

## **Geert Lombaert**

Born in Dendermonde, September 8, 1975. Living in Kessel-Lo, Belgium.

### **Employment history**

08/2012 – Present Programme Director Civil Engineering, KU Leuven  
10/2017 – Present Full Professor, Department of Civil Engineering, KU Leuven, Belgium  
10/2013 – 09/2017 Professor, Department of Civil Engineering, KU Leuven, Belgium  
10/2009 – 09/2013 Associate Professor, Department of Civil Engineering, KU Leuven, Belgium  
10/2003 – 09/2009 Postdoctoral fellow of the Science Foundation Flanders (FWO-Vlaanderen)  
10/2002 – 09/2003 Postdoctoral researcher, Department of Civil Engineering, KU Leuven, Belgium  
01/2002 – 10/2002 Project Design, SEGHERS better technology for solids+air  
07/1998 – 12/2001 Researcher, Department of Civil Engineering, KU Leuven, Belgium

### **Research stays abroad**

04/2008 – 07/2008 Department of Structural Engineering, University of California at San Diego  
01/2003 – 07/2003 Laboratoire Mécanique des Sols, Structures et Matériaux, Ecole Centrale Paris

### **Teaching activities**

2006 – Present Course instructor “Strength of Materials”, “Structural Analysis”, “Finite Elements”, “Dynamics of Structures”, “Structural Engineering Practice”, and “Wave Propagation and Vibrations in the Built Environment”.  
06/02-10/02/2017 Course instructor “Model updating in structural dynamics – theory and practice”, Graduate School, University of Santa Clara.  
03/06-07/06/2013 Course instructor “Identification Methods for Structural Health Monitoring and Residual Lifecycle Assessment”, CISM, Udine.  
04/04-15/04/2011 Course instructor “Computational Mechanics” (3 ECTS), International Master of Civil Engineering, University of Bologna.

### **Prizes, grants, honors and awards**

2000 – OROS European University Millennium Award  
2003 – Postdoctoral Fellowship from the Research Foundation Flanders (3 years)  
2006 – Postdoctoral Fellowship from the Research Foundation Flanders (3 years)  
2015 – Best Paper at Railway Engineering 2015  
2016 – Ahmet Çakmak Best Paper Award 2016 (journal Soil Dynamics and Earthquake Engineering)  
2020 – Network fellowship NF/20/005 prof. Manolis Chatzis (Oxford University)

### **Supervision of Ph.D. students and postdocs**

2006 – Present (Co-)supervisor of 41 finished and ongoing PhD students.  
2006 – Present Jury member of 25 PhDs at KU Leuven and 18 PhDs at other institutes, including Oxford University, ETH, Cambridge University, NTNU, Université Paris-Est, Université Paris Saclay, Université du Maine Paris, Tufts University, KTH, University of Sevilla, Ecole Polytechnique, Bauhaus University Weimar, University of Southampton, UPC, BUTE.

### **Service and leadership**

2022 – Present Member of Technical Advisory Board of SECO  
2022 – Present Member of Executive Committee Belgian National Committee for Theoretical and Applied Mechanics.  
2022 – Present Member of ISO TC108 SC2 WG8 “Groundborne Noise and Vibration from Rail Systems”.  
2014 – Present Member of IABSE Belgium

### **Organization of international conferences**

2019 – Co-chair of the 13th International Workshop on Railway Noise (IWRN13), 16-20 September 2019, Ghent, Belgium, about 200 participants.

2011 – Co-chair of Eurodyn 2011, 8th International Conference on Structural Dynamics, 4-6 July 2011, Leuven, Belgium, about 600 participants.

### **Invited presentations and keynote lectures at international conferences**

2023 Invited seminar “Transforming Structures into Sensors by Fusion of Measurements and Simulations”, Lecture Series “Adaptivity as Utopia” at CRC 1244 Adaptive skins and structures for the built environment of tomorrow, University of Stuttgart.

2023 Invited seminar “The KW51 Bridge and Partners” at The 5th Sheffield Workshop on Structural Dynamics.

2023 Plenary keynote lecture “Railway bridge KW51 as a testbed for virtual sensing and structural health monitoring” at 12th International Conference on Structural Dynamics (Eurodyn).

2023 Invited seminar “Combining measurements and models for virtual sensing of structures” at DICCA, University of Genova.

2021 Plenary keynote lecture “State, input, and parameter estimation for monitoring of civil engineering structures” at 8th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (Compdyn 2021).

2021 Invited presentation “Challenges in quantifying and assessing information from structural health monitoring: state, input, and parameter estimation”, online seminars “Frontiers in monitoring-supported decision making for structures and infrastructures”.

2020 Semi-plenary keynote lecture “Experimental assessment and model calibration of a large multi-span quasi-periodic viaduct”, 11th International Conference on Structural Dynamics (Eurodyn).

2019 Keynote lecture “Sampling and sensitivity-based techniques for Bayesian optimal sensor placement with respect to response predictions” at 7th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (Compdyn 2019).

2016 Tutorial lecture “Online input and state estimation in structural dynamics”, 34th International Modal Analysis Conference (IMAC2016)

2014 Semi-plenary keynote lecture “Numerical, experimental, and hybrid prediction of railway induced ground vibration”, 9th International Conference on Structural Dynamics (Eurodyn 2014).

2014 Keynote lecture “Robust topology optimization of structures sensitive to geometric imperfections”, 12th International Probabilistic Workshop.

2013 State of the Art presentation “Ground-borne vibration due to railway traffic: physical mechanisms, prediction, and mitigation”, 11th International Workshop on Railway Noise.

### **Ongoing research projects**

2023 – 2026 Research Council KU Leuven C14/23/098 "Computational methods for infinite-dimensional Bayesian inversion of physics-based models in engineering applications", co-promotor, (Total project funding covers 7 PhD student and operational costs, own share is 1 PhD student as main supervisor, 2 PhD students as co-supervisor).

2023 – 2026 Project FWO G0B7123N "An integrated static-dynamic structural optimization approach for the design of footbridges", promotor, (Project funding covers 2 PhD students and operational costs, own share is 1 PhD student).

2021 – 2024 Project FWO G0B8221N "Mitigation of railway induced vibration using seismic metamaterials", co-promotor, (Project funding covers 2 PhD students and operational costs, own share is 1 PhD student).

2020 – 2024 Project FWO-SBO S001021N “Multi-layer Bayesian life-cycle methodology for the structural assessment of existing concrete structures (lifeMACS)”, co-promotor, (Total funding covers 4 PhD student and operational costs, own share is 1 PhD student).

### **Publication track record**

(co-)author of 265 publications listed in Web of Science, including 155 peer reviewed journal papers, h-index of 46 in Web of Science and of 56 in Google scholar.