



*There is always a way.*

## Research activities

- October 2014–present **Numerical simulation of fluid-structure interaction**, *Ghent University*, Faculty of Engineering and Architecture.  
Associate Professor
- February 2013–September 2014 **Numerical simulation of fluid-structure interaction**, *Ghent University*, Faculty of Engineering and Architecture.  
10% Associate Professor and 90% postdoctoral fellow of the Research Foundation - Flanders (FWO)
- October 2010–January 2013 **Partitioned simulation of fluid-structure interaction and other coupled problems**, *Ghent University*, Faculty of Engineering and Architecture (Prof. Jan Vierendeels).  
Postdoctoral fellow of the Research Foundation - Flanders (FWO)
- June 2010–September 2010 **Efficient analysis of fluid-structure interaction problems in structural dynamics**, *Ghent University*, Faculty of Engineering and Architecture (Prof. Jan Vierendeels).  
Project of the Research Foundation - Flanders (FWO)
- October 2006–May 2010 **Development of Algorithms for the Partitioned Simulation of Strongly Coupled Fluid-Structure Interaction Problems**, *Ghent University*, Faculty of Engineering and Architecture (Prof. Jan Vierendeels).  
Ph. D. fellow of the Research Foundation - Flanders (FWO)
- September 2006 **Numerical study of bubble detachment**, *Ghent University*, Faculty of Engineering and Architecture.

## Foreign research stays

- July 2011–September 2011 **Gradient-based optimization for parameter identification studies with partitioned fluid-structure interaction simulations**, *Technical University of Munich*, Chair of Structural Analysis, Department of Engineering and Geodesy (Prof. Kai-Uwe Bletzinger).  
Grant for a long stay abroad of the Research Foundation - Flanders (FWO)
- July 2008–August 2008 **Comparison of monolithic and partitioned fluid-structure interaction**, *Massachusetts Institute of Technology*, Finite Element Research Group, Department of Mechanical Engineering (Prof. Klaus-Jürgen Bathe).  
Grant for a long stay abroad of the Research Foundation - Flanders (FWO)
- September 2007–June 2008 **Adaptation of Reduced-Order Models**, *Massachusetts Institute of Technology*, Aerospace Computational Design Laboratory, Department of Aeronautics and Astronautics (Prof. Karen Willcox).  
Grant for a long stay abroad of the Research Foundation - Flanders (FWO)

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## Education

- October 2006–  
April 2010 **Ph.D. in Electromechanical Engineering**, *Ghent University*, Faculty of Engineering and Architecture, Development of Algorithms for the Partitioned Simulation of Strongly Coupled Fluid-Structure Interaction Problems.
- October 2004–  
June 2006 **Master of Science in Electromechanical Engineering**, *Ghent University*.  
summa cum laude
- October 2001–  
June 2004 **Bachelor of Science in Electromechanical Engineering**, *Ghent University*.  
summa cum laude
- September 1995–  
June 2001 **Latin-Mathematics**, *Sint-Aloysiuscollege, Ninove*.  
summa cum laude

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## Teaching experience

- October 2018–  
present **Lecturer**, *Fluid Mechanics*, Ghent University, Belgium.  
Theory *See course description.*
- October 2014–  
present **Lecturer**, *Numerical Optimisation*, Ghent University, Belgium.  
Theory *See course description.*
- October 2014–  
present **Lecturer**, *Computational Fluid Dynamics*, Ghent University, Belgium.  
Theory *See course description.*
- October 2014–  
present **Lecturer**, *Turbomachines*, Ghent University, Belgium.  
Theory *See course description.*
- October 2013–  
September 2018 **Lecturer**, *Doctoral Course on Mathematical Techniques for Engineering Science*, Ghent University, Belgium.  
Theory and exercises
- October 2011–  
September 2017 **Lecturer**, *Fluid-structure interaction*, Ghent University, Belgium.  
Theory and exercises
- October 2011–  
September 2014 **Guest lecturer**, *Advanced Multi-physics Modeling for Medical Applications*, Ghent University, Belgium.  
Theory
- December 2008,  
August 2011 **Lecturer**, *JMBC Burgers course on Fluid-structure interaction (partim)*, Delft University of Technology, The Netherlands.  
Theory and exercises
- October 2006–  
September 2014 **Teaching Assistant**, *Fluid Mechanics*, Ghent University, Belgium, Prof. Jan Vierendeels.  
Exercises, laboratory work and CFD-project *See course description.*

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## Ph.D. students

- October 2019–  
present **Fluid-structure interaction simulation of elasto-hydrodynamic lubrication**, *Nicolas Delaissé*, Supervisor.
- September 2019–  
present **Fluid-structure interaction simulations of cardiovascular problems**, *Amith Balusubramanya*, Supervisor.
- September 2019–  
present **Aeroelasticity of large wind turbines using LES**, *François Trigaux*, Advisor.
- June 2019–  
present **Fluid-structure interaction simulation of wire drawing processes**, *Mathieu Ver-vaecke*, Supervisor.
- January 2018–  
present **Computational analysis of fluid-structure interaction in wind engineering**, *Navaneeth Kodunthirappully Narayanan*, Supervisor.
- October 2018–  
present **Fluid-structure interaction simulations of cardiovascular problems**, *Matthias Van Impe*, Supervisor.

- October 2017–present **Analytical study of multi-secant quasi-Newton methods for optimization problems**, *Nicolas Boutet*, Supervisor.
- October 2017–present **Development of reduced order CFD models for the application of uncertainty quantification**, *Kelbij Star*, Supervisor.
- October 2017–present **Fluid-structure interaction simulations and uncertainty quantification of flow-induced vibration in tube bundles**, *Henri Dolfen*, Supervisor.
- October 2016–present **Calculating free-surface flow using fluid-structure interaction techniques**, *Toon Demeester*, Supervisor.
- September 2016–present **Fluid-structure interaction simulation of the dynamic behavior of a flexible cylinder in supersonic flow**, *Lucas Delcour*, Supervisor.
- September 2016–present **Reducing flow-induced vibration in steam generators and heat exchangers using two-phase fluid-structure interaction simulations**, *Laurent De Moerloose*, Supervisor.
- September 2015–present **Fluid-structure interaction simulations of heart valves**, *Federico Canè*, Supervisor.
- September 2015–present **Wind-structure interactions of tensile surface structures**, *Jimmy Colliers*, Supervisor.
- September 2015–present **Computational shape optimisation of aerodynamic structures**, *Jolan Wauters*, Supervisor.
- September 2014–present **Fluid-structure interaction simulations of wind turbines with composite blades**, *Gilberto Santo*, Supervisor.
- October 2012–October 2018 **Efficient methods for automated conversion of wind turbine blade designs into high-fidelity finite element modelling with shell and solid elements**, *Mathijs Peeters*, Supervisor.
- February 2014–September 2017 **Splicing and weaving of yarns with air jets**, *Akil Osman*, Supervisor.
- September 2012–December 2016 **Integrating Valve Leaflet Motion into Patient-Specific Numerical Blood Flow Simulations of the Human Heart: Strategies and Challenges**, *Alessandra Bavo*, Supervisor.
- February 2012–June 2016 **Computational Analysis of a Twin Screw Expander for Small Scale ORC Systems**, *Iva Papes*, Supervisor.
- October 2011–September 2015 **Computational analysis of flow-induced vibrations in fuel rod bundles of next generation nuclear reactors**, *Jeroen De Ridder*, Supervisor.
- October 2010–September 2014 **Numerical modelling of the fluid-structure interaction in complex vascular geometries**, *Joris Bols*, Advisor.
- October 2010–September 2014 **Fluid-structure interaction simulation of (repaired) aortic coarctation**, *Liesbeth Taelman*, Advisor.
- October 2009–September 2013 **Wind-structure interaction simulations of ovaling vibrations in silo groups**, *Jeroen Hillewaere*, Advisor.
- December 2007–November 2012 **Fluid-structure modeling in the feto-placental circulation: On the umbilical vein and ductus venosus bifurcation**, *Paul Roger Leinan*, Supervisor.

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## Master students

- October 2019–June 2020 **Numerical investigation of the flow field around a tube bundle subjected to two-phase cross-flow**, *Axel Bral*, Supervisor.
- October 2019–June 2020 **Influence of uncertain geometry on flow-induced vibrations using computational fluid dynamics**, *Basile Lievens*, Supervisor.

- October 2019–  
June 2020 **Parametric study of the dynamic stability characteristics of a UAV using surrogate modeling**, *Pieter-Jan Degroote*, Supervisor.
- October 2018–  
September 2019 **Analysis and design of a radial fan discharging directly in the atmosphere**, *Wout Verbiest*, Supervisor.
- October 2018–  
June 2019 **Fluid-structure interaction simulation of a catamaran**, *Alec Bagué*, Supervisor.
- October 2018–  
June 2019 **Optimization of the control surfaces of an unmanned aerial vehicle**, *Cedric Bouckaert and Ruben Demeersseman*, Supervisor.
- October 2018–  
June 2019 **Investigation into the use of multiple main nozzle inlets on air-jet weaving looms**, *Nicolas Delaissé*, Supervisor.
- October 2018–  
June 2019 **Design and optimization of an endless pool**, *Victor Mommerency*, Supervisor.
- October 2017–  
September 2018 **Optimization of technology for deployment of inflatable river weirs with steel gate**, *Jeroen Casters*, Supervisor.
- October 2017–  
September 2018 **Analysis of the dynamics of a culvert valve for navigation lock levelling**, *Ares De Groot*, Supervisor.
- October 2017–  
June 2018 **Analysis of blade loading due to wake effects in wind turbine farms**, *Simon Allosserie and Matthias Debyser*, Supervisor.
- October 2017–  
June 2018 **Multi-Objective Optimization of an Unmanned Aerial Vehicle, Using Surrogate Modelling and Game Theory**, *Renaud Boury and Nathan De Mazière*, Supervisor.
- October 2017–  
June 2018 **Robust design of an Unmanned Aerial Vehicle**, *Vince Browaeys*, Supervisor.
- October 2017–  
June 2018 **Design and optimisation of a compact torque converter**, *Simon Holvoet*, Supervisor.
- October 2017–  
June 2018 **Investigation of the vibrations of a vertical tube subjected to internal two-phase flow**, *Alexander Meire*, Supervisor.
- October 2017–  
June 2018 **Study of cross flow fan behaviour in a combine**, *Jasper Taets*, Supervisor.
- October 2017–  
June 2018 **Analysis of the wind loading on a large scale conveyor belt**, *Dries Van Cauteren*, Supervisor.
- October 2017–  
June 2018 **Comparison and validation of numerical models for large-scale vortices in an array of cylinders**, *Bart Verzelen*, Supervisor.
- October 2016–  
June 2017 **Optimization of a hydraulic torque converter's efficiency**, *Cedric Buffel and Arne Degrande*, Supervisor.
- October 2016–  
June 2017 **Simulation model for the temperature behaviour in a train brake**, *Kwinten De Rijck*, Supervisor.
- October 2016–  
June 2017 **Optimization of the Winglets of an Unmanned Aerial Vehicle**, *Christof Defrancq*, Supervisor.
- October 2016–  
June 2017 **Uncertainty Quantification of an Unmanned Aerial Vehicle**, *Henri Dolfen*, Supervisor.
- October 2016–  
September 2017 **Multi Fidelity Optimization of the Stall Characteristics of an Unmanned Aerial Vehicle**, *Jelle Meyers*, Supervisor.
- October 2016–  
June 2017 **Analysis of the forces acting on the shaft of a large dredge pump**, *Katrijn Van Lierde*, Supervisor.
- October 2016–  
September 2017 **Development of an accurate and fast model for the design of hydraulic torque converters**, *Nicola Zwaenepoel*, Supervisor.

- October 2015–  
June 2016 **Optimisation of the impeller in a milk cooling tank**, *Pieter Boone*, Supervisor.
- October 2015–  
June 2016 **Numerical investigation of periodic large-scale vortex-induced vibrations in an array of cylinders in axial flow**, *Laurent De Moerloose*, Supervisor.
- October 2015–  
June 2016 **Optimization of the stall characteristics of an unmanned aerial vehicle**, *Lucas Delcour*, Supervisor.
- October 2015–  
June 2016 **Optimization of the stall characteristics of an unmanned aerial vehicle**, *Toon Demeester*, Supervisor.
- October 2015–  
June 2016 **Dynamic fluid loading of an open impeller in a centrifugal pump**, *Cedric Devriese*, Supervisor.
- October 2015–  
June 2016 **Analysis of a pump-turbine for an energy storing island**, *Kobe Mertens and Pieter Schacht*, Supervisor.
- October 2015–  
June 2016 **Study and optimization of the air flow in a channel**, *Arjan Missinne*, Supervisor.
- October 2015–  
June 2016 **Optimization of the landing of an unmanned aerial vehicle**, *Xavier van Heule*, Supervisor.
- October 2015–  
June 2016 **Optimisation of a human-powered aircraft using fluid-structure interaction simulations**, *Bob Vanderhoydonck*, Supervisor.
- October 2015–  
June 2016 **Aerodynamic optimisation of spokes of bike wheels**, *Arnout Wittevrongel*, Supervisor.
- October 2014–  
June 2015 **CFD analysis of a screw expander using real gas models**, *Lazhar Abdelli*, Supervisor.
- October 2014–  
June 2015 **Assessment of the force spectrum induced by turbulence on an array of cylinders in incompressible axial flow**, *Pieter Aerts*, Supervisor.
- October 2014–  
June 2015 **Modelling of an electromagnetically controlled valve in a compressible flow**, *Thomas Bonami*, Supervisor.
- October 2013–  
June 2014 **Numerical analysis and design of main nozzles for air weaving machines**, *Ine Hertens*, Supervisor.
- October 2013–  
January 2015 **Study of the dynamic fluid load on an open impeller in a centrifugal pump**, *Martijn Deprez*, Supervisor.
- October 2013–  
June 2014 **Development of a CFD simulation methodology for the modification of an axial turbine in a turbocharger**, *Thibault De Jaeger*, Supervisor.
- October 2013–  
June 2014 **CFD modelling of a wind concentrator for increased yield of small wind turbines in low wind areas**, *Maxim Luyckx and Toon Van Obbergen*, Supervisor.
- October 2013–  
June 2014 **Study of wake effects in wind turbine parks**, *David Schillebeeckx*, Supervisor.
- October 2012–  
June 2013 **Aeroelastic study of wind turbine blades**, *Sergei Maertens*, Supervisor.
- February 2012–  
August 2012 **Evaluation of an auxiliary feedwater system at the Doel 4 nuclear power plant**, *Jan De Jonge*, Supervisor.
- October 2011–  
January 2013 **Numerical simulation of the flow around wind turbine blades**, *Koen Van der Biest*, Counsellor.
- October 2011–  
August 2012 **Simulation of the fluid-structure interaction of the lead-bismuth cooling fluid with the beam tube of the MYRRHA reactor**, *Michiel Van Damme*, Supervisor.
- October 2011–  
June 2012 **Optimisation of air curtains for shielding refrigerated rooms**, *Anke Asselman*, Supervisor.
- October 2010–  
June 2011 **Simulation and optimization of the fluid-structure interaction in an axial membrane pump**, *Jan Alexander*, Supervisor.



- October 2009–  
June 2010 **Simulation of fluid-structure interaction in a membrane pump**, *Joris Bols and Liesbeth Taelman*, Counsellor, awarded with the Atlas Copco Airpower prize.
- October 2009–  
June 2010 **Simulation and optimization of a piezofan**, *Brecht Debrouwere*, Counsellor.
- October 2008–  
June 2009 **Aeroelastic study of the oscillations of a silo**, *Bert Van Quekelberghe*, Counsellor.
- October 2007–  
June 2008 **Numerical simulation of fluid-structure interaction on hydrodynamic impact**, *Koen Stoop and Steve Vermeulen*, Counsellor.
- October 2006–  
June 2007 **Study of the interaction between the flow and flexible inhibitors in solid rocket boosters**, *Stefaan Techel*, Counsellor.

## Grants

- September 2019–  
August 2023 **Strategic basic research project of the Research Foundation - Flanders (FWO)**, *Computational Modelling of Thermo-Elastohydrodynamic Lubricated Contacts (ContactLub)*, Co-applicant with Dieter Fauconnier.
- July 2019–  
June 2023 **Research and development project of Flanders Innovation & Entrepreneurship (VLAIO)**, *Virtual drawing and bunching (ViDB)*, Co-applicant with Bekaert.
- October 2017–  
September 2020 **Research and development project of Flanders Innovation & Entrepreneurship (VLAIO)**, *Towards eco-efficient weaving by exploring flow fields (ECOFLOW)*, Co-applicant with Jan Vierendeels.
- January 2016–  
December 2019 **Starting grant of the Special Research Fund of Ghent University**, *Improving efficiency and safety of devices with flow along cylinders using fluid-structure interactions simulations (ESFLOC)*.
- April 2015–  
March 2019 **EU Horizon 2020 Research and Innovation Action**, *Thermal hydraulics Simulations and Experiments for the Safety Assessment of MEtal cooled reactors (SESAME)*, Co-applicant.
- April 2015–  
March 2019 **EU Horizon 2020 Research and Innovation Action**, *MYRRHA Research and Transmutation Endeavour (MYRTE)*, Co-applicant.
- February 2015–  
January 2019 **Strategic basic research project of Agency for Innovation by Science and Technology (IWT)**, *Efficient uncertainty quantification for optimization in robust design of industrial applications (EUFORIA)*, Co-applicant.
- January 2014–  
December 2018 **Research project of the Research Foundation - Flanders (FWO)**, *Fluid-structure interaction simulations of wind turbines with composite blades*, Applicant with Wim Van Paepegem.
- January 2013–  
December 2015 **Research and development project of Agency for Innovation by Science and Technology (IWT)**, *Optimized design for weaving machine main nozzles (ODMN)*, Co-applicant with Jan Vierendeels.
- February 2012–  
January 2016 **Strategic basic research project of Agency for Innovation by Science and Technology (IWT)**, *Next generation of organic Rankine cycles (ORCNext)*, Co-applicant with Jan Vierendeels.
- January 2012–  
December 2016 **Research project of the Research Foundation - Flanders (FWO)**, *Fundamental numerical and experimental study of flame spread over surfaces in case of fire*, Co-applicant with Bart Merci.
- October 2011–  
September 2015 **Ph. D. fellowship of the Research Foundation - Flanders (FWO)**, *Computational analysis of flow-induced vibrations in fuel rod bundles of next generation nuclear reactors*, Jeroen De Ridder.
- July 2011–  
September 2011 **Grant for a long stay abroad of the Research Foundation - Flanders (FWO)**, *Gradient-based optimization for parameter identification studies with partitioned fluid-structure interaction simulations*, Joris Degroote.

- October 2010–September 2014 **Post-doc fellowship of the Research Foundation - Flanders (FWO)**, *Partitioned simulation of fluid-structure interaction and other coupled problems*, Joris Degroote.
- September 2007–June 2008 **Grant for a long stay abroad of the Research Foundation - Flanders (FWO)**, *Adaptation of Reduced-Order Models*, Joris Degroote.
- October 2006–May 2010 **Ph. D. fellowship of the Research Foundation - Flanders (FWO)**, *Development of Algorithms for the Partitioned Simulation of Strongly Coupled Fluid-Structure Interaction Problems*, Joris Degroote.

## Honours

- October 2019 **Best poster award**, *44th Woudschoten Conference of Dutch-Flemish Scientific Computing Society, Zeist, the Netherlands*, Boundary control of finite volume-based POD-Galerkin reduced order models for buoyancy-driven flows, Kelbij Star, Giovanni Stabile, Sokratia Georgaka, Francesco Belloni, Gianluigi Rozza, Joris Degroote.
- March 2017 **Best paper award**, *International Multiconference of Engineers and Computer Scientists, Hong Kong*, Coupling of Partitioned Physics Codes with Quasi-Newton Methods, Rob Haelterman, Alfred Bogaers, Joris Degroote, Silviu Cracana.
- October 2012 **Best poster award**, *37th Woudschoten Conference, Zeist, the Netherlands*.
- April 2012 **Quadrennial award “Prof. D. De Meulemeester-Piot”**, *A.I.G.*, Award for a Ph.D. thesis in engineering with possible applications in textile technology.
- April 2011 **Finalist for the 2010 ECCOMAS Ph.D. Award**, *European Community on Computational Methods in Applied Sciences*, BNCM Best Ph.D. Thesis Award.
- December 2010 **Biennial award “Andreas De Leenheer” for Beta sciences**, *International Club of Flanders*.
- July 2006 **Sidmar prize**, *Sidmar N.V.*, Master thesis *Numerical study of bubble and droplet dynamics with partitioned solvers* at the Faculty of Engineering of the Ghent University.
- July 2006 **Boulvin-Van Engelen prize**, *A.I.G.*, Award for the engineering student with the highest academic achievement over the entire engineering program at the Ghent University.

## Articles in journals listed in the ISI Web of Science (a1)

- J. Wauters, I. Couckuyt, N. Knudde, T. Dhaene, and J. Degroote. Multi-objective optimization of a wing fence on an unmanned aerial vehicle using surrogate-derived gradients. *Structural and Multidisciplinary Optimization*, pages 1–14, 2019. DOI: , In press.
- F. Canè, M. Selmi, G. De Santis, A. Redaelli, P. Segers, and J. Degroote. Mixed impact of torsion on LV hemodynamics: a CFD study based on the chimera technique. *Computers in Biology and Medicine*, 112(103363):1–12, 2019. DOI: 10.1016/j.combiomed.2019.103363.
- L. Delcour and J. Degroote. Three-dimensional fluid-structure interaction simulations of a yarn subjected to the main nozzle flow of an air-jet weaving loom using a Chimera technique. *Textile Research Journal*, pages 1–51, 2019. DOI: 10.1177/0040517519862884.
- J. Wauters, J. Degroote, and J. Vierendeels. Comparative study of transitional turbulence models for the prediction of high angle of attack and hysteresis behavior. *American Institute of Aeronautics and Astronautics Journal*, 57(6):1–16, 2019. DOI: 10.2514/1.J057249.
- K. Star, F. Belloni, G. Van den Eynde, and J. Degroote. POD-identification reduced order model of linear transport equations for control purposes. *International Journal for Numerical Methods in Fluids*, 90(8):375–388, 2019. DOI: 10.1002/flid.4724.
- G. Santo, M. Peeters, W. Van Paepegem, and J. Degroote. Dynamic load and stress analysis

- of a large horizontal axis wind turbine using full scale fluid-structure interaction simulation. *Renewable Energy*, 140:212–226, 2019. DOI: 10.1016/j.renene.2019.03.053.
- G. Santo, M. Peeters, W. Van Paepegem, and J. Degroote. Numerical investigation of the effect of tower dam and rotor misalignment on performance and loads of a large wind turbine in the atmospheric boundary layer. *Energies*, 12(7):1208, 2019. DOI: 10.3390/en12071208.
- J. Colliers, M. Mollaert, J. Degroote, and L. De Laet. Prototyping of doubly curved thin shell wind tunnel models to facilitate experimental wind load analysis on thin double curved structures. *Journal of Wind Engineering and Industrial Aerodynamics*, 188:308–322, 2019. DOI: 10.1016/j.jweia.2019.03.004.
- D. Zeinali, A. Gupta, G. Maragkos, G. Agarwal, T. Beji, M. Chaos, Y. Wang, J. Degroote, and B. Merci. Study of the importance of non-uniform mass density in numerical simulations of fire spread over MDF panels in corner configuration. *Combustion and Flame*, 200:303–315, 2019. DOI: 10.1016/j.combustflame.2018.11.020.
- J. Wauters and J. Degroote. On the study of transitional low-Reynolds number flows over airfoils operating at high angles of attack and their prediction using transitional turbulence models. *Progress in Aerospace Sciences*, 103:52–68, 2018. DOI: 10.1016/j.paerosci.2018.10.004.
- M. Peeters, G. Santo, J. Degroote, and W. Van Paepegem. High-fidelity finite element models of composite wind turbine blades with shell and solid elements. *Composite Structures*, 200:521–531, 2018. DOI: 10.1016/j.compstruct.2018.05.091.
- M. Peeters, G. Santo, J. Degroote, and W. Van Paepegem. Comparison of shell and solid finite element models for the static certification tests of a 43m wind turbine blade. *Energies*, 11(6-1346):1–18, 2018. DOI: 10.3390/en11061346.
- I. Lahouli, R. Haelterman, J. Degroote, M. Shimoni, G. De Cubber, and R. Attia. Accelerating existing non-blind image deblurring techniques through a strap-on limited-memory switched Broyden method. *IEICE Transactions on Information and Systems*, 101(5):1–8, 2018. DOI: 10.1587/transinf.2017MVP0022.
- L. De Moerloose, P. Aerts, J. De Ridder, J. Degroote, and J. Vierendeels. Numerical investigation of large-scale vortices in an array of cylinders in axial flow. *Journal of Fluids and Structures*, 78:277–298, 2018. DOI: 10.1016/j.jfluidstructs.2018.01.002.
- D. Zeinali, S. Verstockt, T. Beji, T. Maragkos, J. Degroote, and B. Merci. Experimental study of corner fires - part i: Inert panel tests. *Combustion and Flame*, 189:472–490, 2018. DOI: 10.1016/j.combustflame.2017.09.034.
- D. Zeinali, S. Verstockt, T. Beji, T. Maragkos, J. Degroote, and B. Merci. Experimental study of corner fires - part ii: Flame spread over MDF panels. *Combustion and Flame*, 189:491–505, 2018. DOI: 10.1016/j.combustflame.2017.10.023.
- A. Osman, L. Delcour, I. Hertens, J. Vierendeels, and J. Degroote. Toward three-dimensional modeling of the interaction between the air flow and a clamped-free yarn inside the main nozzle of an air jet loom. *Textile Research Journal*, pages 1–12, 2018. DOI: 10.1177/0040517518758006.
- T. Demeester, J. Degroote, and J. Vierendeels. Stability analysis of a partitioned iterative method for steady free surface flow. *Journal of Computational Physics*, 354:387–392, 2018. DOI: 10.1016/j.jcp.2017.10.053.
- L. Delcour, J. Peeters, and J. Degroote. Development of an iterative procedure with a flow solver for optimizing the yarn speed in a main nozzle of an air jet loom. *Journal of The Textile Institute*, pages 1–14, 2018. DOI: 10.1080/00405000.2018.1529219.
- L. De Moerloose, L. Taelman, P. Segers, J. Vierendeels, and J. Degroote. Analysis of several subcycling schemes in partitioned simulations of strongly coupled fluid-structure interaction. *International Journal for Numerical Methods in Fluids*, 89:181–195, 2018. DOI: 10.1002/flid.4688.
- M. Peeters, G. Santo, J. Degroote, and W. Van Paepegem. The concept of segmented wind turbine blades: a review. *Energies*, 10(8):1112, 2017. DOI: 10.3390/en10081112.



- J. De Ridder, K. Van Tichelen, J. Degroote, and J. Vierendeels. Predicting modal characteristics of a cluster of cylinders in axial flow: from potential flow solutions to coupled CFD-CSM calculations. *Journal of Fluids and Structures*, 74:90–110, 2017. DOI: 10.1016/j.jfluidstructs.2017.07.006.
- A. Osman, B. Malengier, S. De Meulemeester, J. Peeters, J. Vierendeels, and J. Degroote. Simulation of air flow–yarn interaction inside the main nozzle of an air jet loom. *Textile Research Journal*, pages 1–11, 2017. DOI: 10.1177/0040517517697646.
- A.M. Bavo, A.M. Pouch, J. Degroote, J. Vierendeels, J.H. Gorman, R.C. Gorman, and P. Segers. Patient-specific CFD models for intraventricular flow analysis from 3D ultrasound imaging: comparison of three clinical cases. *Journal of Biomechanics*, 50:144–150, 2017. DOI: 10.1016/j.jbiomech.2016.11.039.
- A.M. Bavo, A.M. Pouch, J. Degroote, J. Vierendeels, J.H. Gorman, R.C. Gorman, and P. Segers. Patient-specific CFD simulation of intraventricular haemodynamics based on 3D ultrasound imaging. *Biomedical Engineering Online*, 15(1):107–122, 2016. DOI: 10.1186/s12938-016-0231-9.
- A. Osman, S. De Meulemeester, B. Malengier, J. Degroote, and J. Vierendeels. Numerical and experimental analysis of ends-together yarn splicing. *Textile Research Journal*, 87(12):1457–1468, 2017. DOI: 10.1177/0040517516654109.
- I. Papes, J. Degroote, and J. Vierendeels. Development of a thermodynamic low order model for a twin screw expander with emphasis on pulsations in the inlet pipe. *Applied Thermal Engineering*, 103:909–919, 2016. DOI: 10.1016/j.applthermaleng.2016.04.159.
- S. Ulaganathan, I. Couckuyt, T. Dhaene, J. Degroote, and E. Laermans. High dimensional Kriging metamodelling utilising gradient information. *Applied Mathematical Modelling*, 40(9–10):5256–5270, 2016. DOI: 10.1016/j.apm.2015.12.033.
- A.M. Bavo, G. Rocatello, F. Iannaccone, J. Degroote, J. Vierendeels, and P. Segers. Fluid-structure interaction simulation of prosthetic aortic valves: Comparison between immersed boundary and arbitrary Lagrangian-Eulerian techniques for the mesh representation. *PLOS ONE*, 11(4):e0154517, 2016. DOI: 10.1371/journal.pone.0154517.
- D. De Wilde, B. Trachet, N. Debusschere, F. Iannaccone, A. Swillens, J. Degroote, J. Vierendeels, G.R.Y. De Meyer, and P. Segers. Assessment of shear stress related parameters in the carotid bifurcation using mouse-specific FSI simulations. *Journal of Biomechanics*, 49(11):2135–2142, 2016. DOI: 10.1016/j.jbiomech.2015.11.048.
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