# Curriculum Vitae - Christian Johansson

April 2020

## Personal information

Name: Erik Christian Martin Johansson Askling
Date of birth: 1980-05-21 in Motala, Östergötland, Sweden

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Google Scholar: <a href="https://scholar.google.se/citations?user=j89a4PwAAAAJ&hl=en">https://scholar.google.se/citations?user=j89a4PwAAAAJ&hl=en</a>

## Short biography

Christian Johansson Askling (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.

He is presently a Senior Lecturer (Assistant Professor) at the Department of Mechanical Engineering at Blekinge Institute of Technology, BTH. The research is organised in the <u>Product Development Research Lab.</u>

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. The research is focused on knowledge-intensive product development activities, ranging from design automation to decision support and design thinking. Partner companies are mainly global companies from the Swedish manufacturing industry.

CMJ is program director and responsible for the MSc Program in Mechanical Engineering (Swedish link) and BSc Program in Mechanical Engineering (Swedish link) at Blekinge Institute of Technology. CMJ is the project leader for the development project Development of Second-Cycle MSc Programme in Mechanical Engineering, which aims to develop and renew the MSc program in Mechanical Engineering at Blekinge Institute of Technology.

He is the BTH faculty project leader and coach for the BTH/Stanford University ME310 design collaboration projects that are sponsored by Volvo Construction Equipment, where distributed teams of master's students work in global collaborative projects to develop innovative products over an immersive 9-month period, applying a Design Thinking approach.

CMJ is currently supervising 4 PhD candidates and has been supervisor for 4 PhD and 8 Licentiate degrees. He has contributed to 44 peer-reviewed research publications in his area of research. He is currently working within the BTH KKS research profile "Model Driven Development and Decision support, MD3S". He has worked in several European Union projects (VIVACE 2004-2007, CRESCENDO 2009-2012) and Swedish research projects (Faste Laboratory 2007-2009, Fuel Efficient Transmission Technology 2010-2012).



## 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

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.

Research topics have recently been related to maturity-based decision support for decision-making in model-driven engineering design environment. Further, design automation and knowledge-based engineering was explored to

## Formal higher education:

#### Doctoral exam

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

## University degrees

- 2012 Associate Professor Supervision course (step 2), Utbildning för Forskningshandledare Docentkurs (Steg 2), Luleå University of Technology.
- 2008 Supervision course (step 1), 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 Higher Education Pedagogy, Högskolepedagogik 5 Hp (7,5 ECTS), Luleå University of Technology
- 2004 Master of Science (MSc) (Civilingenjör) in Mechanical Engineering, Luleå University of Technology (Thesis title: "Virtual Meeting Services" (confidential).)

### 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, profile plus (2019-)

- Continuation from MD3S (see below), with aim to further focus research efforts and results from previous project.
- Focus design automation and maturity-based decision support for model-maturity assessment.

#### 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).
- *URL*: http://www.productdevelopment.se/?p=68.

### Completed projects

#### CiiR – Centre for interorganizational innovation Research (2013)

- Responsible for web-based communication platform. Development of annotated dissemination video player.
- *URL*: https://www.ltu.se/research/subjects/product-innovation/Forskningsprojekt/CiiR-Centre-for-Interorganisational-Innovation-Research-1.124938?1=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.
- *Url:* 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.
- URL: https://www.ltu.se/research/subjects/product-innovation/Projektarkiv/CRESCENDO-1.513862l=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.
- *URL:* https://www.ltu.se/research/subjects/product-innovation/Projektarkiv/Fastelaboratoriet-Ett-VINN-Excellence-Center-1.27743?l=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.
- *URL:* https://www.ltu.se/research/subjects/product-innovation/Projektarkiv/VIVACE-1.16273?l=en

## Reviewer responsibilities

### Journal and Conference review responsibilities

Reviewer for: (i) Jour

- (j) Journal of Engineering Design
- (j) IEEE Transactions on Engineering Management
- (j) International Journal of Quality and Innovation
- (j) International Journal of Innovation and Technology Management
- (c) Procedia CIRP
- (c) IFAC Symposium on Information Control Problems in Manufacturing
- (c) Swedish Engineering Education conference (Sveriges Ingenjörsutbildningar Konferens) 2019
- (c) Swedish Production Symposium (SPS2020)
- (c) Design Conference 2020
- (c) Norddesign 2020

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

## Ability to apply for and fund research:

2019: CMJ was main applicant for the successful application "Development of Second-Cycle MSc Programme in Mechanical Engineering" to the Knowledge Foundation (KKS) call Avans18 in 2019, with a budget of 3,7 MSEK over 2 years. The project started April 1 2019.

### **Evaluations:**

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

## Academic assignments

2018–[present]: MSc in Mechanical Engineering (BTH) – Program Director more info – URLs: https://www.bth.se/utbildning/program/mtaci//https://www.productdevelopment.se/?page\_id=8145

2018–[present]: BSc in Mechanical Engineering (BTH) – Program Director more info – URL: https://www.bth.se/utbildning/program/mtghm20h/

2013–2018: Master in Sustainable Product-Service System Innovation (BTH) – Program Director; more info – URL: <a href="http://www.mspi.se">http://www.mspi.se</a>

## Supervisor responsibilities

CMJ is at present supervising four PhD candidates:

- Sravan Tatipala Lic December 2019, PhD planned for December 2021, in research subject Mechanical Engineering, BTH.
- Jenny Elfsberg Lic May 2018, PhD planned for 2020, in research subject Mechanical Engineering, BTH; industrial PhD student at Volvo AB.
- Ryan Ruvald Lic December 2019, PhD planned for June 2022, in research subject Mechanical Engineering, BTH.
- Martin Frank Lic December 2019, PhD planned for December 2021, in research subject Mechanical Engineering, BTH; industrial PhD student at Volvo Construction Equipment.

CMJ has been co-supervisor for the following degrees (4 PhD, 8 Lic):

- Md Shafiqul Islam
  - o Lic December 2016: http://urn.kb.se/resolve?urn=urn:nbn:se:bth-13340
  - o PhD September 2019: http://urn.kb.se/resolve?urn=urn:nbn:se:bth-18048
- Massimo Panarotto
  - o PhD December 2015: http://urn.kb.se/resolve?urn=urn:nbn:se:bth-10912
- Alessandro Bertoni
  - o Lic March 2012: http://urn.kb.se/resolve?urn=urn:nbn:se:ltu:diva-25821
  - o PhD December 2013: http://urn.kb.se/resolve?urn=urn:nbn:se:ltu:diva-17969
- Koteshwar Chirumalla
  - o Lic June 2011: http://urn.kb.se/resolve?urn=urn:nbn:se:ltu:diva-26536
  - o PhD December 2013: http://urn.kb.se/resolve?urn=urn:nbn:se:ltu:diva-26188
- Anna Karlsson
  - o Lic June 2012: http://urn.kb.se/resolve?urn=urn:nbn:se:ltu:diva-26252
- Jenny Elfsberg
  - o Lic May 2018: http://urn.kb.se/resolve?urn=urn:nbn:se:bth-16147
- Ryan Ruvald
  - o Lic December 2019: http://urn.kb.se/resolve?urn=urn:nbn:se:bth-18964
- Martin Frank
  - o Lic December 2019: http://urn.kb.se/resolve?urn=urn:nbn:se:bth-18944
- Sravan Tatipala
  - o Lic December 2019: http://urn.kb.se/resolve?urn=urn:nbn:se:bth-18954

## Pedagogic skills

### Development and Management (+Teaching)

• Mechanical Engineering (BSc and MSc programs)

- Program team participant and ongoing development of the international master's program.
- o Course responsibility.
- o Examiner and supervisor for master's thesis.
- o Program director 2018-[present].
- Master in Sustainable Product-Service System Innovation (BTH) http://www.mspi.se.
  - Program team participant and ongoing development of the international master's program.
  - o Course responsibility.
  - o Examiner and supervisor for master's thesis.
  - o Program director 2013-2018.
- Course responsibilities and development:
  - o Extreme Product-Service System Innovation (15 ECTS).
    - Examiner and course responsible.
    - Responsible for ongoing course development.
  - o Design Thinking (7,5 ECTS).
    - Examiner and course responsible.
    - Responsible for ongoing course development.

## **Teaching**

Beyond courses above, CMJ is lecturer in most Master and Bachelor level courses related to product development and Knowledge Enabled Engineering at BTH.

CMJ has also given lectures, workshops and keynotes in topics relating to Design Thinking, Innovation Engineering, Product Development, and Product-Service Systems to both organizations (regions/science parks and schools) and companies (Volvo Group Connected Solutions, Executive Foundation Lund, etc.).

#### Master Thesis supervision

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

Student(s)	Year	Title	
Battula, Karthik	2019	Business Model Framework for Open Innovation projects in Incumbent organizations: A study on Incumbent organization in Sweden. Retrieved from <a href="https://urn.kb.se/resolve?urn=urn:nbn:se:bth-17883">https://urn.kb.se/resolve?urn=urn:nbn:se:bth-17883</a>	S/E
Gomli, Dastan; Lindström, Erik	2019	Visual Communication Console: Sharing Safety-Critical Information between Heavy Vehicles and Vulnerable Road Users. Retrieved from <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:bth-18371">http://urn.kb.se/resolve?urn=urn:nbn:se:bth-18371</a>	S
Karlsson, Jennie	2018	Support in strategic investment decisions: Using option games in an uncertain and competitive environment. Retrieved from <a href="https://urn.kb.se/resolve?urn=urn:nbn:se:bth-17328">https://urn.kb.se/resolve?urn=urn:nbn:se:bth-17328</a>	S
Knutsson, Simon; Larmark, Daniel	2018	Modular communications relay for autonomous quarry operation. Retrieved from http://urn.kb.se/resolve?urn=urn:nbn:se:bth-16786	S
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. Retrieved from <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:bth-16039">http://urn.kb.se/resolve?urn=urn:nbn:se:bth-16039</a>	S
Elawad, Kristian	2017	Aiding the implementation of autonomus machines in dynamic environments. Retrieved from http://urn.kb.se/resolve?urn=urn:nbn:se:bth-17500	S
Bugga, Hemanth; Challa, Aravind Kumar	2017	Development of Tools for Automating Standardization of Cable way using Knowledge Based Engineering.  Retrieved from <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:bth-15655">http://urn.kb.se/resolve?urn=urn:nbn:se:bth-15655</a>	S
Yi, Xin	2017	Data visualization in conceptual design: developing a prototype for complex data visualization. Retrieved from <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:bth-15192">http://urn.kb.se/resolve?urn=urn:nbn:se:bth-15192</a>	E
Ruvald, Ryan	2017	Supporting product development with a tangible platform for simulating user scenarios. Retrieved from http://urn.kb.se/resolve?urn=urn:nbn:se:bth-15367	S/E
Kosovari, Fatmir	2017	Appropriate standing-leaning backward angle for healthier posture while working in front of the computer.  Retrieved from http://urn.kb.se/resolve?urn=urn:nbn:se:bth-15061	S
Ottosson, Ellen	2017	Framtagning av verktyg för integrering av Hållbar Utveckling: En explorativ studie kring hur hållbarhet kan integreras i Semcons projektprocess. Retrieved from <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:bth-14516">http://urn.kb.se/resolve?urn=urn:nbn:se:bth-14516</a>	S
Ameen, Noor; Safawizadeh, Hassan	2017	Visualizing Material on Site for Machines and Humans: A Step toward an Autonomous Construction Site.  Retrieved from <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:bth-14937">http://urn.kb.se/resolve?urn=urn:nbn:se:bth-14937</a>	S
Sun, YufFeng; YongHao, Yang	2017	How does environment and facilities influence people during team work? – The design of a multifunctional desk to enhance creativity. Retrieved from <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:bth-14128">http://urn.kb.se/resolve?urn=urn:nbn:se:bth-14128</a>	E
Winqvist, David	2016	Augmenting communication channels toward the evolution of autonomous construction sites. Retrieved from <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12752">http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12752</a>	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. Retrieved from <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:bth-13471">http://urn.kb.se/resolve?urn=urn:nbn:se:bth-13471</a>	S
Chengqi, Li	2016	PSS for Functional Offering of Automotive Fixtures using Knowledge Enabled Engineering Techniques.  Retrieved from http://urn.kb.se/resolve?urn=urn:nbn:se:bth-11880	S
Tao, Cheng	2016	Decision-Making Support by a Value-Driven Design Model. Retrieved from http://urn.kb.se/resolve?urn=urn:nbn:se:bth-11881	E
Jaghbeer, Yasmeen; Motyka, Yvonne	2016	Roadmap towards a Lean and Sustainable Production for Medium Sized Manufacturers: A Case Study.  Retrieved from http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12099	E
Li, Xin	2016	Building a Business Model to Increase Funding for Karlskrona Makerspace. Retrieved from http://urn.kb.se/resolve?urn=urn:nbn:se:bth-11510	S
Persson, Andreas; Holmberg, Daniel	2016	How to create affordable and sustainable facilitites for companies. Retrieved from http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12840	S
Erlingsson, Oskar; Dahlqvist, Karin	2015	Designing for the Unknown: Exploring Urban Mining as a case study. Retrieved from http://urn.kb.se/resolve?urn=urn:nbn:se:bth-1078	S
Kågesson, Gustav; Tahir, Zainalabidin	2015	Manufacturing processes and materials selection for a sustainable future. Retrieved from http://urn.kb.se/resolve?urn=urn:nbn:se:bth-1047	S
Nilsson, Niklas; Söderberg, Victor	2015	How to future proof a Business Model: Capture and capitalize value in the field of Urban Mining. Retrieved from <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:bth-1051">http://urn.kb.se/resolve?urn=urn:nbn:se:bth-1051</a> .	S
Ha, Simon	2015	Construction industry market segmentation: Foresight of needs and priorities of the urban mining segment. Retrieved from <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:bth-1017">http://urn.kb.se/resolve?urn=urn:nbn:se:bth-1017</a>	S
Chai, Yi; Gao, Zhenqing	2014	Product-Service System Innovation in Urban Mining-A case study with Volvo CE. Retrieved from http://urn.kb.se/resolve?urn=urn:nbn:se:bth-5471	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. Retrieved from <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:ltu:diva-46074">http://urn.kb.se/resolve?urn=urn:nbn:se:ltu:diva-46074</a>	S
Mossing, Erik	2008	Product development path: development of a supportive method focusing on design rationale. Retrieved from <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:ltu:diva-53445">http://urn.kb.se/resolve?urn=urn:nbn:se:ltu:diva-53445</a>	S

## Military service:

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

Grade: 10-7-7

## **Publications**

#### Journal papers:

- Panarotto, M., Bertoni, M., & Johansson, C. (2020). Value models: coordinating artefacts for conceptual design. International Journal of Product Development, 23(4), 326–352. https://doi.org/10.1504/JJPD.2019.105490
- 2. Tatipala, S., Wall, J., Johansson, C., & Larsson, T. (2020). A hybrid data- and model-based approach to process monitoring and control in sheet metal forming. Processes, 8(1). https://doi.org/10.3390/pr8010089
- 3. Panarotto, M., Bertoni, M., & Johansson, C. (2019). Using models as boundary objects in early design negotiations: analysis and implications for decision support systems. Journal of Design Research, 17 (2-3).
- 4. Frank, M., Ruvald, R., Johansson, C., Larsson, T., & Larsson, A. (2019). Towards autonomous construction equipment: Supporting on-site collaboration between automators and humans. International Journal of Product Development, 23(4).
- 5. Bertoni, A., Marco, B., Massimo, P., Johansson, C., & 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
- 6. 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
- 7. 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
- 8. 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 <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:bth-6845">http://urn.kb.se/resolve?urn=urn:nbn:se:bth-6845</a>

- 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
- 10. 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
- 11. 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

#### Book chapters:

1. 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 Retrieved from: http://urn.kb.se/resolve?urn=urn:nbn:se:bth-7471

#### Theses:

- 1. Johansson, C. (2009). *Knowledge maturity as decision support in stage-gate product development : a case from the aerospace industry* (PhD dissertation). Luleå. Retrieved from <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12129">http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12129</a>
- 2. Johansson, C. (2007). *Knowledge engineering in the virtual enterprise : exploring a maturity-based decision support* (Licentiate dissertation). Luleå. Retrieved from <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12101">http://urn.kb.se/resolve?urn=urn:nbn:se:bth-12101</a>

#### Conference papers:

- Johansson, C. (2019). Reverse Engineered Design Automation: Applying Knowledge Based Engineering Techniques to a Case of Automotive Fixtures Design Configuration. In *Proceedings of the International Conference on Engineering Design, ICED* (Vol. 1, pp. 1583–1592). DOI: https://doi.org/10.1017/dsi.2019.164. Retrieved from http://urn.kb.se/resolve?urn=urn:nbn:se:bth-18518.
- 2. Ruvald, R., Bertoni, A. & Johansson, C. (2019). A role for physical prototyping in Product-Service System design: Case study in construction equipment. In *Proceedia CIRP: 11th CIRP Conference on Industrial Product/Service-Systems (IPSS)*, (Vol. 83, pp. 358-362). DOI: https://doi.org/10.1016/j.procir.2019.03.099. Retrieved from: http://urn.kb.se/resolve?urn=urn:nbn:se:bth-18521.
- 3. Ruvald, R., Frank, M., Johansson, C. & Larsson, T. (2018). Data Mining through Early Experience Prototyping: A step towards Data Driven Product Service System Design. In *IFAC PAPERSONLINE*, *Elsevier* (Vol. 51, nr 11, s. 1095-1100). 16th IFAC Symposium on Information Control Problems in Manufacturing, Bergamo. DOI: https://doi.org/10.1016/j.ifacol.2018.08.458. Retrieved from: http://urn.kb.se/resolve?urn=urn:nbn:se:bth-16395.
- 4. Tatipala, S., Wall, J., Johansson, C. & Sigvant, M. (2018). Data-driven modelling in the era of Industry 4.0: A case study of friction modelling in sheet metal forming simulations. In *Journal of Physics: Conference Series 1063 (2018) 012135, Institute of Physics Publishing (IOPP)*, Vol. 1063. NUMISHEET 2018, Tokyo, Japan. DOI: https://doi.org/10.1088/1742-6596/1063/1/012135. Retrieved from: http://urn.kb.se/resolve?urn=urn:nbn:se:bth-16841.
- 5. Tatipala, S., Pilthammar, J., Sigvant, M., Wall, J. & Johansson, C. (2018). Introductory study of sheet metal forming simulations to evaluate process robustness. In *IOP Conference Series: Materials Science and Engineering, Institute of Physics Publishing (IOPP)*, Vol. 418. 37th IDDRG Conference Forming of High Performance Sheet Materials and Components, Waterloo, Canada. DOI: <a href="https://doi.org/10.1088/1757-899X/418/1/012111">https://doi.org/10.1088/1757-899X/418/1/012111</a>. Retrieved from: <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:bth-16613">https://urn.kb.se/resolve?urn=urn:nbn:se:bth-16613</a>.
- 6. 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 <a href="http://urn.kb.se/resolve?urn=urn:nbn:se:bth-14389">http://urn.kb.se/resolve?urn=urn:nbn:se:bth-14389</a>
- 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

- 8. 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
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