

## CURRICULUM VITAE – Tobias C. Larsson

### PERSONAL DATA

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Name: Tobias Christoffer Larsson  
 Date of birth: 22 March, 1972, in Karlskrona, Blekinge  
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### Short biography

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- Professor Tobias C. Larsson (TCL), born 1972, got his PhD at Luleå University of Technology in 2001 within the area of simulation driven design within a product development context. The applications were within automotive, and high-speed train sector. Special emphasis was on multi-body dynamics and simulation driven design within a product development context.
- The core of today is within the Engineering Design Research area, where the focus is on developing methods and tools for engineering product development and simulation applications in industrial settings to support development of sustainable product-service systems (PSS) that should create value in the upcoming Functional Economy. PSS puts the focus on the functional aspects of the development and drives the usually separated product and service development teams into a more concurrent way of working to ensure delivery of a life-cycle function. Value modelling and simulation, knowledge management, and innovation engineering capability when developing PSS is of extra interest in the research.
- The constantly expanding “engineers desktop” is expanding with new tools and methods, and here the focus is on Model Based Engineering/Enterprise. The updated “engineering toolbox 2.0” for the engineer of the future needs to support organisations moving into a “greener” situation, hence life-cycle factors and sustainability, besides the traditional factors of product performance, are always in focus.
- TCL is currently supervising 4 PhD students and has examined several PhD's (22) and licentiate (22) degrees. He has contributed in over 100 peer-reviewed publications within his research area. TCL has initiated and finalized several research projects. TCL was the main person behind the creation of the Faste Laboratory, a VINN Excellence Centre within product-service systems (2007-2016). He is also the main applicant and Center Director for the BTH KK Foundation Research Profile within [Model Driven Development and Decision Support](#) at BTH (2013-2019). He is co-founder of the [Design for Wellbeing](#) framework, a joint research project together with Stanford University, USA, and Hosei University, Japan, and have taken part in several European Union projects within aerospace sector ([VIVACE](#) 2004-2007, [CRESCENDO](#) 2009-2012), and healthcare sector ([PrimCareIT](#) 2012-2104).
- TCL devotes his teaching efforts to product development courses, both via BTH lectures and via lectures on other universities and in industry on national and international level, and by initiated and now hosting the Master programme in Sustainable Product-Service System Innovation, [MSPI](#), at BTH.
- The mode of work is collaborative where building strong group dynamics processes in the research team collaboration is one cornerstone, building from experiences in team sports Playing ice hockey on semi-professional level in various Swedish teams, and now being Chairman of the Board of [Karlskrona HK](#) and Board Member of [SHL](#).
- TCL lives in Karlskrona, Blekinge, with wife Madelene (interaction designer by profession) and the three kids Tilde (2000), Linnea (2004), and William (2008).

### Current position

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- TCL is currently appointed Chaired Professor in Mechanical Engineering with focus on Product Development at Blekinge Institute of Technology, also with the following responsibilities:
  - Director and Research Leader, Product Development Research Lab, Mechanical Engineering
    - <http://www.productdevelopment.se/>
  - Director, KK Foundation research profile “Model Driven Development and Decision Support”
    - <http://www.productdevelopment.se/?p=68>
  - Dean, Faculty of Engineering

## Research agenda

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Traditionally, Swedish industry has developed and sold hardware-dominated products, e.g. trucks, engines and cars. Today, Swedish industry companies have noticed a change. Customers who have until now expressed their needs in relation to the physical artefact, i.e. a technical specification, have begun to express what they expect the physical artefact should bring about in their use of the artefact. A service perspective on product development has grown out of these radical changes concerning market expectations and needs, where customers are increasingly demanding an individualised product and where their primary interest is in functions, rather than hardware. This shifted view is captured in the concept of Product-Service Systems, and the development of PSS's captured in development methods. An integration of the hardware, software and service aspects is the starting point with intention to provide customers with a more encompassing offer, the total offer. Despite the intentions of achieving this integration, it is not yet fully understood how this shifted view will affect the development processes of the physical artefact and the technological progress. It is not either fully understood how sustainability effects can be accounted for.

***The overall objective with the PSS research can then be seen as to examine how physical artefacts and services may be designed and developed to become an element in a total offer, as well as enhance integrated product development to extend towards sustainable product-service system innovation.***

Services today occur in an *aftermarket* and are seen as add-ons to the physical artefact. A major part of the profits is made on aftermarket activities, such as maintenance and spare parts. One trigger for PSS, found in an industrial context, is the interest to control the aftermarket activities of the physical artefact. The driving force to control the aftermarket also enables ecological sustainability through remanufacturing and design, with respect to technological advances, as well as to minimise the cost of maintenance and spare parts, since it is at the provider's own cost. Fundamentally, this evolving view implies extending the life-cycle commitments of product developing companies (i.e. suppliers retain ownership throughout the total life-cycle) and an increased demand to collaborate in global alliances between value chain partners (i.e. the extended enterprise). Extending the life-cycle commitment creates new demands on the hardware development process, which now will have to deal with additional needs and requirements emanating from the aftermarket. Future customers will judge the physical artefact by the functions it provides in a larger perspective, i.e. an optimisation to the customers business as a whole.

***The PSS area integrates the strands of hardware development and service development into a development process with a life-cycle perspective that in functional sales business agreements predicts risk, improves the maturity of the decision base and ensures visibility of cost and income***

Differences presently exist between a core product perspective and a service perspective, and highlighting changes in the product development processes that are motivated by the notion of PSS is interesting. Integrating the strands of service development and hardware development into the PSS process with a life-cycle perspective, supported by simulation of not only manufacturing processes and in-service use, but also business processes and services. In addition, a goal of the research within this knowledge area is to advance the knowledge towards a product development methodology where simulation tools are used to actually drive, and not only verify, the design of a product, manufacturing processes, business processes or a service commitment.

Within PSS there exists some strands that are of extra interest for TCL regarding the research:

- PSS innovation processes
  - How to design products, and lifecycle driven offerings, in to create innovation.
  - How to drive innovation using value.
- Model Based Engineering and simulation based tools and methods for PSS
  - How to design digital tools and methods that support PSS innovation.
  - How to know effects of features on solution before activities are carried out via simulation of outcomes.

With efforts in model based engineering, simulation driven product development, aiming to support product development teams in product-service system development, modelling and simulation together with knowledge engineering becomes important parts in the research. Modelling and simulation already in early concept stages becomes even more important when the development of hardware and services meet early on in the development of

functions, with life-cycle responsibilities and sustainability effects, rather than products to sell, and earn maintenance incomes on.

***Knowledge based tools and methods for fast collection of previous engineering knowledge, and then reapply this knowledge to redesign sustainable concepts and products in early design phases through reuse of previous design rationale is a core topic for TCL.***

The current, and planned, research projects where TCL take part in will bring even more attention to the area of PSS. TCL has stakes in this area and collaborate extensively with academia all over the world via the PSS Design Research Community and nationally via national research networks. The research is to a large extent externally funded and the industrial network partners are well aware of the stakes in the research and supports several research projects in the area.

***The goal of TCL's research is to continue to build the research group in Product-Service System Innovation to become a world leading research group known for values of high quality in research and collaboration.***

### **Formal higher education**

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- 2005 – Associate Professor (Docent) in Functional Product Development, Luleå University of Technology.
- 2001 – Ph.D. in Computer Aided Design, Luleå University of Technology. Thesis: "Multibody dynamic simulation in product development"
- 1999 – Tech.Lic. in Computer Aided Design, Luleå University of Technology. Thesis: "Effective development of dynamic systems: A structured approach"
- 1996 – M.Sc. in Mechanical Engineering, major in Computer Aided Design, Luleå University of Technology.
- 1995 – B.Sc. in Mechanical Engineering, major in Computer Aided Design, Mid Sweden University, Örnsköldsvik.
- 1994 – University Diploma in Mechanical Engineering/Lower Level, Mid Sweden University, Örnsköldsvik.

### **Further education**

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*1 hp equals 1 week of participation*

- Education for programme managers, Blekinge Institute of Technology, 2012 (1 hp)
- NOAK Leadership programme for future academic leaders, Norrbottens Akademi 2010 (4 hp).
- Coaching for Innovation, PIEp programme, 2010 (1 hp).
- Leadership for Change and Organizational Renewal, Stanford University Executive Programme, Stanford Business School, 2009 (3 hp).
- Strategic leadership programme, LTU 2008-2009 (8 hp).
- VINNOVA Leadership programme, 2008-2009 (8 hp).
- Mentor programme, LTU, 2007-2008 (8 hp).
- Systematic psycho-social work environment, LTU, 2007 (1 hp).
- Gender workshop series, Faste Laboratory, LTU, 2007 (1 hp).
- IDAS programme (Identification Development Advancement Support), Swedish network, 2006 (1 hp).
- Project Coordinator Education, EC course, Brussels, 2005 (0.5 hp).
- Education programme for supervisors "Docentkurs", Step 2, LTU, 2004 (8 hp).
- Media- and presentation training, Foundation for Strategic Research in collaboration with Stockholm University as part of ProViking research programme, 2004 (2 hp).
- Kunskapsbyggande (Pedagogic knowledge creation) i Det skapande universitetet, LTU, 2003 (8 hp).
- Supervisor education, Step 1, LTU, 2003 (5 hp).
- Pedagogic education for university teachers LTU, 2003 (3 hp).
- Project management of technology and product development, CENTEK, Luleå, 2002 (5 hp).

### **Professional academic experience**

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- 2014-
  - Guest Professor at China Jiliang University, Hangzhou, China.
- 2011-
  - Professor in Mechanical Engineering, Blekinge Institute of Technology

- 2010 – 2012
  - Guest professor at Department of Design Sciences, Faculty of Engineering, Lund University
- 2011 – 2012
  - Guest professor in Functional Product Development, Division of Innovation and Design, Luleå University of Technology
- 2009 – 2011
  - Guest professor and thematic leader of Sustainable Product-Service System Innovation research, Blekinge Institute of Technology
- 2006 – 2011
  - Professor and Head of division, Division of Functional Product Development, Luleå University of Technology.
- 2005 – 2006
  - Associate Professor (Docent) in Functional Product Development. Division of Computer Aided Design, Luleå University of Technology.
- 2001 – 2005
  - Researcher in Division of Computer Aided Design, Luleå University of Technology.
- 2001
  - Visiting Scholar, Optimal Design Laboratory, University of Michigan, Ann Arbor, Michigan, USA.
  - Research Scientist at Ford Motors, Advanced Engineering, Detroit, Michigan, USA
- 1997 – 2001
  - PhD student within ENDREA (The Swedish Engineering Design Research and Education Agenda) national research programme, funded by Foundation for Strategic Research. Employed at Division of Computer Aided Design, Luleå University of Technology.

## **Research responsibilities**

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TCL is currently responsible for the following research activities:

- VITUM – Virtual Turbine Module Demonstrator (2015-2017)
  - The aim of the project is to demonstrate how innovative solutions can be developed if traditional modular and component interfaces are challenged and to enable a hardware demonstrator for Clean Sky II.
  - Co-applicant, BTH project leader
  - <http://www.productdevelopment.se/?p=76>
- 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.
  - Director, project leader and main applicant
  - <http://www.productdevelopment.se/?p=68>
- ExDin - More effective analysis within medical imaging using collaboration based on networking structure (2012-2014)
  - Medical imaging is facing major challenges. The demographic and geographic structure needs to be addressed with new approaches and services. Digitalization has been ongoing for over 10 years, but there is still great potential to be exploited in sharing capacity and expertise. This project focuses on this potential.
  - Co-applicant, project leader of "innovation model"
  - <http://www.productdevelopment.se/?p=54>
- MINT - Innovation Performance Measuring (2011-)
  - Measuring, and assessing innovation capability in industrial companies
  - Researcher and project leader
  - <http://www.productdevelopment.se/?p=828>

- Design for Wellbeing (2004- )
  - Thematic research network regarding design methods to create wellness.
  - Founder and main partner together with Stanford University, USA and Hosei University, Japan.
  - <http://www.designforwellbeing.org/>
  - <http://www.productdevelopment.se/?p=118>

### Finalized projects

- Faste Laboratory (2007-2016)
  - VINNOVA VINNEX centre with focus on functional product innovation
  - Member of the Executive Committee that plans and lead the work in the laboratory
  - Future centre director for the laboratory (*left 2011 since joining BTH*)
  - Responsible for the Functional Product Development research thrust within the centre.
  - Project leader of three projects.
  - <http://www.ltu.se/centres/Fastelaboratoriet-Vinnexc-Center?l=en>
- PIEp – Product Innovation Engineering Programme (2006-2015)
  - PIEp, Product Innovation Engineering Program is a Swedish national program with the purpose of strengthening the ability in innovative product- and business development.
  - Node leader for LTU. (*left 2011 since joining BTH*)
  - <http://www.ltu.se/research/subjects/product-innovation/Forskningsprojekt/PIEp-Product-Innovation-Engineering-Programme-1.31780?l=en>
- FI-STAR – Future Internet Social and Technological Alignment Research (2013-2015)
  - FI-STAR will establish early trials in the Health Care domain building on Future Internet (FI) technology leveraging on the outcomes of FI-PPP Phase 1.
  - Co-applicant and researcher
  - <http://www.productdevelopment.se/?p=125>
- WIESD – Women at the forefront of Innovation, Entrepreneurship and Sustainable Development (2013-2014)
  - A program designed to foster Women's entrepreneurial skills, and to apply Innovative thinking and Sustainable Development knowledge in the creation of new business, the growth of existing business, and the expansion of women-owned/women-led companies.
  - <http://www.productdevelopment.se/?p=843>
- PrimCareIT – Tele-conferencing to fight social and professional isolation (2012-2014)
  - The project will provide a cost effective development of sustainable e-health related services and products, especially focused on tele-consultation solutions. This should be done by pilot project demonstrators to create realistic scenarios for a future sustainable health care.
  - Main applicant and BTH project leader
  - <http://www.productdevelopment.se/?p=129>
- Makerspace Youth (2013-2014)
  - A project where the co-creation of a makerspace innovation environment fosters the abilities to build knowledge and interest among participants to embark onto a “maker” career.
  - <http://www.productdevelopment.se/?p=825>
- FFI Sånätt – Supply chain for lighter vehicles (2011-2013)
  - 3 year FFI (Vehicle Industry Research Programme) VINNOVA focusing Sustainable PSS development, reducing weight and CO2 signature of new SAAB platform. New OEM collaboration for new business opportunities
  - Senior researcher and BTH project leader responsible for strategic PSS opportunities in supply chain
  - <http://www.productdevelopment.se/?p=791>
- DecSUS – Decision Support for Sustainable Value Chains (2010-2013)

- Focus on providing decision support for product developers with emphasis on life-cycle views
  - Co-applicant and member of steering board.
  - <http://www.productdevelopment.se/?p=821>
- E-health – Sustainable Products and Service within E-health and Tele Medicine (2010-2012)
  - Providing cost-effective development and support for tele medicine and e-health solutions
  - Co-applicant and member of steering board.
  - <http://www.productdevelopment.se/?p=818>
- Crescendo (2009-2012)
  - 3 year EU FP 7 project within Aerospace
  - Value modelling and simulation
  - Knowledge enabled engineering
  - Project leader and senior researcher (left 2011 since joining BTH)
  - <http://www.crescendo-fp7.eu/>
- THINK – Teams for Heterogeneous Innovation Knowledge (2008-2011)
  - 3 year Foundation for Strategic Research (SSF) project regarding Functional Product Development within the ProViking programme
  - Senior researcher and project leader. (left 2011 since joining BTH)
  - <http://www.ltu.se/research/subjects/product-innovation/Projektarkiv/ProViking-THINK-Team-for-Heterogen-Innovationskunskap-1.39150?!=en>
- METOPIA - Methodology for Optimization, Integration and Automation (2009-2011)
  - VINNOVA NFFP5 (National Aerospace Research Programme) project with focus to develop the ability to understand, model and simulate behaviour of new and existing engine configurations from a mechanical perspective.
  - <http://www.ltu.se/research/subjects/product-innovation/Projektarkiv/NFFP5-METOPIA-METodik-for-OPTimering-Integration-och-Automatisering-1.49412?!=en>
- SAAB Technology Transfer (2009-2012)
  - 4 year FFI (Vehicle Industry Research Programme) VINNOVA project focusing on identifying needs for new/complementary methods and tools to enhance the possibilities for evaluation of new, ground-breaking, technologies in the early development phases of vehicle platform development.
  - Academic supervisor for industrial PhD candidate.
  - Member of steering group.
  - <http://www.ltu.se/research/subjects/product-innovation/Forskningsprojekt/SAAB-Teknikoverforing-1.46484?!=en>
- Fuel Efficient Transmission Technology Concept (2009-2012)
  - 4 year FFI (Vehicle Industry Research Programme) VINNOVA project focusing on the development of new transmission technology concept.
  - Senior researcher and project leader (left 2011 since joining BTH)
  - <http://www.ltu.se/research/subjects/product-innovation/Forskningsprojekt/Fuel-Efficient-Transmission-Technology-Concepts-Design-Methodology-1.51185?!=en>
- FFI Robust Machining (2009-2012)
  - 4 year FFI (Vehicle Industry Research Programme) VINNOVA project focusing research in knowledge intense applications for manufacturing, Knowledge Engineering.
  - Academic supervisor for industrial PhD candidate.
  - Member of steering group.
  - <http://www.ltu.se/research/subjects/product-innovation/Forskningsprojekt/FFI-Robust-Machining-1.60789?!=en>
- Centre for Automotive Systems Technology and Testing (2005-2010)
  - Regional project regarding automotive testing
  - Project leader for two subprojects

- Real-time modelling, simulation and visualization of vehicle dynamics over large distances
    - Real-time road profile scanning to predict vehicle dynamics adaptation.
  - <http://www.ltu.se/centres/Centre-for-Automotive-Systems-Technologies-and-Testing>
- FLUD - Swedish Green Engine Demonstrator (2006-2010)
  - Development of lighter and greener jet engines
  - Co-applicant.
  - <http://www.ltu.se/research/subjects/product-innovation/Projektarkiv/FLUD-Swedish-Green-Engine-Demonstrator-1.46578?l=en>
- NFFP Experience Feedback (2007-2009)
  - VINNOVA project with focus to develop an ability to engineer fabricated jet engine components through methods and system support for feedback of knowledge and experience into the product development process (product and process definitions).
  - Project leader and main applicant
  - <http://www.ltu.se/research/subjects/product-innovation/Projektarkiv/NFFP4-Erfarenhetsaterkoppling-1.27739?l=en>
- NFFP Whole Engine Modelling (2007-2009)
  - VINNOVA project with focus to develop the ability to understand, model and simulate behaviour of new and existing engine configurations from a mechanical perspective.
  - Main applicant
  - <http://www.ltu.se/research/subjects/product-innovation/Projektarkiv/NFFP4-Helmtormodellering-1.31781?l=en>
- MERA DLP-e (2007-2009)
  - VINNOVA project focusing on reuse of engineering knowledge for increased production performance.
  - Project leader and main applicant
  - <http://www.ltu.se/research/subjects/product-innovation/Projektarkiv/MERA-DLP-E-1.16271?l=en>
- VIVACE - Value improvement in Virtual Aeronautical Collaborative Enterprises (2004-2007)
  - EU FP6 project focusing on knowledge engineering and collaborative tools
  - Single largest EC project today, €70M.
  - Responsible for research tasks within WP3.1 Knowledge Enabled Engineering where knowledge based tools and methods for reduced lead-times and improved aerospace product development time is in focus.
  - Project leader at LTU
  - <http://www.ltu.se/research/subjects/product-innovation/Projektarkiv/VIVACE-1.16273?l=en>
- Design for Fabrication (2002-2005)
  - VINNOVA project focusing on knowledge based tools and methods for prediction of manufacturing outcomes in early stages of product development
  - Project leader and main applicant
  - <http://www.ltu.se/research/subjects/product-innovation/Projektarkiv/Design-for-Fabrication-1.16309?l=en>
- NeedInn - Need Centered Product Innovation within E-health (2005-2007)
  - 2 year EC project within RPIA (Regionalt program för innovativa åtgärder) with focus on product development methods and tools for e-health.
  - Project leader and main applicant
  - <http://www.ltu.se/research/subjects/product-innovation/Projektarkiv/NeedInn-Behovsdriven-produktutveckling-inom-e-halsa-1.16270?l=en>
- NFFP - Service Concept Design (2005-2007)
  - VINNOVA project with focus on design and development of functional products by use of knowledge engineering and service development.
  - Project leader and main applicant



- <http://www.ltu.se/research/subjects/product-innovation/Projektarkiv/NFFP4-Service-Concept-Design-1.22135?l=en>
- ProViking (2003-2006)
  - Foundation for Strategic Research (SSF) project regarding Functional Product Development
  - Senior researcher and project leader for 2 subprojects in the cluster.
  - <http://www.ltu.se/research/subjects/product-innovation/Projektarkiv/ProViking-Development-of-Functional-Products-in-a-Distributed-Virtual-Environment-1.16272?l=en>
- Prioritized Area of Product Development
  - One of 6 prioritized areas at Luleå University of Technology
  - Focusing on increased external funding and international recognition regarding product development research.
  - Area coordinator for the thrust area.
  - <http://www.ltu.se/research/subjects/product-innovation/Projektarkiv/Produktutveckling-Prioriterat-omrade-1.16274?l=en>

### **Scientific committee responsibilities**

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Member of scientific committee for re-occurring conferences:

- ICED, Member of scientific committee for the Design Society conference “International Conference on Engineering Design”, held bi-annually around the world. Member of the SC since 2006.
- Design, Member of scientific committee for the Design Society conference “International Design Conference”, held bi-annually in Dubrovnik, Croatia. Member of the SC and Advisory Board since 2005.
- CIRP IPS2, Member of the CIRP society conference “Integrated Product/Service Systems – IPS2”, held annually around the world. Member of the SC since 2008.
- IFIP CAI, Member of the Member of scientific committee for the CIRP conference Computer Aided Innovation, held yearly around the world. Member of the SC since 2005.

### **Conference planning and review responsibilities**

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Participated in review and planning of conferences, some listed below:

- ICED 15, 20<sup>th</sup> International Conference on Engineering Design, 27-30 July 2015, Milan, Italy.
  - Reviewer, scientific committee.
- CIRP IPS2, 7th International Conference on Integrated Product-Service Systems, 21-22 May, Saint-Etienne, France.
  - Conference organiser, scientific chair.
- CIRP IPS2, 6th International Conference on Integrated Product-Service Systems, 1-2 May, Windsor, Canada.
  - Conference organiser, scientific chair.
- ICED 13, 19<sup>th</sup> International Conference on Engineering Design, 19-22 August 2013, Seoul, Korea.
  - Reviewer, session chair and coordinator
- CIRP IPS2, 5th International Conference on Integrated Product-Service Systems, 14-15 March, Bochum, Germany.
  - Conference organiser, scientific chair.
- ICED 11, 18<sup>th</sup> International Conference on Engineering Design, 15-18 August 2011, DTU, Copenhagen, Denmark.
  - Reviewer, session chair and coordinator
- ICoRD '11, International Conference on Research Into Design, January 10-12 2011, National Science Seminar Complex, Indian Institute of Science, Bangalore, India.
  - Reviewer, Scientific Committee
- 11<sup>th</sup> International Design Conference, May 17-20 2010, Dubrovnik, Croatia.
  - Reviewer, Advisory Board.
- CIRP IPS2 International Conference on Integrated Product/Service Systems, 14-17 April, Linköping, Sweden
  - Conference organiser, scientific chair
- FPD2010, 3<sup>rd</sup> national workshop on “Functional Products – Development and Sales”, 13 April, Linköping, Sweden.
  - Conference organiser



- ICED 09, 17<sup>th</sup> International Conference on Engineering Design, 28-31 August 2009, Stanford University, San Francisco, California, US.
  - Reviewer and workshop organiser
- ICoRD '09, International Conference on Research Into Design, 7-9 January 2009, National Science Seminar Complex, Indian Institute of Science, Bangalore, India.
  - Reviewer, Scientific Committee
- FPD2007, 2<sup>nd</sup> national workshop on "Functional Products – Development and Sales", 24-25 October, Luleå, Sweden.
  - Conference organiser and conference chairman
- ICED07, 16<sup>th</sup> International Conference on Engineering Design, Design for Society – Innovation, Sustainability and Knowledge, 28-31 August 2007, Paris, France.
  - Reviewer and workshop organiser
- 2nd IFIP Working Conference on Computer Aided Innovation, Michigan, USA, 2007.
  - Planner, organiser and reviewer.
- ASME Design Engineering Technical Conferences, Computers in Engineering, Philadelphia, USA, 2006.
  - Reviewer
- NordPLM06, 1<sup>st</sup> Nordic Conference on Product lifecycle Management, 2006.
  - Reviewer
- 4<sup>th</sup> Workshop on Challenges in Collaborative Engineering, Prague, 2006.
  - Reviewer
- 1st IFIP Working Conference on Computer Aided Innovation, Ulm, Germany, 2005.
  - Planner, organiser and reviewer
- 3<sup>rd</sup> Workshop on Challenges in Collaborative Engineering, Prague, 2005.
  - Reviewer
- ICED 03, 14<sup>th</sup> International Conference on Engineering Design, Research for Practice - Innovative Products, Processes and Organisations, 19-21 August 2003, Stockholm, Sweden.
  - Reviewer
- ASME Design Engineering Technical Conferences, Computers in Engineering, Montreal, CA, 2002.
  - Reviewer
- MOKA Interest Group, symposia in Luleå, November 2003.
  - Organiser, planner and reviewer.
- ASME Design Engineering Technical Conferences, Computers in Engineering, Pittsburgh, USA, 2001.
  - Reviewer and session organiser
- ASME Design Engineering Technical Conferences, Computers in Engineering, Las Vegas, USA, 1999.
- IAVSD Workshop, Herbertov, Czech Republic, 1999.

## **Journal and book and review responsibilities**

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Reviewer/editor for:

- Cleaner Production
  - Editor for special issue
- Computers in Industry
  - Reviewer of journal contributions
- Pearson Education, UK
  - Reviewer for books and manuscripts in the engineering design area
- International Journal of Business and Management Tomorrow
  - Reviewer of journal contributions
- International Journal of Concurrent Engineering: Research and Applications
  - Reviewer of journal contributions
- Journal of Engineering Design

- Reviewer of journal contributions
- International Journal of e-collaboration
  - Reviewer of journal contributions
- International Journal of Production Economics
  - Reviewer of journal contributions

### **Ability to apply for and fund research**

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TCL has a good international network with both industry and academia and has applied for and received research funds (total of 744.8 MSEK until Q1 2015, only funds larger than 0.5 MSEK accounted for).

- SICAHT – Establishment of innovation platform for digital health, 6.4 MSEK, TCL co-applicant, 2015.
- STOSIP – Strategic, tactical and operational implementation of sustainability into the innovation process, 7.5 MSEK, TCL co-applicant, 2015.
- ExDIN III - Efficient image diagnostics and innovation networks – Fas III, 20 MSEK, TCL co-applicant 2014
- VITUM - Virtual TURbine Module demonstrator, 10.5 MSEK, TCL co-applicant, 2014
- Makerspace Youth, 0.8 MSEK, TCL main applicant 2013.
- Women in the Forefront of Innovation, 1.2 MSEK, TCL main applicant 2013.
- Innovative Product Development, 12 MSEK direct company support from Volvo CE, TCL project leader, 2013
- Model Driven Development and Decision Support, 108 MSEK, TCL main applicant 2012.
- Efficient image diagnostics and innovation networks, 20 MSEK, TCL co-applicant 2012
- PrimCareIT, 25 MSEK, TCL co-applicant, 2011.
- Centre for inter-organizational innovation research, 18 MSEK, TCL co-applicant, 2010.
- FFI SÅNätt, 30 MSEK, TCL co-applicant, 2010.
- E-health for sustainable health care, 18 MSEK, TCL co-applicant, 2010.
- Redesigning Innovation, 1 MSEK, TCL co-applicant, 2009.
- FFI Fuel Efficient Transmission Technology Concepts, 18 MSEK, TCL main applicant, 2009.
- NFFP Metopia, 4.4 MSEK, TCL main application 2009.
- Crescendo, 550 MSEK (15 MSEK for LTU), TCL main applicant 2008
- ProViking THINK, 15 MSEK, TCL main applicant, 2008
- NFFP Whole Engine Modelling, 4 MSEK, TCL main applicant, 2007
- NFFP Experience feedback, 4 MSEK, TCL main applicant, 2007.
- NFFP Whole Engine Modelling, 4 MSEK, TCL main applicant, 2007
- Faste Laboratory for "Functional Product Innovation", VINN Excellence Centre, 250 MSEK for LTU, TCL main contributor to application and future centre director from 2010, 2006.
- CASTT Scanning road, 2 MSEK, TCL main applicant, 2006.
- MERA DLP-E, 4 MSEK, TCL main applicant, 2006.
- Service Concept Design, 3 MSEK, TCL main applicant, 2005.
- CASTT Real-time dynamics, 2 MSEK, TCL main applicant, 2005.
- Design for Functional Components, 3 MSEK for LTU, TCL co-applicant, 2005.
- NeedInn, 6 MSEK, TCL main applicant, 2005.
- VIVACE, 700 MSEK (12 MSEK for LTU), TCL main applicant, 2004.
- Design for Fabrication, VINNOVA, 8 MSEK for LTU, TCL main applicant, 2002.
- ProViking, SSF, 28 MSEK, TCL co-applicant. 2002.
- Design for wellbeing & Product Design, LTU, 1 MSEK, TCL main applicant, 2004.

Judgements of TCL in conjunction with research center applications:

- 2006 – International review board when evaluating the Faste Laboratory application at VINNOVA (Prof John Baras, Prof David Williams, Prof Bengt Stenlund evaluators)
  - *"Because of his contributions to the technical presentation and his importance to the future of the Centre, Larson was closely questioned on his technical area and track record, and his vision and long*

*term metrics for the Centre. His calm and thoughtful responses showed his strategic approach, personal charisma and leadership skills. He is an excellent choice of clear international calibre and shows great promise."*

- *"This is a Centre with momentum from its existing work and of unusual promise arising from the clear excellence, energy and vision of its young incoming Director. The proposers and the university are to be commended for the approach that they have taken."*
- *"An excellent incoming Director (for beyond 2009) has been designated and succession is clear."*

## **Evaluations**

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TCL has personally been evaluated regarding research competence (if desired these evaluations can be provided):

- 2010: Successfully evaluated for chaired Professor at BTH in Product Innovation. 3 external experts evaluated TCL and ranked TCL as no 1 candidate for position in competition (TCL accepted this position).
- 2009: Successfully evaluated for chaired Professor at KTH in Product Innovation Engineering. 3 external experts evaluated TCL and ranked TCL as no 1 candidate for position in competition (TCL eventually turned down the proposal).
- 2007: Successfully evaluated for chaired Professor at LTU. 2 external experts evaluated TCL as no 1 candidate in competition.
- 2005: Successfully evaluated for Associate Professor (Docent) at LTU. 2 external experts evaluated TCL.
- 2004: Successfully evaluated for Senior Lecturer in Functional Product at LTU. 2 external experts evaluated TCL in competition.

## **Examiner of research work**

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- TCL has been on grading boards and acted as opponents on both licentiate degrees (14) and doctoral dissertations (7 opponent, 19 grading committees).
- TCL has been evaluating professors, associate professors degree, senior lecturer on a frequent basis.

## **Strategic assignments**

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- Dean, Faculty of Engineering, 2014-
- Member of the BTH board. 2013-2014 (left when appointed Dean of Faculty of Engineering)
- Member of the SUNET strategic research board. 2011-
- Member of the BTH School of Engineering Directorate. 2010-
- Member of working group that developed Swedish National Research Agenda on aerospace 2010 & 2011. <http://www.nraflyg.se/>
- Member of steering group for e-health programme with Landstinget Blekinge, 2009-
- Member of the board of IT & web strategies at LTU, 2010-
- Thematic leader for the Sustainable Product/Service System Innovation theme at section of engineering at BTH, 2009-2011 (2011 transformed into Center for SPSSI)
- Member of the board for Learning Resource Center at LTU, 2008-
- Member of the Department of Applied Physics and Mechanical Engineering Directorate. 2007-2009.
- Member of the Faste Laboratory Executive Committee, 2007-2010.
- Member of the Steering Committee in national product innovation programme PIEp, 2007-2011.
- Responsible for the strategic area of Product Development at LTU, one of 6 prioritized areas at LTU. 2006-2010.
- Participating in a VINNOVA strategy group regarding future research programmes in sustainable product development. 2006-
- Participating in EC strategic FP7 group regarding aerospace research programmes. 2006-
- Participating in EC strategic FP7 group regarding automotive research programmes. 2006-

## **Staff responsibilities**

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- 2007-2011
  - Responsible for the management of the research division of Functional Product Development
  - 28 persons in staff (at leaving point)

- Budget, planning and project execution according to LTU directives are part of daily work routines
- 25 MSEK in yearly turnover (2011, 77% from external funds, starting from scratch 2007).

## **Management and collaboration**

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- To create leading research and educational systems it is important to have a clear strategy on all pieces in the puzzle. Proper management and administration of research and education tasks is key, together with a proactive dialogue with companies and the surrounding society.
- On the research management side it is important to work with clear structures although the research itself may be ambiguous. Here TCL set up clear strategies for project execution and administration and make sure that financial staff is present from the beginning support budget reporting and follow-up.
- On the collaboration side, open seminars and workshops with companies and society act as a door for partners to enter the research arena. Through long-term collaboration comes good research collaboration, and stamina is needed to sustain a good environment. During 2006 TCL was the main person behind the creation of the Faste Laboratory, a VINN Excellence Center in Functional Product Innovation. This process was replicated in 2012 leading up to the initiation of the 6-year BTH KKS research profile in product development deployed 2013.
- TCL was recruited to the position as professor, head of division, and research subject responsible for Functional Product Development at LTU in 2006. The division started 2006 and had grown to 28 persons (2011) and with strong research output and strong financial standing (profit all years). 2011 TCL resigned and joined BTH and since then started up research unit in Product Development. The collaboration consists of some 15 academic partners and 40 companies.
- *TCL has since the PhD exam continuously networked with society and this has rendered a rapid build-up of the research solid economy and high research output, known for research and collaboration skills. TCL has the intention to create an internationally leading research center at BTH.*

## **Supervisor responsibilities**

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TCL is supervisor for 4 PhD candidates:

- Mikael Johansson (planned for PhD 2015 in research subject Mechanical Engineering, BTH)
- Eskil Andreasson (planned for Lic 2015 in research subject Mechanical Engineering, BTH)
- Lisiana Nurhadi (planned for Lic 2016 in research subject Strategic Sustainable Development, BTH)
- Mårten Silvanus (planned for Lic 2018 in research subject Mechanical Engineering, BTH)

TCL has been main supervisor for the following degrees (11 PhD, 13 Lic):

- Massimo Panarotto, Lic 2013-09, PhD 2015-12.
- Koteswar Chirumalla, Lic 2011-06
- Åsa Kastensson, Lic 2011-06
- Peter Thor, Lic 2011-06
- Petter Andersson, Lic 2008, PhD 2011-06
- Johan Wenngren, Lic 2010
- Mikael Nybacka, Lic 2007, PhD 2009-12
- Christian Johansson, Lic 2007, PhD 2009-12
- Mattias Bergström, PhD 2009-06
- Henrik Nergård, Lic 2006, PhD 2009-06
- Mikael Andersson, PhD 2007
- Åsa Ericson, Lic 2006, PhD 2007-12
- Marcus Sandberg, Lic 2005, PhD 2007-12
- Magnus Lövstrand, Lic 2004, PhD 2007-06
- Patrik Boart, Lic 2005, PhD 2007-06

TCL has been co-supervisor for the following degrees (11 PhD, 9 Lic):

- Rachael Gould, Lic 2015-12, Blekinge Institute of Technology.
- Andre Benaim, Lic 2015-06, Lund University of Technology

- Eskil Andreasson, Lic 2015-05, Blekinge Institute of Technology
- Johan Holmqvist, PhD 2015-03, Luleå University of Technology.
- Alessandro Bertoni, PhD 2013-12, Luleå University of Technology.
- Koteswar Chirumalla, PhD 2013-12, Luleå University of Technology.
- Johanna Wallin, PhD 2013-12, Chalmers.
- Malte Jung, PhD 2012, Stanford University.
- Alessandro Bertoni, Lic 2012-03, Luleå University of Technology.
- Johan Holmqvist, Lic 2012-03, Luleå University of Technology.
- Johanna Wallin, Lic 2012-01, Luleå University of Technology.
- Neeraj Sonalkar, PhD 2011-10, Stanford University.
- Anthony Thompson, Lic 2010-10, PhD 2012-12, Blekinge Institute of Technology.
- Vinit Parida, Lic 2008, PhD 2010-04, Luleå University of Technology.
- Andreas Larsson, Lic 2002, PhD 2005-06, Luleå University of Technology.
- Nicklas Bylund, PhD 2004, Luleå University of Technology.
- Belind Lopez-Mesa, PhD 2004, Luleå University of Technology.

### **Graduate school responsibilities**

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TCL is responsible for the graduate school in Mechanical Engineering at BTH 2011-.

TCL has been responsible for the graduate school within Arena Innovative Technology and enterprise at LTU between 2004-2006:

- Green house projects and graduate school courses from 2004-2006.
- 13 licentiate degrees between 2004-2006.
- Now starting up version 2, 2007-2009.

Graduate school courses:

- Innovative Technology and Enterprise
  - Local graduate course for PhD students within Arena Innovative Technology and Enterprise.
  - Examiner 2005-2006.
- Functional Product Development
  - National PhD course.
  - Examiner and course developer, 2009-.
- Product-Service Systems
  - National PhD course.
  - Examiner and course developer, 2010-.
- Simulation and Digital Prototyping
  - National PhD course within the ENDREA and ProViking programme (<http://www.proviking.se>).
  - 1997-
  - Examiner since 2005, and course developer since 2004.
- Simulation of Vehicle Dynamics
  - National PhD course.
  - Examiner and course developer, 1997-.
- Participatory Product Innovation
  - Local PhD course.
  - Examiner and course developer, 2005-.
- Knowledge Enabled Engineering
  - National PhD course.
  - Examiner and course developer, 2007-.

### **PEDAGOGIC SKILLS**

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On the educational side TCL works with the changing facets of our society where new knowledge is needed to create the products and services of tomorrow. Here we need to educate in both exploit end (do the things you need to do with less resources) and the explore dimension (find new ways to do new things) and this means that we need to mix disciplines in education and create the future problem solvers. Through the development of a new master programme in sustainable product-service system innovation (MSPI, <http://www.msmpi.se>) that was deployed at BTH fall 2010, an educational platform for innovation education is created. Here different disciplines can meet and together with entrepreneurs and companies develop the sustainable solutions for tomorrow.

Previous, at LTU, TCL was developer and programme coordinator of an international masters programme in Product Development that started 2007. The programme was a manifestation of the previous and current research within engineering design and product development where the focus is on the ability to train the ability to develop products that answers to new customer demands. New products and services (PSS as an example) require new tools and methods, and hence other competencies than the “regular” engineering programmes train, hence the new masters programme.

Product development and product innovation builds on the training and execution of innovation, creativity, and entrepreneurship, together with domain knowledge in, for example, mechanical engineering. The teaching is a mix of theory and projects together with industry and society where the process of going from idea to concept is pursued during the programmes. Close collaboration with the Stanford d.school programme and colleagues and business in the Bay Area is established in the BTH MSPI programme to have good mentors and examples in the programme.

***TCL focus the education efforts to teaching in product-service innovation and engineering skills and integrates research into this education via thesis projects, industrial visits and industrial key notes, hence making sure that students are given good opportunities to gather latest knowledge and also the chance to interact and collaborate with market actors from the start in education.***

The pedagogic idea is that the students should be encouraged to gain their knowledge in an active way rather than passively build the knowledge only from theoretical lectures by the teachers. Hence, live course projects with entrepreneurs and industry is a common part in education and master students are also encouraged to take part in research projects. Reflection reports are used extensively as a tool to support the individual knowledge creation process when students work in team to perform projects. There are influences of problem based learning and triple learning loop is one goal of the course setups.

TCL have taken LTU programme regarding “Kunskapsbyggande” (Knowledge Creation pedagogic courses) and mix this foundation with the international CDIO (Conceive, Design, Implement, Operate) curricula and Problem Based Learning to find a good way forward regarding Bologna and other surrounding agendas of today in education.

***TCL's ambition is to deliver the best product development education in Sweden, via unique pedagogic idea, collaboration with companies and society, via latest methods and tools, and via continuous interaction with students. TCL has developed educational programmes, courses, and examined on both under graduate and graduate level and is well aware of the educational system setup.***

## Development

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The following development activities regarding education is worth to mention:

- Master in Sustainable Product/Service System Innovation (BTH), <http://www.msmpi.se>.
  - Programme team participant and responsible for the creation and development of the international masters programme together with course responsibility for courses in the programme.
  - Programme Director 2012-
- Master in Product Development (LTU)
  - Programme coordinator and responsible for the creation and development of the international masters programme in product development that started at LTU fall 2007.
  - Programme Director
- Arena Innovative Technology and Enterprise (LTU, AITF – Arena Innovativ Teknik och Företagande)
  - Programme coordinator and examiner for masters programme (civilingenjör) and has been part of the development of AITF between 2004-2007. The Arena builds on traditional subjects and the students can graduate with different titles (civilingenjörsprogram-180p, högskoleingenjörsexamina-120p, civilekonom-160p, kandidatexamen-120p). The foundation of the arena is education and research within market driven, or needs driven product development with focus on the innovation process – from development of new technical solutions to the commercialisation of the products

and processes. Within the arena, green house projects is an interesting concept where innovators gather up with students to together work as an incubator to develop new products and businesses. The arena concept is closely linked to the Aurorum Science Park in Luleå.

- SIRIUS – Final year course on Mechanical Engineering programme (LTU)
  - TCL is one of the key persons behind the pedagogic development in "MTM077 SIRIUS – Creative Product Development" in order to be able to check both the students individual efforts and learning during the course, while at the same time study the team performance in relation to the given task of the course project. Two parallel processes have been developed to facilitate the smooth taking of the project-based course. A review process is active for the project work, and this process is synced with the guiding product development process the students are following; Participatory Product Innovation (P2I, developed by Tobias Larsson, and Andreas Larsson. "Need Driven Product Development in Team-Based Projects" describes the process). The other process handles the students' individual learning and this is monitored and reflected upon using a weekly log that students have to submit, and where reflective sessions are held with the team coach/supervisor on regular basis.
- Design for Wellbeing (LTU)
  - A thematic subject of study for students interested in project based work for the benefit of society. DfW projects have been conducted on a regular basis over the past 4 years and three projects have been conducted with Stanford University. The DfW concept trains students especially in the needfinding phases of product development since wellbeing is about personal preferences rather than hardware performance of products.

## Teaching

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Courses taught by TCL together with role in course (together with students statements where such are collected):

- Value Innovation, 7.5 ECTS
  - Masters level
  - Master in Sustainable Product-Service System Innovation, examiner and developer, 2012-.
  - Master in Mechanical Engineering, examiner and developer, 2012-.
- PSS Extreme Innovation, 15 ECTS
  - Masters level
  - Master in Sustainable Product-Service System Innovation, examiner and developer, 2011-.
- Product-Service Systems Design Research Methodology, 7.5 ECTS
  - Masters level
  - Master in Sustainable Product-Service System Innovation, examiner and developer, 2011-.
- Systems Engineering, 7.5 ECTS
  - Masters level
  - Master in Sustainable Product-Service System Innovation, examiner and developer, 2011-.
- Product Development Processes, 7.5 ECTS
  - Masters level
  - Master in Product Development, examiner and developer, 2007-.
- Theory and methodology for engineering product development, 7.5 ECTS
  - Masters level
  - Master in Product Development, examiner and developer, 2007-.
- Creative concept design, 7.5 ECTS
  - Masters level
  - Master in Product Development, examiner and developer, 2007-.
- Innovative Technology and Enterprise (MTIT01), 7.5 ECTS
  - Basic course in AITF year one.
  - Examiner and developer, 2005-.
- Green House courses, 7.5 ECTS per course, two per year
  - Year 1-5



- Project courses within AITF programme
- Examiner 2005-.
- SIRIUS – Creative Product Development, 30 ECTS
  - 4<sup>th</sup> year on ME programme
  - Course development, theory classes in product development theories, project coach, 1997-.
- Product Development, 7.5 ECTS
  - National course within Gröna Bilen, 2003-
  - Invited teacher to KTH.
    - *”Mycket intressant föreläsning med relevanta exempel”*
    - *”I especially liked the process for product development presented by Mr Larson since it gave me an overview of the studied topic”*
- Applied modelling and simulation, 7.5 ECTS
  - 4<sup>th</sup> year on ME programme
  - Examiner -2005, course developer
- Simulation of dynamic systems, 7.5 ECTS
  - 4<sup>th</sup> year on ME programme
  - Examiner and developer, 1997-.
    - *”Bra uppgifter, lite tuffa att komma igång med, men när jag väl satt mig in i programmet var det utmanande att arbeta med uppgifterna”*
- Computer Graphics, 7.5 ECTS
  - 4<sup>th</sup> year on ME programme
  - Teacher and developer, 1997-2000.
- Integrated Product Development, 7.5 ECTS
  - 2<sup>nd</sup> year on ME programme
  - Teacher 1997-2000.
- Integrated Product Development, 7.5 ECTS
  - 3<sup>rd</sup> year on ME programme at BTH, Blekinge
  - Teacher and developer, 1998-2000.
- 3D Modelling and Virtual Reality, 7.5 ECTS
  - 3<sup>rd</sup> year on ME programme at BTH, Blekinge
  - Teacher and developer, 1998-2000.
- Computer Graphics, 7.5 ECTS
  - 1<sup>st</sup> year at Nordic School for Set Design, Skellefteå
  - Examiner and developer, 1996-2000.

### **Master thesis supervising**

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TCL have supervised and examined some 100+ MSc theses within the mechanical engineering and sustainable product innovation area. Below are some recent examples:

- Ha, S., (2015), “Construction industry market segmentation: Foresight of needs and priorities of the urban mining segment”, Master of Science in Industrial Management and Engineering, BTH
- Dahlqvist, K., Erlingsson, O., (2015), “Designing for the Unknown – Exploring Urban Mining as a case study”, Master of Science in Mechanical Engineering, BTH.
- Kågesson, G., Zainalabidin, T., (2015), “Urban Mining: Manufacturing”, Master of Science in Mechanical Engineering, BTH.
- Söderberg, V., Nilsson, N., (2015), “How to futureproof a Business Model – Capture and capitalize in the field of Urban Mining”, Master of Science in Industrial Management and Engineering, BTH.

### **OTHER**

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## **Collaborative efforts besides research work**

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TCL has participated in several workshops and seminars as speaker, organiser and facilitator and have given over 100 keynotes and workshops etc. Below, an excerpt of these collaborative activities are listed:

- 2015: 10X Labs Innovation workshops with Ericsson and Volvo CE.
- 2014: Keynote on Innovative Product Development at Jiliang University, Hangzhou, China.
- 2014: Keynote on Industrial Product-Service Systems in SSPU, Shanghai, China.
- 2014: Blekinge X-labs public demo at Näringslivsgalan 2014.
- 2012: In jury for BTH Innovation Prize at Guldeken galan.
- 2012: Keynote on Innovative Product Development at TelecomCity Catwalk.
- 2012: Innovation Engineering seminar at Volvo Construction Equipment.
- 2011: Knowledge Seminar Inspirational Speaker on Applied Health Technology at Blekinge Health Arena.
- 2011: Keynote speaker iCoach days, Volvo CE, with talks on ambidextrous innovation
- 2011: Keynote speaker at DTU Proteus consortium meeting with talk on Swedish lessons learned from PSS implementations.
- 2011: Keynote speaker on Automation 2011 in Malmö regarding Swedish industry competitiveness.
- 2008-2009: Organizer of “Open Talks” series at LTU to promote knowledge sharing across the university and to researchers and students. The invited lecturers were from Stanford University, Volvo Aero, Sandvik Coromant, Lund University, and Politecnico Di Milano to mention some.
- 2007-2010: Organizer and facilitator of Radical Innovation Workshops in collaboration with ABB, Sandvik, Metso, Billerud and Volvo Aero.
- 2008: Organizer of the workshop series “From Foresight to Design”, held in Trollhättan/Stockholm/Luleå, Sweden, with some 60 participants from different companies in the Volvo Group, partners of the LTU research and partners of the PIEp programme. In Partnership with the Center for Foresight and Innovation and the Center for Design Research at Stanford University, USA.
- 2009-2011: Invited Keynote speaker at yearly Konkurrenskraft event in Stockholm regarding increased competitiveness through innovation and product development.
- 2009: Responsible for the development of the popular science magazine “Funktionering Magazine” edited by Andreas Larsson and a co-production effort by the network of TCL. “FUNKTIONERING Magazine” available at [www.funktionering.org](http://www.funktionering.org).

## **Leadership**

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With a long sports career in ice hockey I am a team player and I bring skills and experience from the world of sports into the daily work by mixing this with the experience I’ve gained during my 15 years in the research society I believe I’ve found a good philosophy for leadership.

I try to be the good example and inspire my fellow co-workers by “living as I preach” and don’t require someone to live up to standards I cannot myself work after. There is a difference between being a leader and a “formal boss” and I try to be the good leader and respect my fellow companions, whether they belong to my team or to another team, may it be industry, academia or society. I try to always listen to opinions and respect the person behind the opinion no matter my own opinion. “Proof” of setting up a good and motivating working climate would be that other universities and companies constantly recruit the staff we deliver in PhD programmes.

I *like* to work in development oriented, competitive, mode where change is a key issue. I quickly loose interest in “steady-state” operations and move on to more challenging matters.

My *strength* as a leader is that I’ve experienced a lot of different styles of leadership, through sports and through professional career and this have given me good insight on good and bad skills. I’ve taken leadership development programmes both in sports and in academia, that have strengthened my skills and helped me understand my weaknesses. Together with the fact that I, early on, was required to run my own projects I’ve developed a good ability to initiate and lead research projects. This together with early responsibility for PhD students have led to that I claim to have a very well trained “people skills” side of my leadership.

My *weakness* as a leader is that I might be too informal with fellow workers and as an effect have trouble on setting clear boundaries on when responsibilities are misused and projects need to be reorganised. Being an engineer I also lack some skills regarding business development that I aim to work on in order to further develop my leadership over a research organisation.

## Awards

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- 2013 – Reviewers favourite, top 10%. ICED'13 conference.
- 2011 – Best paper award at the International Conference on Research into Design - ICoRD'11, with the paper "Towards open innovation practices in aerospace industry: challenges and opportunities"
- 2008 – Ranked top 4 in "Future Technology Star" review in Metro magazine.
- 2001 – CONEX award of SEK 50.000 for research efforts within "Modelling and Simulation in Product Development".
- 2001 – Best presentation at ASME Design Engineering Technical Conferences 2001, CIE track, Pittsburgh, USA.
- 2001 – Global top ten on the "The 10 Best Intranet Designs of 2001" by NNGroup and Useit.com for the development of the LTU intranet.
- 2001 - The Swedish Engineering Design Research and Education Agenda (ENDREA) stipendiate of 2001 and receiver of SEK 25.000 in travel funds, used for visiting researcher work at University of Michigan (Ann Arbor) and Ford Motors, Advanced Engineering (Detroit).

## Boards

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- BTH Board: 2013-2014.
- SIG-PM: Swedish Interest Group for Product Modelling, Member of the board since 2006 and since 2007 also Chairman.
- ProViking graduate school: Board member 2003-2005.

## Memberships

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- ASME
- Design Society
- SMR: Svenska Mekanisters Riksförening
- SIG-PM

## Military service

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- 1990-1991 on sports platoon at KA2 Karlskrona.

## Sports

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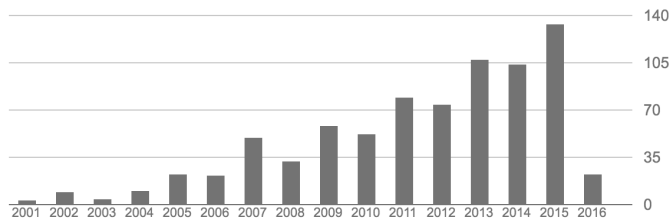
- Karlskrona HK: 2013- (Chairman of the board 2014-)
- SHL: Swedish Hockey League: Board member since 2015
- Chairman of the Board; Antnäs BK, 2007-2009.
- Been playing ice hockey on senior level in elite segment (Former Div 1, now Allsvenskan) for 10 years. Retired 2011, then active in Div II.
- Been team captain for several years and has taken leadership training, and coach training courses. License to coach on senior level.
- Completed Marathon, Vasaloppet and Lidingöloppet and aquathlons/triathlons.

## PUBLICATIONS

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Below are some 100+ publications:

Citation indices	All	Since 2011
Citations	794	521
h-index	14	10
i10-index	21	10



Below are the publications (pending publishing date in *italics*):

- Bertoni A., Bertoni M., Panarotto A., Johansson C., Larsson T. (2016) Value-driven product service systems development: methods and industrial application. Submitted to Special Issue on Design of sustainable Product Service Systems and their Value Creation Chains of the CIRP Journal of Manufacturing Science and Technology.
- Bertoni M., Panarotto, M., Larsson T. (2016) Challenges in considering servitization objectives during the design of Product Service Systems. Submitted to CIRP IPS2 conference 2016, Bergamo, June 20-21.
- Johansson, C. & Larsson, T. (2016) Product Service Systems for Functional Offering of Automotive Fixtures Enablers and Future Outlook. Submitted to CIRP IPS2 conference 2016, Bergamo, June 20-21.
- Kianian, B., S. Tavassoli, T.C. Larsson and O. Diegel. The Adoption of Additive Manufacturing Technology in Sweden. 13th CIRP Global Conference on Sustainable Manufacturing-Decoupling Growth from Resource Use, September 16th-18th, 2015, Ho Chi Minh City & Binh Duong, Vietnam.
- Benaim, A., Elfsberg, J., Larsson, T.C., Larsson, A., (2015). Implementing Innovation Metrics: A case study. Proceedings of the 20th International Conference on Engineering Design (ICED 15), July 27-30, 2015, Milan, Italy.
- Kianian Babak, Tavassoli Sam, Larsson Tobias C., and Diegel Olaf (2015). The Adoption of Additive Manufacturing Technology in Sweden. 3D Printing and Additive Manufacturing. December 2015, 2(4): 152-158. doi:10.1089/3dp.2015.0013.
- Kianian, B., T.C. Larsson (2015). Additive Manufacturing Technology Potential: A Cleaner Manufacturing Alternative. 20th Design for Manufacturing and the Life Cycle Conference (DFMLC). Proceedings of the ASME 2015 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference (IDETC/CIE 2015), August 2nd-5th, 2015, Boston, Massachusetts, USA.
- Tavassoli, S., B. Kianian, T.C. Larsson (2015). Manufacturing Renaissance: Return of manufacturing to western countries. In C. Karlsson, B. Johansson, & R. Stough, Innovation and Entrepreneurship in the Global Economy: Knowledge, Technology and Internationalization", Edward Elgar Publishing.
- Eivazzadeh, S., P. Anderberg, J. Berglund, T. Larsson (2015). Designing with Priorities and Thresholds for Health Care Heterogeneity : The Approach of Constructing Parametric Ontology. ICED 2015, Design for Life, Milan, Italy, 27-30 July, 2015.
- Bertoni, A., M. Bertoni, M. Panarotto, C. Johansson, T. Larsson (2015). Expanding Value Driven Design to Meet Lean Product Service Development. 7th Industrial Product-Service Systems Conference PSS, industry transformation for sustainability and business, May 21-22, 2015, Saint-Étienne, France. doi:10.1016/j.procir.2015.02.153
- B. Kianian, S. Tavassoli, T.C. Larsson (2015). The Role of Additive Manufacturing Technology in job creation: an exploratory case study of suppliers of Additive Manufacturing in Sweden. 12th CIRP Global Conference on Sustainable Manufacturing - Emerging Potentials, September 22nd-24th, 2014, Johor Bahru, Malaysia. doi:10.1016/j.procir.2014.07.109
- Benaim, A., A. Larsson, T.C. Larsson, J. Elfsberg (2014). Becoming an innovative company: Assessing an organization's innovation capability from the perspective of a team. CINet 2014.
- Benaim, A., T.C. Larsson, A. Larsson, J. Elfsberg (2014). Building a pathway for innovation -Lessons Learned from developing an online platform. NordDesign2014.

- Broman G., Robèrt K-H., Basile G., Larsson T., Baumgartner R., Collins T. and Huisingh D., (2013). Systematic leadership towards sustainability, Journal of Cleaner Production, 2013.
- Panarotto, M., T. Larsson, A. Larsson. (2013). Enhancing supply chain collaboration in automotive industry by value driven simulation. 19th International Conference on Engineering Design (ICED13), 19-22 August, 2013, Seoul, Korea.
- Hallstedt, S., T. Thompson, H. Ny, O. Isaksson, T. Larsson. (2013). A Decision Support Approach for Modeling Sustainability Consequences in an Aerospace Value Chain. IDETC/CIE 2013, August 5-9, Portland, US.
- Kianian, B., T.C. Larsson, S. Tavassoli (2013). Manufacturing Renaissance: Return of manufacturing to western countries. International Conference on Sustainable Intelligent Manufacturing (SIM2013) at Lisbon, Portugal, from June 26 to June 29, 2013.
- Bertoni, A., M. Bertoni, M. Panarotto, T. Larsson. (2013). Methods and Technologies to enable Systems Engineering. CIRP Design Conference 2013, March 11-13, Bochum, Germany.
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