Curriculum Vitae

Erik Gustav Sundin, Born April, 18th 1974

Professor in Sustainable Manufacturing

Contact information

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Exams and employments

M.Sc. in Applied physics and Electrical Engineering, Linköping University, 1998, Thesis title: *Material and Energy Flow Analysis of Paper Consumption in the United Kingdom, 1987-2010*.

Ph.D. in Assembly Technology, Linköping University, Sweden, 2004, Thesis title: *Product and Process Design for Successful Remanufacturing*.

Year	Position	Employer
1999 - 2004	Ph.D. candidate	Linköping University, Sweden
2004 - 2008	Assistant professor (sv. Forskarassistent)	Linköping University, Sweden
2008 - 2013	Associate professor (sv. Universitetslektor)	Linköping University, Sweden
2013 - 2019	Associate professor (sv. Biträdande professor)	Linköping University, Sweden
2019 -	Full professor	Linköping University, Sweden

Research profile

Erik Sundin conducted his PhD within the area of remanufacturing in year 2004. His PhD has been downloaded more than 24 000 times from the university electronic library which makes it one of the 20 most popular dissertations from Linköping University. Most of Erik's research has been focusing on remanufacturing but recently areas of sustainable manufacturing and product service systems also have been a part of his research. According to publication analyses made by leading researchers within life cycle engineering Erik is a **top researcher** (8th in the World) when it comes to publishing research papers about product service systems[1].

Erik has worked within several national and international research projects. He has been working within **six European Union projects** called **CAN-Reman**, **ERN** (www.remanufacturing.eu), **L4IDS** (www.circulardesigneurope.eu), **CarE-Service** (www.careserviceproject.eu), **CIRC€UIT** (www.itncircuit.eu) and **SCANDERE** (www.scandere.nu) Both **CAN-Reman** and **ERN** were aiming at improving the business and operations of European remanufacturing companies including e.g. the local companies of Toyota Material Handling and Siemens Industrial Turbomachinery. Within **CIRC€UIT** and **L4IDS** train PhD candidates and manufacturers are supported in their development of products and services towards a more circular economy. The **CarE-Service** project dealt with the development of services regarding the reuse, remanufacturing and recycling of electric vehicles.

Scientific production

Journal papers	**40**	**Citations - Google scholar**	**7343**
International conference papers	**117**	**H-index - Google scholar**	**40**
Book chapters	**14**	**Citations - ISI Web of Science**	**1967**
Popular science articles	**6**	**H-index - ISI Web of Science**	**18**

[1]Tukker A. (2015) Product services for a resource-efficient and circular economy – a review, Journal of Cleaner Production, Vol 97, pp 76-91.

Research projects

Besides the five research projects funded by the European Union, Erik has been working within **37 national research projects** and being the project leader for nine of them. These national projects mostly concern either sustainable manufacturing or remanufacturing. The following table shows the research projects that Erik has participated in during the last 25 years.

Project title	Years	Funding body	Funds (MSEK)
Innovating remanufacturing - disassembly and exploration of new practice in test facility environment	2024-2025	VINNOVA	1
CirkuTrä - Strategier för ökad cirkularitet hos träförädlande industri (IVA-100)	2023-2028	Kamprad	16,6
STIGMA - on customers' drivers and barriers for choosing used/remanufactured consumer products	2023-2026	Kamprad	5
UCP - Evaluation of Circular Product Standards	2022-2023	VINNOVA	1
REMARKABLE* - Remanufacturing – key enabler to future business	2022-2025	Energy Agency	5,08
SCANDERE - Scaling up a circular economy business model by new design, leaner remanufacturing, and automated material recycling technologies (IVA-100)	2022-2025	ERA-Min / VINNOVA	13,6
Unity - En cirkulär plasthantering med hjälp av ett fåtal termoplaster med hög prestanda och tydliga specifika egenskaper	2021-2022	Swedish EPA / VINNOVA	2
Sustainability in P2030 - Sustainability analysis in the SIP Produktion2030 program	2019-2020	VINNOVA	0,8
Mistra REES 2 - Resource-Efficient and Effective Solutions based on circular economy thinking	2019-2023	Mistra	42
HPSS - Household appliance PSS for landlords	2019-2022	VINNOVA	5,00
SE:Kond 2 LIFE - eco system for reuse of vehicle components (IVA-100)	2019-2022	VINNOVA	4,58
CarE-Service - Circular Economy Business Models for innovative hybrid and electric mobility through advanced reuse and remanufacturing technologies and services	2018-2022	EU-H2020	62,29
ARR* - Automation in Repair and Remanufacturing (IVA-100)	2018-2021	VINNOVA	4,59
SQID* - Sustainable and Qlean Industry Demonstrator	2016-2019	VINNOVA	4,35
OHA - Organized reuse of Household Appliances	2019	VINNOVA	0,50
HPSS - Household appliance PSS for landlords (IVA-100)	2019	VINNOVA	0,50
ElevatoRE* - Elevate remanufacturing to the EEE manufacturers' strategy towards CE	2018	VINNOVA	0,50
L4IDS - Learning for Innovative Design for Sustainability	2016-2019	EU-H2020	9,34
CIRC€UIT - Circular European Economy Innovative Training Network	2016-2020	EU-H2020	37,85
Mistra REES - Resource-Efficient and Effective Solutions based on circular economy thinking (IVA-100)	2015-2019	Mistra	42
ERN - European Remanufacturing Network	2015-2017	EU-H2020	13,69
RemProLife* - Efficient Remanufacture through Use of Lean principles and Product Life-cycle data	2013-2016	VINNOVA	5,75
KEAP* - Design for Remanufacture through Efficient Use of Product Life-cycle data (Part II)	2013-2016	VINNOVA	4,67
IQ* - Intelligent Qleaning	2012-2016	Mistra	2,95
Pre-VITS - Pre-study - Virtual tools for service, maintenance and	2013-2014	VINNOVA	1,00

product take-back flows			
KEAP* - Design for Remanufacture through Efficient Use of Product Life-cycle data	2012-2013	VINNOVA	0,78
AutoDisa-TV - Automated disassembly of flat panel televisions	2012-2013	ProViking/ SSF	1,45
RPT - Resource Efficient Products and Services through Remanufacturing and Innovative Business Models	2011-2012	VINNOVA	0,75
RemanFran - Remanufacturing and franchising as means to achieve a more sustainable manufacturing strategy	2011-2012	VINNOVA	0,50
Future Sundin - Remanufacturing Research	2009-2014	Linköping University	5,00
CAN-Reman - Testing and Diagnosis Technologies Development for Car Mechatronic and Electronic Remanufacturing	2008-2011	EU/ VINNOVA	1,46
SOFIQ* - Solvent-Free Industrial Qleaning	2008-2010	ProEnviro	3,14
HÅPLA - Sustainable Recycling of Flat Panel Displays	2009-2013	VINNOVA	8,00
AutoDisa - Automated disassembly of flat panel displays	2009-2012	ProViking/ SSF	2,28
KIPTES - Mapping Integrated Product/Service Systems in Sweden	2008-2009	VINNOVA	1,50
IPSO - Integrated Product Service Offerings	2008	Mistra	0,48
IPSE - Integrated Product and Service Engineering	2006-2008	VINNOVA	3,83
REKO - Hållbara system och produkter för återanvändning och rekonditionering	2004-2006	VINNOVA	5,00
ÅVC - Utformning av framtidens Återvinningscentral – en interventionsstudie för hälsa, miljö och produktivitet	2003-2007	VINNOVA	7,50
3F - Teknik-Ekonomi-Design för framgångsrik funktionsförsäljning	2003-2005	VINNOVA	6,40
Total project funding (in MSEK)			**316**

***** projects where Erik Sundin was leading.

PhD candidate supervision

Main supervisor for seven PhD candidates: Johan Vogt Duberg, Kristofer Elo, Louise Lindkvist, Jelena Kurilova-Palisaitiene, Robert Casper, Fredrik Paulson and Beatriz Pozo Arcos. Co-supervisor for five PhD candidates: Brenda Nansubuga, Johan Östlin, Shuoguo Wei, Sara Nilsson and Raphael Wasserbauer.

Scientific collaborations and assignments

Within remanufacturing, companies have been researched in Canada, USA, Japan, Germany and Sweden which so far have resulted in several international collaborations and assignments:

- Guest researcher Post Doc Dr Hui Mien Lee from SIMTech (Singapore) during 2012
- Starting up Journal of Remanufacturing, Springer Verlag (associate editor, editor-in-chief)
- Starting up an international research network called *The International PSS Design Research Community* with researchers from Japan, Germany, Denmark, France and Sweden.
- Organized international conferences in Linköping, Sweden: CIRP IPS^2, 2010 and 2018.
- Organized international conferences in Amsterdam, The Netherlands: ICoR 2015 and 2019.
- Chairman of the International Conference on Remanufacturing in Linköping, Sweden, 2017.
- Project evaluator for the KK-foundation (2016-) and the Swedish Energy Agency (2018-).
- Expert group leader within VINNOVAs Strategic Innovation Program (SIP) called Produktion2030 for the group called “Circular production systems and maintenance” (2015-).
- **Remanufacturing research champion for Europe** appointed from the European Remanufacturing Council (ERC) (2017-2019)
- **Remanufacturer of the Year (RoTY) award** – category: Best Reman Ambassador (2023).

Scientific journals: Erik has been reviewing for **10+ research journals** e.g. Journal of Cleaner Production, Journal of Remanufacturing, Sustainability, Assembly Automation, International Journal of Sustainable Engineering, International Journal of Production Economics, Journal of Manufacturing Technology Management, Journal of Engineering Design, Environmental Informatics and International Journal of Automation Technology.

Scientific conferences: Erik has been participating and reviewing papers for several conferences e.g. CIRP Life Cycle Engineering (LCE), CIRP Industrial Product Service Systems (IPS^2), CIRP Manufacturing Systems (CMS), International Conference on Remanufacturing (ICoR), International Conference on Engineering Design (ICED), Design conference, and Swedish Production Symposium (SPS).

Research evaluations: Erik has been conducted research evaluation for ongoing research at Singapore Institute of Technology. He has and is reviewer of research proposals in the Netherlands, The United Kingdom, and Italy. Erik has also been evaluating people for a position as an Associate professor at Luleå Technological University.

He has also been a member of graduation boards and/opponent for **26 doctoral/licentiate defenses**:

Year	PhD Candidate	University	Degree	Role
2023	Steffen Foldager Jensen	Aalborg University (DEN)	PhD	Grad. board
2023	Viktor Werner	Linköping University	PhD	Grad. board (r)
2023	Carolina Villamil	Blekinge Institute of Technology	PhD	Grad. board
2022	Pavel Romanov	Linköping University	Lic	Examiner
2020	Yohannes Alamarew	University of Grenoble (FRA)	PhD	Grad. board
2019	Ross Harris	University of Strathclyde (UK)	PhD	Ext. examiner
2019	Daria Sas	Luleå University of Technology	PhD	Grad. board
2019	Hugo Guyader	Linköping University	PhD	Grad. board
2018	Tom Bauer	University of Grenoble (FRA)	PhD	Grad. board
2018	Rachael Gould	Blekinge Institute of Technology	PhD	Opponent
2018	Christina Windmark	Lund University	PhD	Grad. board
2017	Fredrik Henriksson	Linköping University	Lic	Examiner
2017	Derek Diener	Chalmers University of Technology	PhD	Grad. board
2017	Asif Farazee	Royal Institute of Technology	PhD	Grad. board
2016	Lisiana Nurhadis	Blekinge Institute of Technology	Lic	Opponent
2016	Ilaria Barletta	Chalmers University of Technology	Lic	Opponent
2015	Johan Holmqvist	Luleå University of Technology	PhD	Grad. board
2014	Daria Sas	Luleå University of Technology	Lic	Opponent
2014	Joris Van Ostayen	University of Leuven (BE)	PhD	Grad. board
2014	Martin Kurdve	Mälardalen University	PhD	Opponent
2013	Sara Ridley	University of Strathclyde (UK)	PhD	Ext. examiner
2012	Carin Rösiö	Mälardalen University	PhD	Opponent
2012	Jorge Amaya	University of Grenoble (FRA)	PhD	Grad. board
2012	Ramesh Subramoniam	Erasmus Univ. of Rotterdam (NL)	PhD	Grad. board
2011	Peter Thor	Luleå University of Technology	Lic	Opponent
2008	Rolf Lundin	Jönköping University	Lic	Opponent

International standardization assignments

International expert for creating the **ISO14006-standard** called "Environmental management systems – Guidelines for incorporating ecodesign" that connects ISO14001 with Ecodesign. This standard was established first in 2011 but also updated in 2020. In parallel to this Erik has been involved in developing the first **ISO/IEC-standard on Ecodesign** called "IEC 62430: 2019 Environmentally conscious design (ECD) - Principles, requirements and guidance". In addition, he also

was a part of the working group that developed a **remanufacturing standard** for CEN/CELENEC called EN 45553 "General method for the assessment of the ability to remanufacture energy-related products" in 2020. Erik has also contributed to the first standard on **Circular Economy** published by British Standards Institute (BSI) and the ISO59004 standard Circular economy — Vocabulary, principles and guidance for implementation. Finally, Erik participated in national meetings at SIS within the mirror committee for the above-mentioned standards.

Scientific awards

- ***Emerald Literati Network 2010 Awards for Excellence*** for the paper *Product design for product/service systems – design experiences from Swedish industry* published in Journal of Manufacturing Technology Management.
- ***Four "best-paper-awards"*** for the papers a) *Key success factors for implementing Upgrading Remanufacturing* presented at ICoR-17, Linköping, Sweden, b) *Exploring the Use of Product Life-Cycle Information in Two Value Chains Including Remanufacturing* at EcoDesign-13, Jeju, South Korea, c) *Reverse logistic challenges within the remanufacturing of automotive components* at ICoR-2011, Glasgow, Scotland, and d) *Consumer purchase intention of remanufactured EEE products – A study on robotic lawn mowers in Sweden* at LCE-2020, Grenoble, France.
- ***Scientific leader of the future*** at Linköping Institute of Technology, Linköping University, 2009.

Teaching profile

Erik has taught subjects e.g. circular economy, sustainable manufacturing, remanufacturing, product-service systems, product development, design for environment / assembly / manufacturing / disassembly / remanufacturing / recycling. His teaching has been performed has been performed at Linköping University mainly at the MSc programmes Mechanical Engineering (M), Industrial Engineering and Management (I), Design and Product Development (DPU), Applied Physics and Electrical Engineering (Y) and Technical Biology (TBI). In addition, teaching has been conducted for Mechanical Engineering bachelors (Mi), International master programmes Manufacturing Management (MM), Innovation and Product Development (IND), Mechanical Engineering (MEC) and Environmental Technology (ENV) as well as for PhD students. From year 2000 until now Erik has been teaching more than 10 000 hours in 43 courses.

Course development and evaluations

Erik has developed and examined ten courses:

Course (teaching program)	Level	Points	Years(s)
TMKT68/82 Integrerad produktutveckling – projektkurs (DPU)	G2	16 hp	2009-
TMPS23 Konstruktionsprojekt (I)	A	6 hp	2008-2011
TMPS29 Produktionssystem projektkurs (M, I)	A	10 p	2007-2010
TKMM10/TKMM14 Product Development (MM, INN)	A	6 hp	2007-2011
TMPS31 Sustainable Manufacturing (DPU, M, I, Mi, MEC)	A	6 hp	2010-
TMPP01 Projektkurs – design och produktutveckling (DPU)	A	12 hp	2011-
TXPR10 Product Development (MBA)	A	6 hp	2009
Product Development (PhD students)	PhD	6 hp	2005
CIRCUIT Spring School (PhD students)	PhD	2 hp	2018
P10 Sustainable Development (PhD students)	PhD	4 hp	2014-

At Linköping University, we are using a central evaluation questionnaire program where the students get to grade the courses from a scale from 1 to 5 where 5 is the highest score. The table below shows the average scores for the courses Erik has been involved in ("*" means that he was the examiner).

Course	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
TKMM14*	3,62	4,12	-	-	-	-	-	-	-	-	-	-	-
TMPS23*	2,33	3,80	3,00	4,40	-	-	-	-	-	-	-	-	-
TMPS22	4,20	4,00	3,90	3,54	4,00	4,17	3,50	2,80	3,25	2,67	3,33	3,71	-
TMPM01	3,86	3,79	3,72	3,57	3,80	3,79	3,95	-	-	3,95	-	-	
TMKT68/82	3,48	4,58	4,04	3,96	3,63	4,07	3,90	3,70	4,20	3,36	3,86	4,20	
TMPS31*	4,20	3,40	4,00	3,20	3,56	3,38	4,00	3,43	4,27	3,42	3,71	3,29	4,18

Educational boards

- Member of the **program board** of the MSc programme called Industrial Engineering and Management (I) with responsibility for the Mechanical Engineering profile since 2008.
- Member of **PPG-I** for the MSc program Industrial Engineering and Management since 2008.
- Member of **PPG-Delta** for the MSc program Product Design and Development since 2016.

Evaluation of education programs

In year 2012 Erik participated in the writing of the self-evaluation submitted to the Swedish Higher Education Authority (UKÄ) evaluation of the MSc educational programmes of Industrial engineering and management (I), Mechanical engineering (M) and Design and Product development (DPU).

Pedagogical courses

- University Pedagogics, Step 1: Learning, teaching and knowledge
- University Pedagogics, Step 2: Design, evaluate and organization for learning
- University Pedagogics, Step 3: Research supervision

Books (co-authored)

- *Sustainable Manufacturing – Why and how to improve environmental performance* (2019), ISBN 978-91-44-12054-6, Studentlitteratur AB, Lund, Sweden.
- *Återvinningscentralen - Sorteringsplats-Arbetsplats-Mötesplats* (2008) ISBN: 978-91-7393-974-4.
- *Planera, utforma och driva en ÅTERVINNINGSCENTRAL* (2008) ISBN 978-91-7393-595-1.

Popular science and newspaper articles (examples)

- *Hur skapa mervärde med integrerade produkt- och tjänsteerbjudanden*. Uppfinnaren & Konstruktören. nr 5, s. 38-44.
- *Integrerade produkt- och tjänsteerbjudande ur ett konstruktionsperspektiv*. Uppfinnaren & Konstruktören. nr 6, s. 28-32.
- *Hur företag bör arbeta i framtagandet av integrerade produkt- och tjänsteerbjudanden*. Uppfinnaren & Konstruktören. nr 1, s. 28-33.
- *Television interview* with TV4, 2004
- *Radio interview* with science radio (Swedish: Vetenskapsradion), 2004
- *IVA-Aktuellt,* 2005
- *Östgöta Correspondenten*, 2007-12-22
- *Företagarna*, 2008 issue No. 2
- *Verkstäderna*, 2008 issue No. 5
- *NyTeknik*, 2008-09-10, 2010-12-08 and 2019-02-14

- *Dagens Industri*, 2009-01-13
- *Learning a hundred 9-year-old-kids about industrial robots, 2018-11-09:*

M.Sc. student Robert Westerdahl demonstrate how industrial robots are used for school kids.
Bild: Teiksma Buseva.