ENRICO RONCHI

PERSONAL DATA
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- **EDUCATION / ACADEMIC TITLES**

2019 Associate Professor (*Docent* in Sweden, *Reader* in the UK)
Lund University, Sweden
2012 PhD in Transportation Engineering, Land Use and Technological Innovation
Polytechnic University of Bari, Italy. PhD Supervisor: Prof Pasquale Colonna
2008 BSc in Civil Engineering and MSc (cum laude) in Transportation Engineering
Polytechnic University of Bari, Italy

- **CURRENT POSITION**

11/2017 - … Senior Lecturer
Division of Fire Safety Engineering (90%), Transport and Roads (10%)/Lund University, Sweden

- **PREVIOUS POSITION**

2015 – 10/2017 Associate Senior Lecturer
Division of Fire Safety Engineering/Lund University, Sweden
08/2013-12/2014 Post-doctoral Researcher
Division of Fire Safety Engineering/Lund University, Sweden.

- **FELLOWSHIPS**

07/2017 and 06/2019 Guest Researcher
Department of Mechanical Engineering/Imperial College London, UK.
03/2017-04/2017 Guest Researcher
School of Human Sciences/Waseda University, Japan.
04/2013-07/2013 Guest Researcher
Department of Psychology I/University of Würzburg, Germany.
09/2012-03/2013 Guest Researcher
Fire Research Division/National Institute of Standards and Technology (NIST)/Department of Commerce of the United States, Gaithersburg, USA.
05/2012-08/2012 Researcher
Division of Fire Safety Engineering/Lund University, Sweden.
2009, 2010 Visiting PhD student
GIDAI Group/University of Cantabria, Spain.

- **RESPONSIBILITIES**

2018 Co-chair of the Workshop on *Global Overview of Large Outdoor Fire Standards*, within the Technical Committee 92 of the International Standards Organization (ISO).
2018 Member of the Program Committee of the *3rd European Symposium on Fire Safety Science* 2018, Nancy, (France)
2018 Co-chair of the Lorentz Center (NL) workshop: *Physics and Psychology of Human Crowd Dynamics*, Leiden (The Netherlands)
2018 Member of the Program Committee of the *Fire and Environmental Safety Engineering Conference* 2018, Lviv (Ukraine)
2018 Member of the Program Committee of the *1st International Symposium S-Force 2018*, Novi

Sad (Serbia)

2017 –… Responsible at Lund University for the Erasmus Mundus International Master Programme in Fire Safety Engineering IMFSE (arranged by Ghent University, Lund University, University of Edinburgh)

2017 Chair of the workshop *New approaches to evacuation modelling* within the International Association for Fire Safety Science Symposium IAFSS2017 in Lund (Sweden).

2017 Chair of a Workshop held in Lund within the Knowledge for resilience society project on the development of the first PhD Programme in Fire Safety Engineering and Disaster Risk Management in the Western Balkans.

2017 Chair of the Bilateral Sweden/Japan workshop *Tunnel Fire Safety* held in Lund, Sweden.

2017 Member of the Doctoral Degree Committee of the PhD thesis of Paolo Intini, Polytechnic University of Bari (Italy).

2017 Member of the Program Committee of the *1st International Symposium K-Force 2017*, Novi Sad (Serbia)

2016 Appointed by the Swedish Police as advisor on crowd management for the visit of Pope Francis to Sweden in October 2016

2015 Contributor to the vertical egress provisions in the 2015 National Fire Safety Code in Italy

2015 Member of the Program Committee of the 2nd Complex Events and Information Modelling 2015 (CEIM15) Conference, Lodz (Poland)

2014 – 2015 Member of the technical panel of the project *Egress modelling in health care occupancies* sponsored by the National Fire Protection Association, USA

2014 Member of the Program Committee of the *1st Complex Events and Information Modelling 2014* (CEIM14) Conference, Warsaw (Poland)

2014 –… Leader of the Task Group of ISO TC92/SC4/WG7 on the development of a standard for the Verification and Validation of evacuation models

2014 Opponent of the Doctoral Dissertation of the PhD thesis of Virginia Alonso, University of Cantabria, Spain

- **ROLES IN SCIENTIFIC PUBLISHING**

2019–… Associate Editor of the journal **Fire Technology** published by Springer Nature in collaboration with the National Fire Protection Association (USA) and the Society of Fire Protection Engineers.

2019 Guest Editor of the Special Issue "Fire Evacuation Modelling" edited by Fire Technology

2018 –… Associate Editor of the journal **Safety Science** published by Elsevier

2017 –… Member of the editorial board of the European Magazine of the Society of Fire Protection Engineers.

2011 Peer-reviewer for 100+ papers in International scientific journals in the area of safety, fire, modelling and transportation (see: publons.com/**a/1182631/**) as well as for the Fire Research Division of the National Institute of Standards and Technology, and 15+ international conferences.

- **ASSESSMENT FOR RESEARCH FUNDING AGENCY**

2019 –… Funding proposal assessor for the Dutch Research Council

2018 –… Funding proposal assessor for the Natural Sciences and Engineering Research Council of Canada

- **INSTITUTIONAL MEMBERSHIPS**

2018 –… Member of the Society of Fire Protection Engineers

2018 - … Member of the *Tall Buildings* Task Group of the Society of Fire Protection Engineering

2018 - 2019 Coordinator of the *Emergency management and evacuation* group of the Large Outdoor Fires and the Built Environment group of the International Association for Fire Safety Science

2017 - … Member of the ISO Task Group of TC92 on *Large outdoor fires and the built environment*

2014 – … Member of the ISO Working Group 7 of TC92/SC4 on *Assessment, verification and validation*

of fire models and computer codes

2014 – … Member of the ISO Working Group 11 of TC92/SC4 on *Behaviour and movement of people*

2014 – … Member of the Swedish Standards Institute

2011 – … Member of the IAFSS, International Association for Fire Safety Science

2009 – … Chartered Civil Engineer in Italy

- **SELECTED PROJECTS**

2019 – 2021 Principal investigator for the Future Research Leaders project *Building egressibility in an ageing society*, funded by FORMAS, the Swedish research council for sustainable development

2019 Principal investigator of the project *A risk assessment method for tunnel fire scenarios* funded by the private company Cantene srl

2018 – 2019 Scientific leader for the project *WUI-NITY: a platform for the simulation of wildland-urban interface fire evacuation*, funded by the National Institute of Standards and Technology, Department of Commerce, USA

2016 – 2019 Work Package leader for the International educational project *K-FORCE: Knowledge for resilient society*, funded by the EU Erasmus+ Programme.

2018 Principal Investigator of the research project *Test standards used for the application of regulations relating to wildland urban interface (WUI) fires,* funded by the National Research Council of Canada.

2017 Principal Investigator of the research project *Design Guidance on wildland urban interface (WUI) fires,* funded by the National Research Council of Canada.

2016 – 2017 Deputy responsible at Lund University of the Initiation grant project *Evacuation in emergency situations* in collaboration with Waseda University (Japan) funded by the Swedish Foundation for International Cooperation in Research and Higher Education, STINT.

2016 – 2018 Principal Investigator of the research project *ForensicVR: Investigating human behaviour in fire with Virtual Reality*, funded by the Crafoord Foundation, Sweden.

2016 – 2018 Co-responsible of the cooperation programme on *fire safety of underground nuclear research facilities* between the Department of Fire Safety Engineering at Lund University and CERN, Switzerland.

2016 – 2017 Principal Investigator of the research project *e-Murray: Modelling requirements for an open-access multiphysics approach to planning of urban evacuations caused by wildfire disasters*, funded by the National Institute of Standards and Technology, Department of Commerce, USA.

2016 – 2017 Member of the research team at Lund University of the project on *Summary of the state of the art about knowledge on human walking speed in smoke* funded by the Swedish Traffic Administration.

2015 – 2016 Principal Investigator of the research project *Large-scale evacuation modelling in complex scenarios* funded by LTH.

2014 – 2015 Principal Investigator of the research project *Ascending stair evacuation* funded by the Swedish fire research council and the Swedish Traffic Administration

2014 – 2015 Member of the research team at Lund University of the EU-funded CascEff project, *Modelling of dependencies and cascading effects for emergency management in crisis situations*, 7th Framework programme.

2013 – 2015 Member of the research team at Lund University of the project *Tunnel evacuation systems* funded by the Swedish Transport Administration.

2013 Member of the research team at University of Würzburg of the research project *Protection of critical bridges and tunnels in roadways* [Schutz kritischer Brücken und Tunnel im Zuge von Straßen] funded by the German Ministry of Education and Research

2012 – 2014 Member of the research team of the NIST project *Safety of Building occupants* funded by the US Federal Government

2012 Member of the research team at Lund University of the research project *Evaluation of an Evacuation and Fire Model* funded by Siemens.

2012 Member of the research team at Lund University of the project *Assessment of Total Evacuation Systems for Tall Buildings* funded by the Fire Research Protection Foundation of the National

Fire Protection Association (NFPA), USA.

2011 Member of the research team at Lund University of the Work Package 2 of the M.E.T.R.O. project funded by five organisations, namely Stockholm Public Transport (SL), Swedish Civil Contingencies Agency (MSB), the Swedish Transport Administration, the Swedish Fortifications Agency, and the Swedish Fire Research Board.

2009 – 2010 Member of the research team at the Polytechnic University of Bari of the research project *Study of the relationship between operative speed and road configuration through the evaluation of user risk acceptance* funded by the Italian Ministry of Research.

- **TEACHING EXPERIENCE**

10 years of teaching experience in the field of Transportation, Safety Science and Fire Safety Engineering at different International institutions (See Table 1). I have also given several seminars on the topic of evacuation at different institutions around the world, e.g. The University of Edinburgh (UK), Tokyo University of Science (Japan), Technical University of Eindhoven (The Netherlands), Delft University (The Netherlands), Imperial College London (UK), etc.

Table 1. Teaching experience

Name of the course	Institution	Role	Academic year	Degree Level	Language
Fire Evacuation Design	Lund University (Sweden)	Course Responsible	to present 2016/2017	Master	English
Human Behaviour in Fire	Lund University (Sweden)	Course Responsible	to present 2018/2019	Bachelor	English
Human Behaviour in Fire	Lund University (Sweden)	Course Responsible	to present 2018/2019	Master	English
Fire Safety Evaluation	Lund University (Sweden)	Lecturer	to present 2015/2016	Bachelor	English
CAD Fire	Technical University of Denmark (Denmark)	Lecturer	2019/2020	Master	English
Simulation of Evacuation and Human Behaviour in Fire	Polytechnic University of Catalunya (Spain)	Lecturer	2019/2020 2016/2017	Master	Spanish
Traffic Simulation	Lund University (Sweden)	Lecturer, Laboratory responsible	2017/2018	Master	English
Concepts of human behaviour in emergencies and Safety Engineering principles applied to outdoor evacuation	University of Padua (Italy)	Lecturer	2017/2018	Master	Italian
An introduction to human behaviour in fire and evacuation	University of Novi Sad (Serbia)	Guest Lecturer	2017/2018	Master	English
People and Fire	Worcester Polytechnic Institute (USA)	Guest Lecturer	2016/2017	Master	English
Evacuation Modelling Theory and Case studies	Waseda University (Japan)	Guest Lecturer	2016/2017	Bachelor	English
Advanced Fire and Egress modelling	Haugesund University (Norway)	Guest lecturer	2015/2016	Master	English
VENLab seminar series	Brown University (USA)	Seminar responsible	2014/2015	PhD	English

Fire Research seminar series	NIST (USA)	Seminar responsible	2014/2015	PhD	English
Fire Safety Engineering	Mälardalen University (Sweden)	Guest lecturer	2013/2014 2012/2013 2011/2012	Master	English
Fire Safety in Underground Structures	Lund University (Sweden)	Seminar responsible	2013/2014	PhD	English
Human Behaviour in Fire	Lund University (Sweden)	Lecturer, Laboratory Responsible	2017/2018 2016/2017 2015/2016 2014/2015 2013/2014 2011/2012	Bachelor /Master	English
Human Behaviour in Fire	Lund University (Sweden)	Seminar responsible	2011/2012	PhD	English
Road Safety and Management	Politecnico di Bari (Italy)	Teaching Assistant	2010/2011	Master	Italian
Road and Railroad Design	Universitá del Salento (Italy)	Teaching Assistant	2010/2011	Master	Italian
Road Tunnelling	Politecnico di Bari (Italy)	Teaching Assistant	2009/2010 2008/2009	Master	Italian
Road, Railroad and Airport Design	Politecnico di Bari (Italy)	Laboratory Responsible	2010/2011 2009/2010 2008/2009	Bachelor	Italian

- **SUPERVISION**

2019 1 PhD student, Erik Smedberg, Lund University, Sweden
Research area is Egress of people with disabilities

2019 1 visiting research student, Jun Kubota, Waseda University, Japan
Research area is Virtual Reality and way-finding

2019 1 visiting PhD student, Olivera Bukvic, University of Novi Sad, Serbia
Research area is Egress and ageing

2019 1 visiting PhD student, Jovana Maksimovic, University of Novi Sad, Serbia
Research area is GIS for wildfires

2018 – 2019 1 Postdoctoral researcher, Jonathan Wahlqvist, Lund University, Sweden
Research area is Virtual Reality for wildfires

2017 – 2018 1 Postdoctoral researcher, Paolo Intini, Lund University, Sweden.
Research area on traffic modelling for WUI fire evacuation

2017 - … 1 PhD student, Khashayar Kazemzadeh, Lund University, Sweden.
Research area is level of service in traffic

2017 - … 1 PhD student, Eva-Sara Carlsson, Lund University, Sweden.
Research area is on underground evacuation

2017 - … 1 PhD student, Axel Mossberg, Lund University, Sweden.
Research area is on elevators for evacuation

2016 - … 1 PhD student, Hana Najmanová, Technical University of Prague, Czech Republic.
Research area is on children evacuation

2014 – … 1 PhD student, Silvia Arias, Lund University, Sweden.
Research area is on virtual reality for fire evacuation

2012 – 2016 1 PhD student, Ruggiero Lovreglio, Polytechnic University of Bari, Italy
Research area is on random utility theory for evacuation modelling

2012 – … 14 Msc students and 20 Bsc students, Lund University, Sweden.

2009 – 2012 3 Msc students, Polytechnic University of Bari, Italy

- **INVITED PRESENTATIONS**

I have been invited speaker at the following conferences:

- Palotutkimuksen päivät [Fire safety research workshop] 2019, Helsinki (Finland)
- Crowd evacuation management in outdoor gatherings 2018, Padua (Italy)
- Help for all – For an inclusive safety 2018, Rome (Italy)
- Design and management of security of public gatherings in open spaces 2018, Turin (Italy)
- 8th International Joint Seminar Tunnel Fire Safety and Management 2017, Kanazawa (Japan)
- Fire and Evacuation Modeling Technical Conference 2016, Malaga (Spain)
- Conference on multiscale inverse problems 2016, Loka Brunn (Sweden)
- International Technical Safety Forum ITSF 2016, Hamburg (Germany)
- Workshop on Fire Protection at Research Facilities at CERN 2015, Geneva (Switzerland)
- Seminar Program for Polish Fire Experts 2015, Zakopane (Poland)
- Fire and Evacuation Modeling Technical Conference 2014, Gaithersburg (USA)
- World Tunnel Congress 2013, Geneva (Switzerland) – **Award winning talk**

- **AWARDS AND SCHOLARSHIPS**

2019 Magnusson Mid-Career Award. Granted by the International Association for Fire Safety Science for contributing a body of work that is of significance to any area of fire safety science

2018 Foundation Medal. Granted by the National Fire Protection Association (USA) as PI of the Fire Protection Research Foundation project that best exemplifies the Foundation's fire safety mission.

2017 Bigglestone Award. Granted by the National Fire Protection Association (USA) as first author of the most outstanding paper published in the journal Fire Technology.

2017 Jack Watts Outstanding Reviewer award. Granted by Springer Nature each year to the best reviewers (≈1% of reviewers) of the journal Fire Technology.

2013 ITA-Cosuf Award winner. Granted by the Committee on Operational Safety of Underground Facilities of the International Tunnelling Association (ITA) to the best young researcher in 2013 in the field of underground safety.

2011 Swedish Institute. I was awarded this competitive scholarship (my proposal was ranked first in Italy) to carry out research activities at Lund University in the area of tunnel evacuation modelling.

2011 C.M. Lerici Foundation. Scholarship awarded to contribute to a set of full scale evacuation experiments conducted in Sweden.

- **MEDIA APPEARANCES**

I have been interviewed, quoted and writing articles in different national and international media, including Newsweek (US), Citylab (US), Wired (US), The Conversation (UK), Sverige Radio (Swedish National Radio), Svenska Dagbladet (Sweden), Rivista Antincendio (Italy), etc.

- **PERSONAL SKILLS AND COMPETENCES**

Languages: Italian: Native. Spanish: Fluent. English: Fluent. Swedish: Intermediate. Serbo-Croatian: Beginner
Computer skills: AutoCAD, REVIT (BIM package), SPSS (Statistical package), Civil Design (Road design software), Unity3D (Virtual Reality Game Engine), SketchUp (3D modelling)
Evacuation models and tools: FDS+Evac, STEPS, Pathfinder, NOMAD, MASSEgress, Gridflow, Simulex, CrowdControl, EXIT89, SFPE hydraulic model, Pyrosim, Smokeview.

- **SCIENTIFIC PUBLICATIONS**

I have authored ≈150 publications, including >50 peer-reviewed papers in International Journals. I have published in many of the top scientific journals in the area of safety science, fire safety, transportation, applied mathematics, ergonomics, modelling and simulation. I have commented on the topic of disaster management and evacuation right after the terrorist attacks in Paris and on fire funding situation after the Grenfell Tower fire the multi-disciplinary journal Nature. I have received over 1750 citations (Google Scholar). My updated list of publications can be found in google scholar (see https://scholar.google.it/citations?user=_PAp-e4AAAAJ&hl=it).

LIST OF PUBLICATIONS

PEER-REVIEWED PAPERS

E. Ronchi, A. Corbetta, E. Galea, M. Kinateder, E. Kuligowski, D. McGrath, A. Pel, Y. Shiban, P. Thompson, F. Toschi (2019) *New approaches to evacuation modelling for fire safety engineering applications.* Fire Safety Journal Doi: 10.1016/j.firesaf.2019.05.002

R. Lovreglio, **E. Ronchi**, M. J. Kinsey (2019). *An online survey of pedestrian evacuation model usage and users*. Fire Technology. Doi: 10.1007/s10694-019-00923-8

P. Intini, **E. Ronchi**, S. M. V. Gwynne, N. Benichou. *Guidance on design and construction of the built environment against wildland urban interface fires: a review*. Fire Technology. Doi: 10.1007/s10694-019-00902-z

S. Arias, **E. Ronchi**, R. Fahy, D. Nilsson, H. Frantzich, J. Wahlqvist. Forensic Virtual Reality: investigating individual behavior in the MGM Grand fire. *Fire Safety Journal, Doi:* 10.1016/j.firesaf.2019.102861

E. Ronchi, G. Rein, S. M. V. Gwynne, P. Intini, R. Wadhwani. *An open multi-physics framework for modelling wildland-urban interface fire evacuations*. Safety Science. Doi: 10.1016/j.ssci.2019.06.009

E. Ronchi, S. Arias, S. La Mendola, N. Johansson *A fire safety assessment approach for evacuation analysis in underground physics research facilities.* Fire Safety Journal, 108, Doi: 10.1016/j.firesaf.2019.102839

A. Rigos, E. Mohlin, **E. Ronchi** (2019). *The cry wolf effect in evacuation: a game-theoretic approach*. Physica A: Statistical Mechanics and its applications 526. Doi: 10.1016/j.physa.2019.04.126

S. Arias, S. La Mendola, J. Wahlqvist, O. Rios, D. Nilsson, **E. Ronchi** (2019). *Virtual Reality evacuation experiments on way-finding systems for the Future Circular Collider*. Fire Technology. Doi: 10.1007/s10694-019-00868-y.

N. Bode, **E. Ronchi** (2019). *Statistical model fitting and model selection in pedestrian dynamics research*. Collective Dynamics. Doi: 10.17815/CD.2019.20

K. Fridolf, **E. Ronchi**, D. Nilsson, H. Frantzich (2019). *The representation of evacuation movement in smoke-filled underground transportation systems*. Tunnelling and Underground Space Technology 90, pp. 28-41. Doi: 10.1016/j.tust.2019.04.016

S. M. V. Gwynne, **E. Ronchi**, N. Benichou, M. Kinateder, E. Kuligowski, I. Gomaa, M. Adelzadeh (2019). *Modelling and Mapping Dynamic Vulnerability to Better Assess WUI Evacuation Performance*. Fire and Materials Doi: 10.1002/fam.2708.

Adrian, J., Bode, N., Amos, M., Baratchi, M., Beermann, M., Boltes, M., …., **E. Ronchi**, … Wijermans, N. (2019). *A Glossary for Research on Human Crowd Dynamics*. Collective Dynamics, 4. https://doi.org/10.17815/CD.2019.19

E. Ronchi, D. Mayorga, R. Lovreglio, J. Wahlqvist, D. Nilsson (2019), *Virtual Reality experiments for evacuation research: Mobile-powered Head Mounted Displays vs Cave Automatic Virtual Environment experiments for evacuation research*. Computer Animation and Virtual Worlds. Doi: 10.1002/cav.1873

P. Intini, **E. Ronchi**, S. M. V. Gwynne, A. Pel (2019). *Traffic modelling for wildland-urban interface fire evacuation*. Journal of Transportation Engineering, Part A: Systems 145:3, 04019002. Doi: 10.1061/JTEPBS.0000221

T. Sano, **E. Ronchi**, Y. Minegishi, D. Nilsson (2018). *Modelling pedestrian merging in stair evacuation in multi-purpose buildings*. Simulation Modelling Practice and Theory 85, pp. 80-94. Doi: 10.1016/j.simpat.2018.04.003

E. Ronchi, K. Fridolf, H. Frantzich, D. Nilsson, A. Lindgren Walter, H. Modig (2018). *A tunnel evacuation experiment on movement speed and exit choice in smoke.* Fire Safety Journal 97 pp. 126-136. Special Issue of the International Symposium on Tunnel Safety and Security (ISTSS). Doi: 10.1016/j.firesaf.2017.06.002

D. Nilsson, H. Frantzich, **E. Ronchi**, K. Fridolf, A. Lindgren Walter, H. Modig (2018). *Integrating evacuation research in large infrastructure tunnel projects - Experiences from the Stockholm Bypass Project.* Fire Safety Journal 97 pp. 118-125. Special Issue of the International Symposium on Tunnel Safety and Security (ISTSS). Doi: 10.1016/j.firesaf.2017.07.001

H. Najmanova, **E. Ronchi** (2017). *An Experimental Data-set on Pre-school Children Evacuation*. Fire

Technology 53:4, pp.1503-1533. Doi: 10.1007/s10694-016-0643-x

E. Gissi, **E. Ronchi**, D. A. Purser (2017), *Transparency vs Magic numbers: the Development of Stair Design Requirements in the Italian Fire Safety Code*. Fire Safety Journal 91, pp. 882-891. Doi: 10.1016/j.firesaf.2017.03.037

T. Sano, **E. Ronchi**, Y. Minegishi, D. Nilsson (2017). *A pedestrian merging flow model for stair evacuation.* Fire Safety Journal 89, pp.77-89. Doi: 10.1016/j.firesaf.2017.02.008

J. Olander, **E. Ronchi**, R. Lovreglio, D. Nilsson (2017). *Dissuasive exit signage for building fire evacuation*. Applied Ergonomics 59, pp. 84-93. Doi: 10.1016/j.apergo.2016.08.029

A. Cuesta, **E. Ronchi**, S. M. V. Gwynne, M. J. Kinsey, A. Hunt, D. Alvear (2017). *School egress data: comparing the configuration and validation of five egress models*. Fire and Materials 41:5, pp. 535-554, Special Issue of the Human Behaviour in Fire Symposium 2015 Doi: 10.1002/fam.2405

M. Delin, J. Norén, **E. Ronchi**, K. Kuklane, A. Halder, K. Fridolf (2017). *Ascending stair evacuation: Walking speed as a function of height*. Fire and Materials 41:5 pp.514-534, Special Issue of the Human Behaviour in Fire Symposium 2015 Doi: 10.1002/fam.2410

E. Ronchi, P. A. Reneke, R. D. Peacock (2016). *A conceptual fatigue-motivation model to represent pedestrian movement during stair evacuation.* Applied Mathematical Modelling 40:7-8, pp. 4380-4396. Doi: 10.1016/j.apm.2015.11.040

R. Lovreglio, **E. Ronchi**, G. Maragkos, T. Beji, B. Merci (2016). *A dynamic approach for the impact of a toxic gas dispersion hazard considering human behaviour and dispersion modelling*. Journal of Hazardous Materials 318, 15 pp. 758-771. Doi: 10.1016/j.jhazmat.2016.06.015

R. Lovreglio, **E. Ronchi**, D. Nilsson (2016). *An Evacuation Decision Model based on risk perception, social influence and behavioural uncertainty*. Simulation Modelling Theory and Practice 66, 226–242. Doi: 10.1016/j.simpat.2016.03.006

E. Ronchi, E. Kuligowski, D. Nilsson, R. Peacock, P. Reneke (2016). *Assessing the Verification and Validation tests for building fire evacuation models.* Fire Technology 52, pp.197-219. Doi: 10.1007/s10694-014-0432-3

E. Ronchi, F. Nieto Uriz, X. Criel, P. Reilly (2016). *Modelling large-scale evacuation of music festivals*. Case Studies in Fire Safety 5, pp. 11-19. Doi: 10.1016/j.csfs.2015.12.002.

E. Ronchi, D. Nilsson, H. Modig, A. Lindgren Walter (2016). *Variable Message Signs for road tunnel emergency evacuations.* Applied Ergonomics 52, pp. 253-264. Doi: 10.1016/j.apergo.2015.07.025

G. Cosma, **E. Ronchi**, D. Nilsson (2016). *Way-finding lighting systems for rail tunnel evacuation: A virtual reality experiment with Oculus Rift®*. Journal of Transportation Safety and Security 8:sup1, pp. 101-117. Doi: 10.1080/19439962.2015.1046621

R. Lovreglio, **E. Ronchi**, D. Nilsson (2015). *A model of the decision-making process during pre-evacuation*. Fire Safety Journal 78 pp. 168-179. Doi: 10.1016/j.firesaf.2015.07.001.

R. Lovreglio, **E. Ronchi**, D. Nilsson. *Calibrating floor field cellular automaton models for pedestrian dynamics by using likelihood function optimization.* (2015). Physica A: Statistical Mechanics and its applications. Doi: 10.1016/j.physa.2015.06.040

E. Ronchi, D. Nilsson, S. Kojic, J. Eriksson, R. Lovreglio, H. Modig, A. Lindgren Walter. *A Virtual Reality experiment on flashing lights at emergency exit portals for road tunnel evacuation* (2015). Fire Technology. Doi: 10.1007/s10694-015-0462-5

E. Ronchi, M. Kinateder, M. Müller, M. Jost, M. Nehfischer, P. Pauli, A. Mühlberger (2015). *Evacuation travel paths in virtual reality experiments for tunnel safety analysis.* Fire Safety Journal 71, pp. 257-267. Doi: 10.1016/j.firesaf.2014.11.005

S.M.V. Gwynne, E. D. Kuligowski, M. Spearpoint, **E. Ronchi** (2015). *Bounding defaults in egress models*. Fire and Materials 39:4, pp-335-352, Special Issue on the Human Behaviour in Fire Symposium 2012. Doi: 10.1002/fam.2212

E. Ronchi, D. Nilsson (2014). *Modelling total evacuation strategies for high-rise buildings*. Building Simulation 7(1):73-87. Doi: 10.1007/s12273-013-0132-9

E. Ronchi, E. D. Kuligowski, R. D. Peacock, P. A. Reneke (2014). *A probabilistic approach for the analysis of evacuation movement data*. Fire Safety Journal 63, pp. 69-78. Doi: 10.1016/j.firesaf.2013.11.012

E. Ronchi, P. A. Reneke, E. Kuligowski, R.D. Peacock (2014). *An analysis of evacuation travel paths on stair landings by means of conditional probabilities*. Fire Safety Journal 65, pp. 30-40. Doi: 10.1016/j.firesaf.2014.02.001

M. Kinateder, **E. Ronchi**, D. Gromer, M. Müller, M. Jost, M. Nehfischer, P. Pauli, A. Mühlberger (2014). *Social influence on route choice in a virtual reality tunnel fire*. Transportation Research Part F: Traffic Psychology and Behaviour 26, pp. 116-125. Doi: 10.1016/j.trf.2014.06.003

E. Ronchi, P. A. Reneke, R.D. Peacock (2014). *A method for the analysis of behavioural uncertainty in evacuation modelling*. Fire Technology 50, pp. 1545-1571. Doi: 10.1007/s10694-013-0352-7

R. Lovreglio, **E. Ronchi**, D. Borri (2014). *The validation of evacuation simulation models through the analysis of behavioural uncertainty*. Reliability Engineering & System Safety 131, pp. 166-174. Doi: 10.1016/j.ress.2014.07.007

E. Ronchi, D. Nilsson (2013). *Fire evacuation in high-rise buildings: a review of human behaviour and modelling research*. Fire Science Reviews 2(7). Doi: 10.1186/2193-0414-2-7

E. Ronchi (2013). *Testing the predictive capabilities of evacuation models for road tunnel safety analysis.* Safety Science 59, pp.141-153. Doi: 10.1016/j.ssci.2013.05.008

K. Fridolf, **E. Ronchi**, D. Nilsson, H. Frantzich (2013). *Movement speeds and exit choice in smoke-filled rail tunnels.* Fire Safety Journal 59, pp. 8–21. Doi: 10.1016/j.firesaf.2013.03.007

E. Ronchi, P. Colonna, N. Berloco (2013). *Reviewing Italian fire safety codes for the analysis of road tunnel evacuations: advantages and limitations of using evacuation models*. Safety Science, Special Issue from the 1st CoSaCM. Vol 52, pp. 28-36. Doi: 10.1016/j.ssci.2012.03.015

E. Ronchi, S.M.V. Gwynne, D. A. Purser, P. Colonna (2013). *Representation of the impact of smoke on agent walking speeds in evacuation models.* Fire Technology 49 (2), pp. 411-431. Doi: 10.1007/s10694-012-0280-y

E. Ronchi, P. Colonna, J. Capote, D. Alvear, N. Berloco, A. Cuesta (2012). *The evaluation of different evacuation models for assessing road tunnel safety analysis*. Tunnelling and Underground Space Technology Vol. 30, pp. 74-84. Doi: 10.1016/j.tust.2012.02.008

E. Ronchi, D. Nilsson, S.M.V. Gwynne (2012). *Modelling the impact of emergency exit signs in tunnels*. Fire Technology 48(4) pp. 861-988. Doi: 10.1007/s10694-012-0256-y

EDITORIALS, COMMENTS AND LETTERS

M. Kinateder, **E. Ronchi** (2019)**.** *Burning down the silos in a multidisciplinary field: towards unified quality criteria in Human Behaviour in Fire*. Fire Technology. Doi: 10.1007/s10694-019-00867-z

E. Ronchi, E. Kuligowski, S. M. V. Gwynne, (2019) *Guest Editorial: Special Issue on Advances in Evacuation Modelling*. Fire Technology 55:2, pp. 387–389 Doi: 10.1007/s10694-018-0807-y

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CONFERENCE CONTRIBUTIONS

Papers

A. Johansson, S. M. V. Gwynne, **E. Ronchi**, A. Thompson, and R. Thomas (2019). *Quantifying the impact of luggage on aircraft deplaning scenarios*. To be presented at Interflam 2019.

A. Velasco, **E. Ronchi**, A. Halder, K. Kuklane (2019). *Physical exertion during ascending evacuation while carrying load.* To be presented at Interflam 2019.

T. Sano, **E. Ronchi**, A. Sekizawa, M. Mizuno, K. Fujii, H. Kadokura (2019). *Descending evacuation on staircases: how accurate are models in representing movement without merging?* To be presented at Interflam

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S. Arias, D. Nilsson, **E. Ronchi**, H. Frantzich, J. Wahlqvist (2019). *Enhancing behavioural realism in virtual reality fire evacuation experiments*. To be presented at Interflam 2019.

S. M. V. Gwynne, **E. Ronchi**, N. Benichou, M. Kinateder, E. Kuligowski, I. Gomaa, M. Adelzadeh (2019). *Modelling and Mapping Wildfire Evacuation.* IFireSS 2019, Ottawa, Canada.

E. Ronchi, S. Arias, S. La Mendola, N. Johansson (2018). *An integrated approach for fire evacuation safety assessment in underground physics research facilities*. International Conference on Tunnel Safety and Security, Borås, Sweden.

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V. Alonso, **E. Ronchi** (2016). *The simulation of assisted evacuation in hospitals*. Fire and Evacuation Modelling Technical Conference FEMTC16, Malaga, Spain.

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H. Najmanová, **E. Ronchi** (2016). *Pre-school children evacuation modelling*. Presented at the Nordic Fire and Safety Day, 16-17th June 2016, Copenhagen, Denmark.

D. Nilsson, H. Frantzich, **E. Ronchi**, K. Fridolf, A. Lindgren Walter, H. Modig (2016). *Integrating research in large infrastructure tunnel projects.* Proceedings of the International Symposium on Tunnel Safety and Security in 2016, ISTSS2016, Montreal, Canada.

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Posters

L. Catovic, C. Alniemi, **E. Ronchi** (2018), *A survey on the factors affecting horizontal assisted evacuation in hospitals*. European Symposium of the International Association for Fire Safety Science, Nancy, France.

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E. Ronchi (2019). *Modelling Crowd Evacuation*. COMPUTE Research school, Lund, Sweden.

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S. Arias, J. Wahlqvist, D. Nilsson, **E. Ronchi,** H. Frantzich (2019) *Realistic behaviour in Virtual Reality fire evacuation experiments*. Magazine of the Society of Fire Protection Engineering.

S. Arias, **E. Ronchi,** S. La Mendola, J. Wahlqvist, O. Rios, (2019). *Fire Safety Engineering in Particle Physics Research Facilities*. European Magazine of the Society of Fire Protection Engineering.

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