Academic position

I am employed as a professor within Production Engineering at the University of Skövde. I got my PhD from De Montfort University, UK, in 2009 and my docent appointment in 2014. Since 2016 I am the leader of the research group “Production and Automation Engineering” at the University of Skövde, which consists of approximately 40 researchers working within the area of virtual engineering. The group’s research is to a large extent applied and carried out in close cooperation with industrial partners, mainly within the manufacturing industry but also with partners found in the public sector. As the research leader, I have the overall responsibility for the scientific quality and scientific development of the group, including, amongst others, to set a research strategy, ensure academic excellence, secure relevant recruitments, plan publications, applying for external funding, and many other things.

Scientific publications

Journal Publications


Submitted Journal Publications


Book Chapters


Note that I changed my last name from Persson to Syberfeldt in 2008.


Conference Publications (peer-reviewed full papers)


### Research projects

To date I have had a leading role in 23 research projects with a total budget responsibility of over 186 million SEK. All the research projects in which I have been involved have been undertaken in collaboration with external partners, from both the private and public sector as well as from other academic institutions, nationally and internationally. The table below outline the projects in which I have had a leading role.

<table>
<thead>
<tr>
<th>Name of project</th>
<th>Period</th>
<th>Budget and financier</th>
<th>Description</th>
<th>External partner(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtual Factories with Knowledge-Driven Optimization (co-project leadership with prof. Amos Ng)</td>
<td>2018-2026</td>
<td>100,000,000 SEK Knowledge Foundation</td>
<td>Research profile within virtual engineering.</td>
<td>AB Volvo, Volvo Cars, Scania, ABB, IKEA Industry, Flexlink, Arla</td>
</tr>
<tr>
<td>MOSIM</td>
<td>2018-2021</td>
<td>2,800,000 SEK Vinnova</td>
<td>Optimization of human-robot collaboration</td>
<td>AB Volvo (project coordinator), Scania, FCC, IPS, Virtual Manufacturing</td>
</tr>
<tr>
<td>The Virtual Factory</td>
<td>2018-2020</td>
<td>4,000,000 SEK Knowledge Foundation</td>
<td>Industrial education within virtual engineering.</td>
<td>AB Volvo, Volvo Cars, IDC West Sweden</td>
</tr>
<tr>
<td>VISION</td>
<td>2018-2020</td>
<td>5,000,000 SEK Vinnova</td>
<td>Automated production quality inspections using machine learning.</td>
<td>AB Volvo, Volvo Cars, IDC West Sweden, Jonsac AB, Jönköping University, Swerea IVF.</td>
</tr>
<tr>
<td>OMAR</td>
<td>2018-2020</td>
<td>8,000,000 SEK Vinnova</td>
<td>Research collaboration and arena for production engineering development.</td>
<td>Lund University, Jönköping University, Borås University, Halmstad University, University West, SLU, Kristianstad University</td>
</tr>
</tbody>
</table>

2 The amount of money specifies my budget responsibility.
<table>
<thead>
<tr>
<th>Project Description</th>
<th>Year</th>
<th>Funding (SEK)</th>
<th>Industry Focus</th>
<th>Project Lead(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Bed For Digital Waste Collection</td>
<td>2018-2019</td>
<td>1,000,000 Vinnova</td>
<td>Test bed development.</td>
<td>AÖS</td>
</tr>
<tr>
<td>Virtual Factory</td>
<td>2018-2019</td>
<td>1,000,000 Vinnova</td>
<td>Industrial education within virtual engineering.</td>
<td>IDC West Sweden</td>
</tr>
<tr>
<td>TWIN</td>
<td>2017-2019</td>
<td>8,000,000 Vinnova</td>
<td>Production optimization based on digital twins.</td>
<td>Leax AB, Goodtech Solutions AB, Projektengagemang AB</td>
</tr>
<tr>
<td>Virtual water &amp; waste competence II</td>
<td>2017-2019</td>
<td>657,000 Vinnova</td>
<td>Decision-support systems for maintenance of water pumps and water pipes.</td>
<td>Vakin AB (project coordinator), Adopticum</td>
</tr>
<tr>
<td>Mini-ÅVC</td>
<td>2017-2018</td>
<td>680,000 Vinnova</td>
<td>Optimized solutions for collection of waste.</td>
<td>AÖS</td>
</tr>
<tr>
<td>SIM2020 AK3</td>
<td>2016-2018</td>
<td>11,300,000 Tillväxtverket</td>
<td>Industrial decision support based on simulation and optimization.</td>
<td>Volvo Cars, Volvo GTO, AÖS</td>
</tr>
<tr>
<td>Autonomous Refuse Trucks</td>
<td>2016-2017</td>
<td>874,000 Vinnova</td>
<td>Future truck concepts with integrated optimization systems.</td>
<td>AB Volvo, Norba Gesink, AÖS</td>
</tr>
<tr>
<td>Virtual water &amp; waste competence</td>
<td>2016-2017</td>
<td>380,000 Vinnova</td>
<td>Optimization of maintenance of water pumps and water pipes.</td>
<td>Vakin AB (project coordinator), Glesbygdsmedicinskt centrum</td>
</tr>
<tr>
<td>DYNAMITE</td>
<td>2015-2016</td>
<td>1,600,000 Vinnova</td>
<td>Decision-support systems for operator support.</td>
<td>Chalmers (project coordinator), Scania CV, CEJN AB, Penny AB, KTH</td>
</tr>
<tr>
<td>Uppdragsforskning</td>
<td>2015</td>
<td>100,000 AÖS</td>
<td>Optimization of vehicle fleets.</td>
<td>AÖS</td>
</tr>
<tr>
<td>Young Operator 2020</td>
<td>2014-2017</td>
<td>17,000,000 Vinnova</td>
<td>Operator support systems using real-time optimizations.</td>
<td>Volvo Cars AB, VGTO AB, Daloc AB, Swegon AB, Vici Industrier AB.</td>
</tr>
<tr>
<td>ICECAP</td>
<td>2014-2016</td>
<td>1,700,000 Vinnova</td>
<td>Industrial collaboration platform.</td>
<td>University of Jönköping (project coordinator),</td>
</tr>
</tbody>
</table>
University of Malmö, University West, University of Borås, University of Halmstad, SLU

CARENA 2013 - 2015
1,700,000 SEK
Vinnova
Research collaboration and improved effects of research results.
University of Jönköping (project coordinator), University of Lund, University West, University of Borås, University of Halmstad, SLU

Uppdragsforskning Noticia 2012
100,000 SEK
Noticia
Sensor-based optimization of garbage containers.
Noticia AB

Smart Optimization of Logistics 2011 – 2014
7,700,000 SEK
Knowledge Foundation
Optimization algorithms for complex logistics problems.
Volvo Technology AB, GKN Aerospace, ONCOlog AB

WeShare2012 2010 – 2013
9,300,000 SEK
Tillväxtverket
Simulation and optimization of production and logistics.
Avfallshantering Östra Skaraborg, Mimer AB

Engineering for youth 2009 – 2010
350,000 SEK
Alfastiftelsen
Technical experiments that create an interest for technology.
Local elementary schools

Supervision of PhD Students

To date I have supervised 14 PhD students, of which eight as main supervisor (huvudhandledare), according to the table below.

<table>
<thead>
<tr>
<th>Name of student</th>
<th>Supervisor position</th>
<th>Graduation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aitor Iriondo Pascual</td>
<td>Main supervisor</td>
<td>PhD expected 2023</td>
</tr>
<tr>
<td>Niklas Land</td>
<td>Main supervisor</td>
<td>PhD expected 2023</td>
</tr>
<tr>
<td>Henrik Smedberg</td>
<td>Assistant supervisor</td>
<td>PhD expected 2023</td>
</tr>
<tr>
<td>Yu Liu</td>
<td>Main supervisor</td>
<td>PhD expected 2021</td>
</tr>
<tr>
<td>Enrique Ruiz</td>
<td>Main supervisor</td>
<td>PhD expected 2020</td>
</tr>
<tr>
<td>Patrik Gustavsson</td>
<td>Main supervisor</td>
<td>PhD expected 2020</td>
</tr>
</tbody>
</table>
Oscar Danielsson | Main supervisor | PhD expected 2020
---|---|---
Ingemar Karlsson | Primary supervisor | PhD, 2018
Jacob Bernedixen | Primary supervisor | PhD, 2018
Carina Larsson | Assistant supervisor | Licentiate, 2017
Stefan Ericson | Main supervisor | PhD, 2017
Veronica Fornlöf | Main supervisor | Licentiate, 2016
Florian Siegmund | Assistant supervisor | PhD, 2016
Tehseen Aslam | Primary supervisor | PhD, 2013

**Additional scientific assignments and qualifications**

- Expert leader on virtual production development in the national strategic innovation program Produktion2030 (since 2015)
- Member of the Research and Innovation Council of Produktion2030 (since 2018)
- Head of Research for the industrial Innovation Arena ASSAR (since 2015)
- Pedagogical qualification: Accomplished Teaching Lecturer (9% of the university staff has reached this qualification level).
- Member of Steering Committee for the Research Environment INFINIT at the University of Skövde
- Member of the Steering Committee for AB Volvo’s Preferred Academic Partner Program at the University of Skövde
- Member of the Steering Committee for PhD Program in Informatics at the University of Skövde (since 2015)
- Member of the Management Committee for Industrial Research School at the University of Skövde (since 2015)
- Member of the board of the University of Skövde
- Editorial Board member: of The European Multidisciplinary Society for Modelling and Simulation (since 2013)
- Associate Editor of Journal of Manufacturing Systems (since 2014)
- Program committee member of Winter Simulation Conference, logistics track (since 2016)
- Six Sigma Black belt certification