CURRICULUM VITAE **January 28, 2019**

1. Full name, sex, Researcher ID

Hostikka, Simo Antti
Male
Researcher ID: K-8622-2015
ORCHID: http://orcid.org/0000-0002-3581-1677

2. Date and place of birth, nationality, current residence

July, 2, 1971, Vehkalahti, Finland
Finland
Espoo, Finland

3. Education and degrees awarded Degrees

D.Sc. (Tech.)	Helsinki University of Technology (June 10, 2008)
Major:	Theoretical and Applied Mechanics
Minor:	Mathematics
Dissertation:	*Development of fire simulation models for radiative heat transfer and probabilistic risk assessment*
Grade:	Pass with distinction
M.Sc. (Tech.)	Helsinki University of Technology, 1997.

4. Linguistic skills

Finnish (mother tongue), English (fluent), Swedish (basic), German (elementary).

5. Current position

Associate Professor (Tenured)
Aalto University, Department of Civil Engineering.

6. Previous work experience

2014-2018	Associate Professor, tenure track, Aalto University
2011-2014	Principal Scientist, Team Leader, VTT
2006-2011	Senior Research Scientist, VTT
2000-2001, 2003	Guest researcher, National Institute of Standards and Technology, Maryland, USA (12 months in total)
1997-2006	Research Scientist, VTT
1995-1997	Research trainee, VTT Technical Research Centre of Finland

7. Research funding as well as leadership and supervision

- PI for Academy of Finland –project *Novel measurement and sensing technologies for thermal radiation of unwanted fires*, n:o 314487, 2018-21, 0.25 M€ (project total 1.3 M€)
- PI for Academy of Finland –project *Fire-safe materials by pyrolysis modelling*, n.o 297030, 2016-2020, 0.33 M€ (project total 0.65 M€)

- Preparation, supervisor, for the Academy of Finland –project *Robustness of Advanced Multi-Storey Steel-Frame Buildings in Fire* (PI Prof. Jari Puttonen 2015-19, 0.6 M€)
- Sub-project preparation of EU FP7-project *Preparing for the Domino effect in Crisis situations* in 2013 (0.7 M€)
- Sub-project PI and WP-leader for the EU FP7 -project *Fire-resistant composite materials for the transport sector*, grant no. 246037, 2011-2015, ca. 0.7 M€.
- Project manager in the Finnish research programme for nuclear power safety (SAFIR2010, SAFIR2014) from the State Nuclear Waste management fund. FIRAS and LARGO projects concerning nuclear power plant fire safety, c.a. 1.5 M€.
- Project manager in TEKES –project *Evacuation simulation tool development*, 2005 c.a. 0.4 M€.
- PI for Finnish Fire Protection fund (Palosuojelurahasto) –projects *Pressure management in apartment fires*, 2015-2016 and *Performance-based fire design process development*, 2016-2017, 0.35 M€ in total.

- Supervisor for post-doctoral researcher Kaiyuan Li, 2015-2016
- Supervisor for post-doctoral researcher Michalina Makowska, 2018-
- Supervisor for staff scientist Hadi Bordbar, 2018-
- Supervised doctoral students to completion: Anna Matala (2013), Topi Sikanen (2018); MSc students to completion: 13; Currently supervising 5 doctoral thesis.

8. Teaching

Curriculum planning and leadership

2016-	Program director for 'Building technology' –master's programme
2015	Preparation of new 'Building technology' –master's programme

Lecturer, responsible teacher, Aalto University

2017-18	Fire dynamics and simulation (5 cr)
	Fire and evacuation risk analysis (5 cr)
2014-2015	Fire Dynamics (4 cr), Fire simulation (4 cr)
2014	Seminar course of Structural Engineering (2 cr)

Lecturer, Forschnungszentrum Jülich, Germany

2017, August	Summer school in Fire Dynamics Modelling, Thermal radiaiton

Aalto PRO education for *Value chain of timber construction*

2017	Fire safe timber construction

Emergency Services College, Kuopio, Finland

2005-2006	Lectures on the *Numerical fire simulation*

Training

2014-2017	Aalto University pedagogical training (25 cr)

9. Awards, prizes and honours

Personal awards

2012	*Sjölin Award*, awarded by the International Forum of Fire Research Directors, for "outstanding contributions over the past number of years to the FDS Development Team and the resulting impact of the team's work on the advancement of fire engineering around the world". Received with K. McGrattan, H. Baum, G. Forney, R. McDermott, R. Rehm, J. Floyd, T. Korhonen and W. Mell.
2010	The best paper 2009 in *Rakenteiden mekaniikka* (*Journal of Structural Mechanics*) for the article "Experimental and numerical studies on

	projectile impact" by A. Saarenheimo, M. Tuomala, K. Calonius, I. Hakola, S. Hostikka and A. Silde
2008	*Philip Thomas Medal of Excellence* for the best paper at the 8th Symposium of International Association of Fire Safety Science, 2005. Received with Timo Korhonen and Olavi Keski-Rahkonen.
2007	*Interflam thropy* at the 11th International Fire Science and Engineering Conference held in London, England, Sept. 1-3, 2007. Received together with Kevin McGrattan, Jason Floyd and Glenn Forney, for a key contribution to fire science.
Awards as supervisor	
2018	Best MSc thesis award of the Nordic Fire and Safety Days 2018 conference, student Aleksi Rinta-Paavola
2019	MSc thesis award of Oskari Vilamo –fund, student Aleksi Rinta-Paavola

10. Other academic merits

PhD external examiner:

- Nils Roenner, Imperial College, March 1, 2018

PhD committee member:

- Elizabeth Blanchard, Université Henri Poincaré, 2011.
- Rickard Hansen, Mälardalen University, 2015

Thesis pre-examiner:

- Dennis Pau, University of Canterbury, 2013.

Expert evaluator for research funding applications

- Research Foundation – Flanders FWO (Belgium)
- Fire research fund (Palosuojelurahasto)
- Dutch Technology Foundation STW (2016, 2017)
- National Institute of Standards and Technology research grants

Invited / keynote speaker

- Keynote at Fire Safety Engineering, Bologna, Italy. Dec 7, 2018
- Invited speaker at 11th International Congress Fire Safety & Science, Arnhem, 2018
- Keynote at 2018 Nordic Fire and Safety Days, Trondheim, 7-8.6.2018
- First workshop by International Association of Fire Safety Science Working group on Measurement and Computation of Fire Phenomena, Lund, Sweden, 2017
- Keynote at 21st Int. Conf. Computer Methods in Mechanics, T. Univ. Gdansk, Poland, 2015.
- APICI International Congress on Fire Safety Engineering, Universidead Pontificia Comillas, Madrid, 2015.
- Fire Retardant Technologies, Uni. Central Lancashire, UK, 2009.
- Eurofire 2009, Fire protection engineering conference, Bruges, Belgium, 2009.

Conference committee member

- 2019 9th International Seminar on Fire and Explosion Hazards, St. Petersburg
- 2018 Fire and Environmental Safety Engineering (FESE 2018), Lviv, Ukraine
- 2018 3rd ESFSS / European Symposium on Fire Safety Science, Nancy
- Nordic Fire and Safety Days, 2016, 2017, 2018 (Copenhagen, Trondheim)

- Fire Safety Day, 2012, 2014, 2015 (Lund, Copenhagen)
- 12th International Symposium of Fire Safety Science, 2017 June, Lund. Track co-chair.
- 12th World Conference on Injury Prevention and Safety Promotion, 2016, Tampere.
- The 2014 International Conference on Active Media Technology (AMT 2014), Special session on Human Aspects in Cyber-Physical Systems, Warsaw, Poland, 2014.
- 11th International IAFSS Symposium, 2014, University of Canterbury, New Zealand
- 10th International IAFSS Symposium, 2011, University of Maryland, USA

Member of the steering group for the Finnish research programme on Nuclear Power Plant Safety (SAFIR2022), 2018-2022.

Member of the advisory group for the 'Safety of New Energy Carrier Vehicles in Underground Infrastructure Facilities' –project, funded by the German Federal Ministry of Education and Research, 2018-2020.

Member of the expert group preparing new Finnish building code for fire safety (2015)

Member of preparatory group for the national research programmes on nuclear power plant safety, SAFIR2018 and SAFIR2022, appointed by the Ministry of Economic Affairs and Employment, 2014, 2018. Finnish member in the Programme Review Group of OECD PRISME-projects (2005-2020).

Editorial board member for Fire Science Reviews, Fire Technology, and Fire Research – scientific journals, and for the Zeszyty Naukowe –journal of the Main School of Fire Service of Poland.

Reviewer for journals: Combustion and Flame, Nuclear Engineering and Design, Fire Technology, Fire Safety Journal, Combustion Science and Technology, Fire and Materials, Int. J. Heat Transfer Engineering, Int. Symp. Combustion Institute, J. Fire Protection Engineering, J. of Engineering for the Maritime Environment.

11. Scientific and societal impact of research

Development of the Fire Dynamics Simulator (FDS) software in co-operation with NIST (USA) since 2000. FDS is the most widely used fire simulation software globally. As open source, it enabled the use of state-of-the-art CFD for fire safety engineering and led to the global breakthrough of performance-based design.

PI in research of fire-induced pressures (2015-2016). Ministry of Environment adopted the main result to the new draft of the Finnish building code in the end of 2016. Also recognized by an interview in Pelastustieto 2/2017, titled "Paloprofessori teki täydellisen tutkimuksen" (*Fire professor did a perfect study*).

181 publications, 100 of them in scientific journals of conferences, 42 of them in refereed journals and conference proceedings. 543 citations in Scopus, 2,343 citations in www.researchgate.net, 5924 citations in Google scholar.

12. Other merits

- Member of the board for the Finnish Society of Fire Protection Engineers since 2016.
- Member of the Finnish committee for CTIF (International Association of Fire and Rescue Service), 2014-2017.
- Principal developer of the thermal radiation and solid phase heat transfer routines of FDS software.
- Principal developer of the Probabilistic Fire Simulator (PFS) tool for performing Monte Carlo simulations of fire scenarios.

- Principal developer of MASIFIRE tool for map-based simulation of forest fires in wildland-urban interface.
- Developer and coordinator of FDS+EVAC – the evacuation module for FDS software, 2005-2014.