



## ASTRID LINDER

Professor, PhD, MSc

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## EMPLOYMENT

- 2021 – Present Swedish National Road and Transport Research Institute (VTI)  
**Professor of Road Safety**
- 2005 – Present Swedish National Road and Transport Research Institute (VTI), Sweden  
**Research Director and Head of the Traffic Safety Division**
- 2003 – 2005 Monash University Accident Research Centre (MUARC), Australia  
**Senior Research Fellow**, appointed Holden Postdoctoral Fellow
- 2002 – 2003 Thatcham Research, The Motor Insurers' Repair and Research Centre, United Kingdom. **Senior Research Engineer**
- 2002 Swedish National Road Administration, Sweden. **Researcher**
- 1996 – 2002 Chalmers University of Technology, Sweden.  
**PhD Student** in the Crash Safety Group
- 1978 – 1987 Océ Svenska AB, Sweden. **Technician**

## EDUCATION

- 2014 **Associate Professor (Docent)**, Injury Prevention, Chalmers University of Technology, Gothenburg, Sweden
- 2002 Degree of **Doctor of Philosophy**, Chalmers University of Technology, Crash Safety Group, Department of Mechanical Engineering, Gothenburg, Sweden
- 1999 Degree of **Licentiate of Engineering**, Chalmers University of Technology, Crash Safety Group, Department of Mechanical Engineering, Gothenburg, Sweden
- 1995 Degree of **Master of Science in Engineering Physics**, Chalmers University of Technology, Department of Physics, Gothenburg, Sweden

## ACCADEMIC POSITIONS AND FELLOWSHIPS

- 2016 – Present **Adjunct Professor**, Injury Prevention, Chalmers University of Technology, Crash Safety Group, Gothenburg, Sweden
- 2014 - 2017 **Adjunct Associate Professor**, Monash University Accident Research Centre, Melbourne, Australia
- 2014 - 2017 **Global Marie Skłodowska Curie Fellow/VINNMER Fellow**, European Union/Vinnova, Stockholm, Sweden
- 2003 - 2005 **Postdoctoral Fellow**, Monash University Accident Research Centre, Melbourne, Australia

**EXPERT ASSIGNMENTS**

- 2013 - 2017 Appointed expert for the **Transport Advisory Group (TAG)** for the Research Programme Horizon 2020 initiated by the European Commission.
- 2013 - 2017 Appointed expert for the **Advisory Group on Gender** for the research programme Horizon 2020 initiated by the European Commission.
- 2014 Appointed expert for the **collaboration between the Transport Research Board (TRB) of the National Academies and the European Commission**: On the topic of implementation of research findings, resulting in a joint symposium in 2014.
- 2013 - 2019 Member of the **Swedish Technical Platform Group (Svenska Teknikplattformgruppen)** at the Swedish Governmental Agency for Innovation Systems (VINNOVA).
- 2019 - Present Member of the board of **Forum of European Road Safety Research Institutes (FERSI)**.
- 2012 – Present Steering committee member of the PIN panel of the **European Transport Research Council (ETSC)**.
- 2019 - Present Member of the **International Scientific Advisory Council (ISAC)** of Virtual Vehicle Research GmbH.
- 2002 - 2003 Expert advisor for the ad-hoc **Euro NCAP** group formed to establish test methods for evaluating the performance of vehicle seats in rear impact.

**SELECTED SECURED FUNDING FROM THE EU AND THE NATIONAL SWEDISH RESEARCH FUNDING AGENCY** (Coordinator (main project leader) and applicant of the projects)

- 2018- 2022 Project title: **VIRTUAL- Open Access Virtual Testing Protocols for Enhanced Road User Safety**, [www.projectvirtual.eu](http://www.projectvirtual.eu).  
Total project budget: **€ 6.99 Million**.  
Funding: European Commission within the Horizon 2020 Programme.
- 2009-2013 Project title: **ADSEAT - Adaptive seat to reduce neck injuries for female and male occupants**, [www.adseat.eu](http://www.adseat.eu).  
Total project budget: **€ 3.45 Million**.  
Funding: European Commission within the 7<sup>th</sup> Framework Programme.
- 2016 – 2018 Project title: **ViVA II - Virtual Vehicle Safety Assessment Step 2: Open Source Human Body Models and Crash Testing**, results found at <https://www.chalmers.se/en/projects/pages/openhbm.aspx>.  
Total project budget: **SEK 3.1 Million**.  
Funding: VINNOVA.
- 2013 – 2016 Project title: **ViVA - Virtual Vehicle Safety Assessment: Open Source Digital Human Body Models and Crash Testing**, results found at <https://www.chalmers.se/en/projects/pages/openhbm.aspx>.  
Total project budget: **SEK 4.995 Million**.  
Funding: VINNOVA.
- 2014 – 2017 Project title: **Traffic Safety for Him and Her: Enhanced injury protection for vulnerable road users** ->VINNMER, Global Marie Skłodowska Curie Fellowship.  
Total project budget: **SEK 3.08 Million**.  
Funding: VINNOVA through the European Commission.
- 2005 - 2007 Project title: **Varför bara han? – En krockdocka av en genomsnittlig kvinna** (Why only him? – A crash test dummy of an average female).  
Total project budget: **SEK 2 Million**  
Funding: VINNOVA.

**NATIONAL AND INTERNATIONAL AWARDS**

- 2015 **Volvo Research and Education Foundation** Håkan Frisinger.
- 2015 **US Government for Safety Engineering Excellence**, sponsored by the National Highway Traffic Safety Administration (NHTSA).
- 2014 **EU Champions of Transport Research** Overall Winner and EU Champions of Transport Research, TRA VISIONS.
- 1999 **Best student paper** at the Traffic Safety and Auto Engineering Stream at the World Congress on Whiplash-Associated Disorders, Vancouver, Canada.

**TOP 10 SCIENTIFIC PUBLICATIONS OUT OF 50+**

1. Linder, A., and Svedberg, W. (2019) Review of average sized male and female occupant models in European regulatory safety assessment tests and European laws: Gaps and bridging suggestions, *Accident Analysis & Prevention*, 127, 156-162, <https://doi.org/10.1016/j.aap.2019.02.030>
2. Linder, A., Holmqvist, K., and Svensson, M. (2018). Average male and female virtual dummy model (BioRID and EvaRID) simulations with two seat concepts in the Euro NCAP low severity rear impact test configuration. *Accident Analysis & Prevention*, 114, 62-70, <https://doi.org/10.1016/j.aap.2017.05.029>
3. Östh, J., Medoza-Vazquez, M., Sato, F., Svensson, M.Y., Linder, A., and Brodin, K. (2016). A female head-neck model for rear impact simulations. *Journal of Biomechanics*, 51, 49-56. <http://dx.doi.org/10.1016/j.jbiomech.2016.11.066>
4. Carlsson, A., Chang, F., Lemmen, P., Kullgren, A., Schmitt, K-U., Linder, A., and Svensson, M. (2014). Anthropometric specifications, development, and evaluation of EvaRID—A 50<sup>th</sup> percentile female rear impact finite element dummy model, *Traffic Injury Prevention*, 15(8), 855 – 865, <https://doi.org/10.1080/15389588.2014.885647>
5. Linder, A., Schick, S., Hell, W., Svensson, M., Carlsson, A., Lemmen, P., Schmitt, K-U., Gutsche, A., and Tomasch, E. (2013). ADSEAT – Adaptive seat to reduce neck injuries for female and male occupants. *Accident Analysis & Prevention*, 60, 334-343. <https://doi.org/10.1016/j.aap.2013.02.043>
6. Linder, A., Olsén, S., Eriksson, J., Carlsson, A., and Svensson, M. (2012). Influence of gender, height, weight, age, seated position and collision site related to neck pain symptoms in rear end impacts. *Proceedings of the International Research Council on Biomechanics of Injury (IRCOBI) Conference*, Dublin, Ireland, Paper Nr. IRC-12-31, 235-248.
7. Linder, A., Carlsson, A., Svensson, M. Y., and Siegmund, G. (2008). Dynamic responses of female and male volunteers in rear impacts. *Traffic Injury Prevention*, 9(6), 592-599.
8. Linder, A., Svensson, M.Y., and Viano, D. (2002). Evaluation of the BioRID P3 and the Hybrid III in pendulum impacts to the back: A comparison to human subject test data. *Traffic Injury Prevention*, 3(2), 159-166. <https://doi.org/10.1080/153895802384669>
9. Linder, A., Svensson, M.Y., Davidsson, J., Flogård, A., Håland, Y., Jakobsson, L., Lövsund, P., and Wiklund, K. (2002). Design and validation of the neck for a rear impact dummy (BioRID I). *Journal of Crash Prevention and Injury Control*, 3(2), 167-174. <https://doi.org/10.1080/15389580211995>
10. Linder, A. (2000). A new mathematical neck model for a low-velocity rear-end impact dummy: Evaluation of components influencing head kinematics, *Accident Analysis & Prevention*, 32(2), 261-269. [https://doi.org/10.1016/S0001-4575\(99\)00085-8](https://doi.org/10.1016/S0001-4575(99)00085-8)

**SELECTED REVIEW / REFEREE ASSIGNMENTS**

Accident Analysis & Prevention  
Journal of Crashworthiness  
Journal of Crash Prevention and Injury Control  
Society of Automotive Engineers)  
ASME Journal of Biomechanical Engineering  
Medical Journal of Australia  
Traffic Injury Prevention  
Transport Research Arena

**EXAMPLES OF NATIONAL AND INTERNATIONAL PRESENTATIONS DURING 2015-2020**

1. Chair at the annual Swedish conference **Transportforum 2020**. Session: Nollvisionen och andra hållbarhetsmål - lösningskonflikt och möjligheter, 8 Jan. 2020, **Linköping, Sweden**.
2. Invited speaker to the **World Science Forum**, Budapest. Title: Sex and gender bias in the assessment of vehicle safety: From biology to occupant models, 21 Nov. 2019, **Budapest, Hungary**.
3. Presentation at 2018 **JSAE Annual Congress** (Spring). Title: Open source human body models and virtual testing of low severity vehicle safety: The VIVA model and the VIRTUAL project, 23-25 May 2018, **Yokohama, Japan**.
4. Chair at the annual Swedish conference **Transportforum 2019**. Session: Trafiksäkerhetsanalys, 9 Jan. 2019, **Linköping, Sweden**.
5. Keynote speaker, **SIMBIO-M Conference**. Title: The development of an open source human body model of an average female, ViVA, for low severity vehicle safety assessment, 18-19 June 2018, **Stratford-Upon-Avon, UK**.
6. Presentation given at the conference **International Research Council on the Biomechanics of Injury (IRCOBI)**. Title: Anti-lock braking system on bicycles: A pilot study on influence on stability, 26 April 2018, **Lonavala, India**.
7. Presentation given at the 18<sup>th</sup> International Conference **Road Safety on Five Continents (RS5C 2018)**. Title: Occupant safety assessment in European regulatory tests: Review of occupant models, gaps and suggestion for bridging any gaps, 16 April 2018, Jeju Island, **South Korea**.
8. Keynote plenary speaker at 18<sup>th</sup> International Conference **Road Safety on Five Continents (RS5C 2018)**. Title: Vehicle occupant and road user safety evaluation – past, present and future, 17 April 2018, Jeju Island, **South Korea**.
9. Presentation at the 17<sup>th</sup> International Conference **Road Safety on Five Continents (RS5C 2016)**. Title: Simulations with average male and female dummy models with two seat concepts in the Euro NCAP low severity rear impact test configuration, 17 May 2016, **Rio de Janeiro, Brazil**.
10. Keynote speaker at the **FESTA Gender in Research Grant Conference**. Title: Horizon 2020 Advisory Group on Gender, 8 June 2016, **Uppsala, Sweden**.
11. Invited speaker at the **ESOF Satellite Marie Skłodowska-Curie Actions Conference**. Title: Male and female occupant models in the vehicle safety assessment, 29 July 2016, **Manchester, UK**.
12. Invited speaker at the **SAE-Brazil Congress** to the Vehicle Safety Technical panel. Title: Traffic Safety and Injury Prevention, 22 Sep. 2015, **São Paulo, Brazil**.
13. Invited speaker at the **Gender Summit** to the plenary panel. Title: Occupant Norm in Vehicle Safety, 27 Aug 2015, **Seoul, Korea**.

**ASSIGNMENTS AS MEMBER OF PHD GRADING COMMITTEES**

- Sanders, U. (2018). Predicting safety benefits of automated emergency braking at intersections: Virtual simulations based on real-world accident data *Department of Mechanics and Maritime Science, Chalmers University of Technology, SE-412 96 Gothenburg, Sweden*, ISBN 978-91-7597-780-5.
- Rizzi, M. (2016). Towards a safe system approach to prevent health loss among motorcyclists: The importance of motorcycle stability as a condition for integrated safety, *Department of Applied Mechanics, Chalmers University of Technology, SE-412 96 Gothenburg, Sweden*. New Serie Nr 4057, ISSN: 0346-718X ISBN 978-91-7597-376-0.
- Markkula, G. (2015) Driver behavior models for evaluating automotive active safety. *Department of Applied Mechanics, Chalmers University of Technology, SE-412 96 Gothenburg, Sweden*. New Serie Nr. 3834, ISSN 0346-718X.
- Iraeus, J. (2015). Stochastic finite element simulations of real life frontal crashes. *Umeå University, Medical Faculty, SE-901 87 Sweden*. ISBN: 978-91-7601-293-2, ISSN: 0346-6612, E-version available at: <http://umu.diva-portal.org/>.
- Gravelin, A. (2008). Studies on structural and biomechanical responses in seat integrated safety belt configuration. *Department of Applied Physics and Mechanical Engineering, Division of Solid Mechanics, Luleå University of Technology, SE-971 87 Luleå, Sweden*. Nr: 2008:12, ISSN 1402-1544, ISRN: LTU-DT--08/12—SE.

**EXAMPLES OF COMMUNICATING RESEARCH RESULTS TO THE COMMUNITY (2018-2020)**

- 2020 **World Trade Organization (WTO)**, presentation at workshop on the role of gender in the development of standards, Switzerland, [https://www.wto.org/english/tratop\\_e/tbt\\_e/wksp\\_tbt\\_81220\\_e.htm](https://www.wto.org/english/tratop_e/tbt_e/wksp_tbt_81220_e.htm)
- 2019 **Consumer Reports (CR)**, US, <https://www.consumerreports.org/car-safety/crash-test-bias-how-male-focused-testing-puts-female-drivers-at-risk/>
- 2019 **National radio**, science programme, **Vetandets Värld**, Sweden, <https://sverigesradio.se/sida/avsnitt/1392601?programid=412>
- 2019 **Higgs, Magazin**, Switzerland, <https://www.higgs.ch/autos-sollen-fuer-frauen-sicherer-werden/25715/>
- 2019 Mentioned in the **book “Invisible women”** by Caroline Criado Perez
- 2019 **The Guardian** article, UK, <https://www.theguardian.com/lifeandstyle/2019/feb/23/truth-world-built-for-men-car-crashes>
- 2018 **TEDX**, <https://www.youtube.com/watch?v=jv06vMYCgYY>