-2000 as firefighter at F17-Malmen in Linköping, Sweden

Grade: 10-7-7

Publications

Journal papers:

Bertoni, A., Marco, B., Massimo, P., Christian, J., & Larsson, T. (2016). Value-driven product service systems development: Methods and industrial applications. *CIRP - Journal of Manufacturing Science and Technology*, 15, 42–55. <https://doi.org/10.1016/j.cirpj.2016.04.008>

Ericson, Å., Johansson, C., & Nergård, H. (2015). Manufacturing knowledge : Going from production of things to designing value in use. *International Journal of Intelligent Decision Technologies*, 9(1), 79–89. <https://doi.org/10.3233/IDT-140207>

Johansson, C. (2014). Managing Uncertainty and Ambiguity in Gates : Decision Making in Aerospace Product Development. *International Journal of Innovation and Technology Management (IJITM)*, 11(2). <https://doi.org/10.1142/S0219877014500126>

Chirumalla, K., Bertoni, A., Aditya, A., Johansson, C., & Bertoni, M. (2013). Performance measurement framework for product-service systems development : a balanced scorecard approach. *International Journal of Technology Intelligence and Planning (IJTIP)*, 9(2), 146–164. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-6845>

Chirumalla, K., Bertoni, A., Parida, A., Johansson, C., & Bertoni, M. (2013). Performance Measurement Framework for Product-Service System Development : A Balanced Scorecard Approach. *International Journal of Technology Intelligence and Planning (IJTIP)*, 9(2), 146–164. <https://doi.org/10.1504/IJTIP.2013.058135>

Kastensson, Å., & Johansson, C. (2011). Decision-making in gates : based on formal basis or gut feeling? *International Journal of Technology Intelligence and Planning (IJTIP)*, 7(2), 140–152. <https://doi.org/10.1504/IJTIP.2011.043199>

Johansson, C., Hicks, B., Larsson, A., & Bertoni, M. (2011). Knowledge maturity as a means to support decision making during product-service systems development projects in the aerospace sector. *Project Management Journal*, 42(2), 32–50. <https://doi.org/10.1002/pmj.20218>

Theses:

Johansson, C. (2009). *Knowledge maturity as decision support in stage-gate product development : a case from the aerospace industry* (PhD dissertation). Luleå. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12129>

Johansson, C. (2007). *Knowledge engineering in the virtual enterprise : exploring a maturity-based decision support* (Licentiate dissertation). Luleå. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12101>

Conference papers:

Johansson, C., Wall, J., & Panarotto, M. (2017). Maturity of models in a multi-model decision support system. In *Proceedings of the International Conference on Engineering Design, ICED* (Vol. 6, pp. 237–246). Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-14389>

Johansson, C., Larsson, T., & Tatipala, S. (2017). Product-Service Systems for Functional Offering of Automotive Fixtures: Using Design Automation as Enabler. In *Procedia CIRP : 9th CIRP Conference on Industrial Product/Service-Systems (IPSS), Copenhagen* (Vol. 64, pp. 411–416). <https://doi.org/10.1016/j.procir.2017.03.006>

Tatipala, S., Suddapalli, N. R., Pilthammar, J., Sigvant, M., & Johansson, C. (2017). Simulation-Driven Design Approach for Design and Optimization of Blankholder. In *Journal of Physics: Conference Series (JPCS)* (Vol. 896). <https://doi.org/10.1088/1742-6596/896/1/012045>

Johansson, C., Elfsberg, J., Larsson, T., Frank, M., Leifer, L., Nilsson, N., & Söderberg, V. (2016). Urban Mining as a Case for PSS. In *PRODUCT-SERVICE SYSTEMS ACROSS LIFE CYCLE* (Vol. 47, pp. 460–465). <https://doi.org/10.1016/j.procir.2016.03.089>

Bertoni, M., Bertoni, A., & Johansson, C. (2015). Knowledge Enabled Engineering. In *International Workshop of Advanced Manufacturing and Automation*. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-10909>

Bertoni, A., Bertoni, M., Massimo, P., Christian, J., & Tobias, L. (2015). Expanding Value Driven Design to meet Lean Product Service Development. In *7TH INDUSTRIAL PRODUCT-SERVICE SYSTEMS CONFERENCE : IPSS, INDUSTRY TRANSFORMATION FOR SUSTAINABILITY AND BUSINESS* (Vol. 30, pp. 197–202). <https://doi.org/10.1016/j.procir.2015.02.153>

Bertoni, A., Bertoni, M., & Johansson, C. (2015). Analysing the effects of value drivers and knowledge maturity in preliminary design decision-making. In *ICED 15, VOL 10: DESIGN INFORMATION AND KNOWLEDGE MANAGEMENT*. Design Society. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-6409>

Karlsson, A., Törlind, P., & Johansson, C. (2014). Managing Rejected Ideas from Projects— A Way to Avoid Idea Cemeteries. Presented at the International Product Development Management Conference, Limerick, Ireland: EIASM. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-6424>

- Chirumalla, K., Bertoni, M., & Johansson, C. (2013). Experience feedback using social media : from the product lifecycle phases to the design practices. In *Product-Service Integration for Sustainable Solutions : Proceedings of the 5th CIRP International Conference on Industrial Product-Service Systems* (Vol. 5, pp. 459–471). Berlin, Germany. https://doi.org/10.1007/978-3-642-30820-8_39
- Bertoni, M., Chirumalla, K., & Johansson, C. (2012). Social technologies for cross-functional product development : SWOT analysis and implications. In *Proceedings of the Annual Hawaii International Conference on System Sciences* (Vol. 45, pp. 3918–3927). Los Alamos, CA, USA. <https://doi.org/10.1109/HICSS.2012.538>
- Johansson, C., Karlsson, J., Kaplan, A., Bertoni, M., & Chirumalla, K. (2012). Enhancing intracognitive communication between engineering designers and operators : a case study in the laser welding industry. In *Proceedings of the 3rd IEEE International Conference on Cognitive Communications* (Vol. 3, pp. 493–497). Piscataway, NJ, USA. <https://doi.org/10.1109/CogInfoCom.2012.6422031>
- Johansson, C., Chirumalla, K., Bertoni, M., & Isaksson, O. (2012). Capturing and sharing lessons learned across boundaries : a video-based approach. In *Proceedings of the 20th European Conference on Information Systems* (Vol. 20, p. 12). Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12126>
- Johansson, C., & Ericson, Å. (2011). Visualization of knowledge maturity for product-service system development. In *Research into Design : Supporting Sustainable Product Development* (Vol. 3, pp. 312–319). Bangalore, India. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12110>
- Johansson, C., Bertoni, A., & Bertoni, M. (2011). Towards assessing the value of aerospace components : a conceptual scenario. In *Impacting society through engineering design : ICED 11 København, the 18th International Conference on Engineering Design* (Vol. 18, pp. 226–235). Glasgow, UK. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12111>
- Holmqvist, J., Wenngren, J., Ericson, Å., Johansson, C., & Thor, P. (2011). Sharing expertise : Easier said than done. In *Functional thinking for value creation : Proceedings of the 3rd CIRP International Conference on Industrial Product Service Systems, Technische Universität Braunschweig, Braunschweig, Germany* (Vol. 3, pp. 201–206). Berlin. https://doi.org/10.1007/978-3-642-19689-8_36
- Johansson, P., & Johansson, C. (2011). Perceptions of and challenges with knowledge sharing : enterprise collaboration in a virtual aeronautical enterprise. In *Impacting society through engineering design : ICED 11 København, the 18th International Conference on Engineering Design* (Vol. 18, pp. 332–341). Glasgow, UK. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12119>
- Bertoni, M., Johansson, C., & Larsson, T. (2011). Methods and Tools for Knowledge Sharing in Product Development. In *Innovation in Product Design : From CAD to Virtual Prototyping* (pp. 37–53). New York: Springer. https://doi.org/10.1007/978-0-85729-775-4_3
- Johansson, C., & Parida, V. (2011). Assessment of team based innovation in a Product Service System development process. In *Research into Design : Supporting Sustainable Product Development* (Vol. 3, pp. 711–718). Bangalore, India. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12122>
- Johansson, P., Johansson, C., & Isaksson, O. (2010). Take the knowledge path to support knowledge management in product/service systems. In *Industrial product-service systems (IPS²) : proceedings of the 2nd CIRP IPS² Conference* (Vol. 2). Linköping. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12106>
- Parida, V., Johansson, C., & Larsson, T. (2009). Implementation of open innovation practices in Swedish manufacturing industry. Presented at the 17th International Conference on Engineering Design (ICED'09) Design has never been this cool, Stanford University, California, USA, Design Society. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-11257>
- Johansson, C., Parida, V., & Larsson, A. (2009). How are knowledge and information evaluated? : decision making in stage-gate processes. In *Design has never been this cool : ICED 09, the 17th International Conference on Engineering Design ; 24 - 27 August 2009, Stanford University, Stanford, California, USA ; proceedings volume* (Vol. 17, pp. 195–206). Stanford, CA, USA. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12104>

- Johansson, C., Parida, V., & Bergström, M. (2009). Exploring challenges for innovation-driven virtual enterprises. In *Research into Design : Supporting multiple facets of product development* (Vol. 2, pp. 568–575). Singapore. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12105>
- Nergård, H., Johansson, C., & Larsson, T. (2008). Supporting decision making with agent-based modelling and simulation. In *Proceedings of the 10th International Design Conference, Design 2008*. University of Zagreb. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-11267>
- Bertoni, M., Bordegoni, M., Johansson, C., & Larsson, T. (2008). Pilot specifications definition guidelines for the implementation of a KEE solution in the aeronautical domain. In *CIRP Design Conference 2008*. Laboratory of Design, Production and Management, Faculty of Engineering Technology, Univ. of Twente. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-11274>
- Johansson, C., Larsson, A., Larsson, T., & Isaksson, O. (2008). Gated maturity assessment - Supporting Gate Review Decisions with Knowledge Maturity Assessment. Presented at the 18th CIRP Design Conference 2008, Design Synthesis, Enschede, The Netherlands: Laboratory of Design, Production and Management, Faculty of Engineering Technology, Univ. of Twente. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-11271>
- Bertoni, M., Johansson, C., Larsson, T., & Isaksson, O. (2008). A methodology for KEE systems target cascading. In *Proceedings of the 7th International Symposium on Tools and Methods of Competitive Engineering - TMCE 2008* (Vol. 2). Delft University of Technology. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-11273>
- Ericson, Å., Bergström, M., Johansson, C., & Larsson, T. (2007). On the way to knowledge awareness in early design (pp. 607–616). Presented at the 17th CIRP Design Conference - The Future of Product Development, Berlin, Germany: Springer. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-11287>
- Johansson, C., & Larsson, A. (2006). Virtual Meeting Interoperability : Discussing the need of support for heterogeneous meeting environments. In *Proceedings of the Fourth IASTED International Conference on Knowledge Sharing and Collaborative Engineering* (Vol. 4, pp. 92–97). Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12093>

Other publications:

- Nergård, H., Johansson, C., Solvang, B., Deng Solvang, W., Kärkkäinen, J., Pieskä, S., & Rättyä, J. (2012). *Current status and upcoming needs in SME's in Northern regions of Finland, Norway and Sweden : Technologies, personnel, market and ICT in the business process*. Luleå. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12128>
- Johansson, C., Ericson, Å., Holmqvist, J., & Wenngren, J. (2011). *A quest for knowledge?* Luleå. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12123>
- Johansson, C., Larsson, A., & Larsson, T. (2007). Knowledge enabled engineering - knowledge lifecycle approach. Presented at the Svenska Mekanikdagar 2007, Luleå tekniska universitet. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-11283>
- Nergård, H., Andersson, P., & Johansson, C. (2007). Concept automation and decision support in a functional product development perspective (Vol. 2, p. 3). Presented at the National Workshop on Functional Products, Luleå. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12103>