

Ruben Van Coile

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EDUCATION

Ghent University, Civil Engineering, Fire Safety Engineering, Law

- Postgraduate Fire Safety, 2016
- PhD Civil Engineering, 2015, Dissertation title:
Reliability-based decision-making for concrete elements exposed to fire
- Bachelor of Laws, 2011, magna cum laude
- BSc, MSc Civil Engineering, 2008, 2010, magna cum laude



SUMMARY AND RESEARCH FIELD

Prof. Van Coile is an expert in probabilistic structural fire safety engineering, specifically on the application of risk and reliability methods. He has degrees in civil engineering, fire safety engineering and law, and has been a post-doctoral researcher at the University of Edinburgh and a practicing fire safety and structural fire safety engineer in London, UK. He has worked on high-profile projects, including a new terminal for Gatwick airport, some of Europe's tallest structures, and a submerged tunnel. He has been a visiting researcher at the University of Life Sciences and Natural Resources (Vienna, Austria), at the University of Waterloo (Waterloo, Canada), and at Johns Hopkins University (Baltimore, USA).

Prof. Van Coile is currently contributing to the revision of the UK standard of practice on probabilistic fire safety engineering (PD 7974-7), and has been appointed as an expert to the International Standards committee ISO TC92 for the development of guidance on probabilistic structural fire safety. His research field focusses on the application of risk and reliability methods to structural fire engineering and decision making, structural fire engineering modelling, and probabilistic risk assessment. As long-term collaborator at the Magnel Laboratory for Concrete Research, Prof. Van Coile has specific background in the fire safety of concrete structures.

Prof. Van Coile teaches Basics of Structural Engineering and Risk Management to Fire Engineering students, and contributes to Finite Element education for the Civil Engineering students. He has been the supervisor of 2 PhD students and a number of MSc students. Under his impulse, Ghent University is updating its Fire Safety Engineering curriculum in 2019-2021 towards an increased contribution of structural fire engineering training, with the introduction of new structural fire engineering courses.

EXPERIENCE

<i>Now</i>	Ghent University, Department of Structural Engineering (Ghent, Belgium)
<i>Oct 2017-</i>	ASSISTANT PROFESSOR Computer-Based Structural Fire Engineering ISO (International Standards Organization), expert on panel ISO/TC 92 - Fire Safety BSI (British Standards Institute), expert on revision panel for PD 7974-7: Probabilistic Fire Safety
<i>Sept 2017</i>	University of Edinburgh, BRE Centre for Fire Safety Engineering (Edinburgh, UK)
<i>Oct 2016-</i>	POST DOCTORAL RESEARCH ASSOCIATE, in the research group of Prof. Dr. Luke Bisby BSI (British Standards Institute), expert on revision panel for PD 7974-7: Probabilistic Fire Safety
<i>Aug 2015</i>	WSP UK (London, UK)
<i>Oct 2016-</i>	STRUCTURAL FIRE SAFETY ENGINEER Collaborator on structural and fire safety projects, including: Fire safety strategy Gatwick Airport (London UK), external fire spread Bishopsgate 22 (280m high office building, London, UK)
<i>Aug 2015</i>	Ghent University, Department of Structural Engineering (Ghent, Belgium)
<i>April 2015-</i>	POST DOCTORAL RESEARCHER, Structural fire safety engineering and decision making
<i>April 2015</i>	Ghent University, Department of Structural Engineering (Ghent, Belgium)
<i>Oct 2011-</i>	PHD RESEARCHER, Reliability-based decision-making for concrete elements exposed to fire
<i>July 2009</i>	Bain & Company (Brussels, Belgium)
<i>Aug 2009-</i>	SUMMER INTERN, Strategic management consultancy

PUBLICATIONS

Selected list below. Full overview including selected Open Access at <https://biblio.ugent.be/person/002005283121>

7 KEY PUBLICATIONS

1. Van Coile, R., Van Coile, R., Hopkin, D., Lange, D., Jomaas, G., & Bisby, L. (2018). The Need for Hierarchies of Acceptance Criteria for Probabilistic Risk Assessments in Fire Engineering. *Fire Technology*.
2. Van Coile, R., Balomenos, G.P., Pandey, M.D., Caspeelee, R. (2017). An Unbiased Method for Probabilistic Fire Safety Engineering, Requiring a Limited Number of Model Evaluations. *Fire Technology*, 53, 1705-1744.
3. Molkens, T., Van Coile, R., Gernay, T. (2017). Assessment of damage and residual load bearing capacity of a concrete slab after fire: Applied reliability-based methodology. *Engineering Structures*, 150, 969-985.
4. Van Coile, R., Caspeelee, R., Taerwe, L. (2016). Decision support tool on investments in life safety based on sampling theory. *Structure and Infrastructure Engineering: Maintenance, Management, Life-Cycle Design and Performance*, 12, 861-873.
5. Van Coile, R., Caspeelee, R., Taerwe, L. (2014). Lifetime Cost Optimization for the Structural Fire Resistance of Concrete Slabs. *Fire Technology*, 50, 1201-1227.
6. Van Coile, R., Caspeelee, R., Taerwe, L. (2014). Towards a reliability-based post-fire assessment method for concrete slabs incorporating information from inspection. *Structural Concrete*, 15, 395-407.
7. Van Coile, R., Caspeelee, R., Taerwe, L. (2014). Reliability-based evaluation of the inherent safety presumptions in common fire safety design. *Engineering Structures*, 77, 181-192.

AWARDS

- 2018: Bigglestone Award: Award for the paper in Fire Technology 'that best represents excellence in the communication of fire protection concepts', for the paper 'An Unbiased Method for Probabilistic Fire Safety Engineering, Requiring a Limited Number of Model Evaluations' (Van Coile et al., 2017)
- 2016: Interflam 2016: Best Paper Runner Up Award, for the conference paper 'Efficient Method for Probabilistic Fire Safety Engineering.
- 2014: Brenner Award: Best Poster Presentation 'Structural safety and cost optimization for Brenner Base Tunnel linings exposed to fire'
- 2011: BSVM material science award, master dissertation 'Effect of fire on the safety level of concrete elements'
- 2010: honorable mention 'ENCI-Studieprijs 2010' (Dutch concrete association), master dissertation 'Effect of fire on the safety level of concrete elements'