



**Professor Lincy Pyl**

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**Biography:**

Lincy Pyl is a Professor at Vrije Universiteit Brussels. Her research expertise is related to structural design and analysis, numerical modeling, metal and composite structures, structural behavior under exceptional loading conditions, mechanical characterization and behavior of lightweight/3D printed materials under fatigue, under high speed load conditions like blast, impact and crush.

**Selected Publications:**

- Lincy Pyl, D. Clouteau and Geert Degrande, "A weakly singular boundary integral equation in elastodynamics for heterogeneous domains mitigating fictitious eigenfrequencies", *Engineering Analysis with Boundary Elements*, Vol. 28, No. 12, pp 1498-1513, 2004
- Iveta Georgieva, Luc Schueremans, Lincy Pyl and Lucie Vandewalle, "Experimental investigation of built-up double-Z members in bending and compression", *Thin-Walled Structures*, Vol. 53, pp 48-57, April 2012
- Iveta Georgieva, Luc Schueremans, Lincy Pyl and Lucie Vandewalle, "Numerical study of built-up double-Z members in bending and compression", *Thin-Walled Structures*, Vol. 60, pp 85-97, November 2012

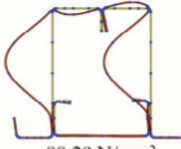
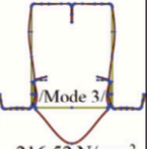
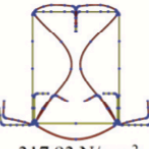
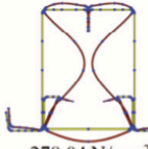

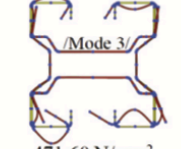
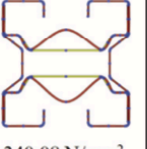
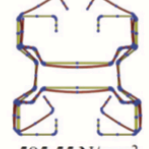
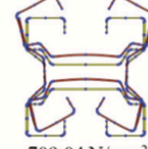
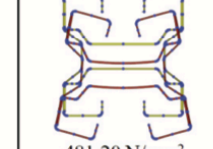
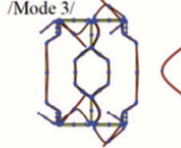
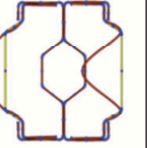
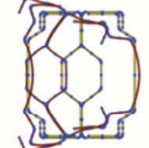
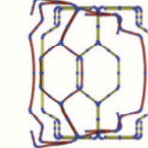
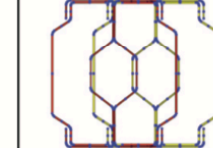
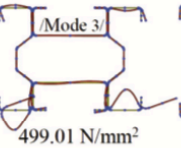
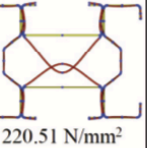
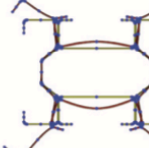
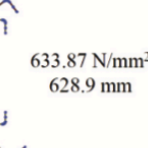
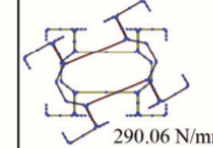
	Local buckling stress		Distortional buckling stress		Overall buckling stress
2xZ200+C145	 88.29 N/mm <sup>2</sup> 115.8 mm	 216.52 N/mm <sup>2</sup> 115.8 mm	 317.93 N/mm <sup>2</sup> 521.1 mm	 278.04 N/mm <sup>2</sup> 431.8 mm	 362.57 N/mm <sup>2</sup> 3000 mm
2xS200+2xT195	 471.60 N/mm <sup>2</sup> 65.9 mm	 340.08 N/mm <sup>2</sup> 79.5 mm	 585.55 N/mm <sup>2</sup> 758.9 mm	 709.04 N/mm <sup>2</sup> 1333.8 mm	 481.20 N/mm <sup>2</sup> 3000 mm
2BOxS200+Tt195	 505.59 N/mm <sup>2</sup> 65.9 mm	 340.01 N/mm <sup>2</sup> 79.5 mm	 989.51 N/mm <sup>2</sup> 758.9 mm	 854.64 N/mm <sup>2</sup> 915.9 mm	 106.01 N/mm <sup>2</sup> 3000 mm
2xS200+2xC145	 499.01 N/mm <sup>2</sup> 65.9 mm	 220.51 N/mm <sup>2</sup> 96 mm	 633.87 N/mm <sup>2</sup> 628.9 mm		 290.06 N/mm <sup>2</sup> 3000 mm

Figure 2. Elastic buckling stress in N/mm<sup>2</sup> (obtained from FSM) and corresponding half-wavelengths in mm for each profile in the sections

From: Bujňák, J., Vičan, J., Georgieva, I., Schueremans, L., Vandewalle, L., and Pyl, L. (2012). "Design of built-up cold-formed steel columns according to the direct strength method." *Procedia Engineering*, 40, pp. 119–124.

Lincy Pyl, Luc Schueremans, Willem Dierckx, Iveta Georgieva, "Fire safety analysis of a 3D frame structure based on a full-scale fire test", *Thin-Walled Structures*, 2012?, Vol. 61, pp 204-212

Bujňák, J., Vičan, J., Georgieva, I., Schueremans, L., Vandewalle, L., and Pyl, L. (2012). "Design of built-up cold-formed steel columns according to the direct strength method." *Procedia Engineering*, 40, pp. 119–124.

I. Georgieva, L. Schueremans, L. Pyl, Composed columns from cold-formed steel Z-profiles: experiments and code based predictions of the overall compression capacity, *Eng. Struct.*, 37 (2012), pp. 125-134

Lincy Pyl, X. Wang, Elien De Smedt, Marijke Mollaert, "Approach to a reliability framework for membrane structure design, *International Journal of Computational Methods and Experimental Measurements*, Vol. 5, pp 105-115, 2017

Lincy Pyl, "Integrated structural health monitoring by 3D printed metallic structures", *International Conference on 3D Printing Technology and Innovations*, July 5-6, Frankfurt, Germany, 2017

Lincy Pyl, Kalliopi-Artemi Kalteremidou and Danny van Hemelrijck, "Exploration of specimen geometry and tab configuration for tensile testing exploiting the potential of 3D printing freeform shape continuous carbon fibre-reinforced nylon matrix composites", *Polymer Testing*, Vol. 71, September 2018

Kalliopi-Artemi Kalteremidou, Brendon R. Murray, Eleni Tsangouri, Dimitrios Aggelis, Danny van Hemelrijck and Lincy Pyl, "Multiaxial damage characterization of carbon/epoxy angle-ply laminates under static tension by combining in situ microscopy with acoustic emission", *Applied Sciences*, 23 October 2018, <https://doi.org/10.3390/app8112021>

Lincy Pyl, Kalliopi-Artemi Kalteremidou and Danny van Hemelrijck, "Exploration of the design freedom of 3D printed continuous fibre-reinforced polymers in open-hole tensile strength tests", *Composites Science and Technology*, Vol. 171, December 2018

Xing Liu, Bachir Belkassam, Arnaud Jonet, David Lecompte, Danny Van Hemelrijck, Rik Pintelon and Lincy Pyl, "Experimental investigation of energy absorption behaviour of circular carbon/epoxy composite tubes under quasi-static and dynamic crush loading", *Composite Structures*, Vol. 227, Article 111266, 1 November 2019

Xing Liu, Ling Wu, Danny Van Hemelrijck and Lincy Pyl, "Quasi-static crush modelling of carbon/epoxy composites with discontinuous Galerkin/anisotropic extrinsic cohesive law method", *Composite Structures*, Vol. 230, Article 111480, 15 December 2019

Hamza Ousji, Bachir Belkassam, Lincy Pyl and John Vantomme, "Air-blast loading on empty metallic beverage can used as sacrificial cladding: Experimental, analytical and numerical study, *Engineering Structures*, Vol. 204, 2020

Kalliopi-Artemi Kalteremidou, Mohammad Hajikazemi, Wlm Van Paepegem, Danny van Hemelrijck and Lincy Pyl, Effect of multiaxiality, stacking sequence and number of off-axis layers on the mechanical response and damage sequence of carbon/epoxy composite laminates under static loading", *Composites Science and Technology*, Vol. 190, 2020