

# Mario Vanhoucke



## UCL School of Management

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## Department of Business Informatics and Operations Management

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## Technology and Operations Management Area

Vlerick Business School, Bolwerklaan 21, Brussels 1210, Belgium  
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## Academic Appointments

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- 2017 - present      **Northwestern Polytechnical University** (Xi'an, China)  
School of Management  
**Adjunct Professor** (2017 - present)
- 2010 - present      **University College London** (London, UK)  
UCL School of Management (2015 - present) and Department of Management Science & Innovation (2010 - 2015)  
**Senior Teaching Fellow and Honorary Senior Research Associate**
- 2001 - present      **Ghent University** (Ghent, Belgium)  
Department of Business Informatics and Operations Management  
**Head of Department and Full Professor** (2008 - present), Associate Professor (2006 - 2008), Assistant Professor (2001 - 2006)
- 2001 - present      **Vlerick Business School** (Brussels, Belgium)  
Technology and Operations Management Area  
**Full Professor** (2015 - present), Associate Professor (2006 - 2015), Assistant Professor (2001 - 2006)

## Education

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- 1996 - 2001      **PhD in Operations Management**  
University of Leuven, Belgium
- 1994 - 1996      **M.Sc. in Business Engineering**  
University of Leuven, Belgium
- 1991 - 1994      **B.Sc. in Business Engineering**  
University of Leuven, Belgium

## Awards

[www.or-as.be/awards](http://www.or-as.be/awards)

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### Research Awards

- 2017      **Elsie Cropper Award for Best Paper**  
for the paper "In pursuit of more accurate project forecasts: Integration of earned value management with exponential smoothing and reference class forecasting" at the Young OR Conference in London (presented by Jordy Batselier)
- 2015      **Editors' Award for Excellence in Reviewing**  
for the recognition of an outstanding contribution to the quality of the European Journal of Operational Research in 2014
- 2011      **Notable Contributions to Management Accounting Literature Award**  
for the paper "A Simulation Analysis of Interactions among Errors in Costing Systems" Denver (US)
- 2008      **IPMA Research Award**  
for the research "Measuring Time using Earned Value Management" International Project Management Association (IPMA), Rome (Italy)

2007 **Research Collaboration Fund Award**  
PMI Belgium, Brussels (Belgium)

## Teaching Awards

2015 **Best Teacher Award Business Engineering program**  
Faculty of Economics and Business Administration, Ghent University, Ghent (Belgium)

2014 **Best Teacher Award Business Engineering program**  
Faculty of Economics and Business Administration, Ghent University, Ghent (Belgium)

2013 **Best Teacher Award Business Engineering program**  
Faculty of Economics and Business Administration, Ghent University, Ghent (Belgium)

2002 **Best Teacher Award International MBA**  
Vlerick Business School, Ghent (Belgium)

## Student Awards

### PMI Belgium Best Thesis Award

2017 Incentive contract design for stochastic projects - Jeroen Santens

2016 Using Data Envelopment Analysis to support project success - Thomas Govaert

2015 A study to the impact of schedule adherence on the accuracy and stability of forecasts - Tom Servranckx

2014 Statistical project control - Annelies Martens

2012 A genetic algorithm for the multi-mode resource-constrained project scheduling problem with discounted cash flows - Pieter Leyman

2011 An accuracy study on Earned Value Management extensions using Monte-Carlo simulations - Evelyn De Blicke and Ellen De Groot

### PMI Belgium University Contest Award

2017 Baseline schedule and risk analysis: Exhibition stand at BISbeurs - Olivier Van Raemdonck, Gauthier Dejonckheere, Bram Devlieghere, Maxim Pitteman, Laura Vanacker

2016 De Waalse Krook: Risk Assessment using the Fuzzy Set Theory - Ellen De Backer, Rani Torrekens, Laurine Van Buggenhout, Mathilde Van Caekenbergh, Karen Verhaeghe

2015 Dynamic scheduling of a new project: Building wireless smart cities - Camille De Cock, Ellen Dekoning, Adeline Dewaele, Miguel Garcia Casado, Jessica Seurinck and Ann-Sophie Tytgat

2014 Managing product innovation: A study of product innovation in project management - Astrid De Keyzer, Jolien Dobbelaere, Shana Raes, Lisa Vandevoorde and Dorien Van Steenberge

2013 How to improve project team dynamics: Team building workshop - Pearl Debeurme, Sanne Diependaele, Ann-Sophie Parmentier, Julie Scheipers, Hanne Vanaelst and Eline Van Lombeek

2012 Windmolenpark Maldegem - Lien Vehent, Mélanie Decq, Jannig Theeten, Philippe Peelman and Philip Pensaert

2011 Impact of methodology and software on the planning of a construction project - Alexander De Cuyper, Jan Dierckx, Peter Van Vooren and Hristo Petrov

### Arcelor Mittal Best Thesis Award

2017 Multi-project scheduling: The application of a decoupled schedule generation scheme and a game mechanic - Rob Van Eynde

2016 On the use of artificial intelligence for project control - Thomas Carolo and Mathieu Degrande

2015 Control techniques for maintenance and repair of windmill projects - Mick Van Den Eeckhout

2014 The introduction of team rotation in a project management environment - Bert Aelter and Jules Branswyck

2013 An accuracy study and improvement of a time-dependent EV model using Monte Carlo simulation - Pieter Beeckman and Kenny Vanleeuwen

2012	A study of exact and meta-heuristic planning techniques for unrelated parallel machines with common servers in the textile industry - Louis-Philippe Kerkhove
2011	A case study for multi-project planning - Len Vandenheede
2010	Applying the shifting bottleneck procedure for a real-life production problem - Frederic Steen
2007	Personnel scheduling in the airline sector: Case Brussels Airlines - Bruce Fecheyr-Lippens

## Research Grants

[www.or-as.be/grants](http://www.or-as.be/grants)

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2017 - 2021	<b>University Research Fund (BOF), Ghent University € 190,000</b> A comprehensive framework and solution approach for scheduling flexible projects
2017 - 2021	<b>The Research Foundation - Flanders (FWO) € 202,750</b> An integrated analysis of incentive contracting for project management
2017 - 2020	<b>The Research Foundation - Flanders (FWO) € 160,000</b> Judgmental adjustment in forecasting with formal models: biases - cause, effect, and solutions
2016 - 2020	<b>The Research Foundation - Flanders (FWO) € 187,000</b> Resource-constrained project scheduling with outsourcing options: Mathematical formulations, scheduling policies, risk mitigation and reconciling conflicting objectives
2011 - 2020	<b>Concerted Research Action (GOA), Ghent University € 1,113,000</b> Searching for static and dynamic project drivers to predict and control the impact of management/contingency reserves on a project's success
2011 - 2014	<b>The Research Foundation - Flanders (FWO) € 256,000</b> Staffing and scheduling projects under multiple activity execution modes and with a multi-skilled workforce
2010 - 2013	<b>The Research Foundation - Flanders (FWO) € 254,000</b> Assessing the relation between schedule adherence, project performance stability and project success: the time dimension
2010	<b>Academic Research Fund (ARF), Vlerick Business School € 24,200</b> On the design of custom pack: Grouping of medical disposable items for surgical procedures
2008 - 2011	<b>The Research Foundation - Flanders (FWO) € 236,000</b> The influence of rostering systems on personnel satisfaction and quality of care: an optimization approach
2008 - 2011	<b>The Research Foundation - Flanders (FWO) € 231,000</b> An integrated approach for personnel rostering and project optimization in a multi-project environment
2008	<b>Academic Research Fund (ARF), Vlerick Business School € 33,000</b> Improving performance measurement by novel earned value management systems
2007 - 2011	<b>University Research Fund (BOF), Ghent University € 156,000</b> An integrated optimization approach for personnel staffing/scheduling and patient scheduling
2006 - 2009	<b>The Research Foundation - Flanders (FWO) € 20,500</b> Design of efficient exact and heuristic algorithms for financial resource optimisation in a multiproject environment
2004 - 2007	<b>The Research Foundation - Flanders (FWO) € 224,800</b> Design of efficient exact and heuristic algorithms for strategic and operational planning in hospitals
2003 - 2007	<b>University Research Fund (BOF), Ghent University € 140,000</b> Operational research and application in health-care systems
2003 - 2006	<b>University Research Fund (BOF), Ghent University € 140,000</b> Optimization in project scheduling: exact and heuristic methods

## Teaching

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2016 - present	<b>Data-driven Project Management</b> Master in General Management, Vlerick Business School, Belgium Master in International Management and Strategy, Vlerick Business School, Belgium
2008 - present	<b>Applied Operations Research</b> M.Sc. in Business Engineering, Ghent University, Belgium

2006 - present	<b>Integrated Management Exercise</b> M.Sc. in Business Engineering, Ghent University, Belgium
2001 - present	<b>Project Management</b> M.Sc. in Business Engineering, Ghent University, Belgium (2007 - present) M.Sc. in Civil Engineering, Ghent University, Belgium (2001 - present) M.Sc. in Management, University College London, UK (2013 - present) M.Sc. in Civil Engineering, University College London, UK (2010 - 2013) Executive Teaching at Vlerick Business School, Belgium (2001 - present) The International Academy of Osteopathy (2016 - present) M.Sc. in Sustainable Management of Natural Resources, Anton De Kom University, Suriname (2014, 2017) Executive Teaching at Baltic Management Institute, Lithuania (2013) M.Sc. in Operations and Technology Management, Ghent University, Belgium (2001 - 2007)
2001 - present	<b>Decision Making for Business</b> International MBA, Vlerick Business School, Belgium (2001 - present) Master in General Management, Vlerick Business School, Belgium (2001 - present) Beijing International MBA, Peking University, China (2010 - present)
2014 - 2015	<b>Dynamic Project Planning</b> International MBA, Vlerick Business School, Belgium
2001 - 2013	<b>Statistics for Business</b> Master in General Management, Vlerick Business School, Belgium
2001 - 2006	<b>Advanced Production Management</b> M.Sc. in Operations and Technology Management, Ghent University, Belgium

## PhD Supervision

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2017 - present	<b>Weikang Guo</b> Scheduling, risk and control algorithms in project management Ghent University, Ghent, Belgium
2017 - present	<b>Izel Unsal</b> Scheduling, risk and control algorithms in project management Ghent University, Ghent, Belgium
2017 - present	<b>Jingyu Luo</b> Scheduling, risk and control algorithms in project management Ghent University, Ghent, Belgium
2017 - present	<b>Jie Song</b> Scheduling, risk and control algorithms in project management Ghent University, Ghent, Belgium
2017 - present	<b>Jakob Snauwaert</b> Resource skills for the resource renting project scheduling problem Ghent University, Ghent, Belgium
2017 - present	<b>Rob Van Eynde</b> Multi-project resource constrained project scheduling problems with quality restrictions Ghent University, Ghent, Belgium
2016 - present	<b>J�rome Bridelance</b> Dedication and sharing policies for multi-project planning Ghent University, Ghent, Belgium
2015 - present	<b>Tom Servranckx</b> Activity and resource flexibility in project scheduling Ghent University, Ghent, Belgium
2014 - present	<b>Annelies Martens</b> Timing and accuracy of control points in project management Ghent University, Ghent, Belgium
2014 - present	<b>Jeroen Burgelman</b> The resource-constrained project scheduling problem with dynamic project arrivals Ghent University, Ghent, Belgium
2012 - 2016	<b>Jordy Batselier</b> Empirical evaluation of existing and novel approaches for project forecasting and control Ghent University, Ghent, Belgium (02/09/2016)

2012 - 2016	<b>Louis-Philippe Kerkhove</b> Improving decision making for incentivised and weather-sensitive projects Ghent University, Ghent, Belgium (09/09/2016)
2012 - 2016	<b>Pieter Leyman</b> Heuristic algorithms for payment models in project scheduling Ghent University, Ghent, Belgium (16/09/2016)
2009 - 2012	<b>Christophe Van Huele</b> The influence of rostering systems on personnel satisfaction and quality of care Ghent University, Ghent, Belgium
2010 - 2015	<b>Mathieu Wauters</b> Time/cost optimization and forecasting in project scheduling and control Ghent University, Ghent, Belgium (18/09/2015)
2009 - 2015	<b>Jeroen Colin</b> Single and multi-variate methods for statistical project control using earned value management Ghent University, Ghent, Belgium (17/04/2015)
2007 - 2011	<b>Sophie Hoozée</b> On the determinants and the role of costing accuracy of time-drive activity-based costing Ghent University, Ghent, Belgium (03/06/2011) - Co-advisor
2007 - 2011	<b>Veronique Sels</b> Hybrid (meta-)heuristic optimization for single machine, parallel machine and job shop scheduling problems Ghent University, Ghent, Belgium (26/08/2011)
2005 - 2010	<b>Vincent Van Peteghem</b> Meta-heuristic procedures for the multi-mode project scheduling problem Ghent University, Ghent, Belgium (28/05/2010)
2003 - 2007	<b>Broos Maenhout</b> Exact and meta-heuristic algorithms for nurse shift scheduling problems Ghent University, Ghent, Belgium (25/09/2007)
2002 - 2006	<b>Dieter Debels</b> Exact and heuristic optimization for various resource-constrained project scheduling problems Ghent University, Ghent, Belgium (31/11/2006)

## Professional Activities

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Program Director	M.Sc. in Operations and Technology Management (2003 - 2007) B.Sc. and M.Sc. in Business Engineering (2004 - present)
Founder	EVM Europe (2009 - 2017) Operations Research - Applications and Solutions (OR-AS bvba) (2007 - present)
Editorial Board	Computers & Operations Research (2014 - present) European Working Group on Project Management and Scheduling (2014 - present) International Conference on Applied Operational Research (2014) Journal of Modern Project Management (2012 - present) Operations Research for Health Care (2012 - present)
Member	Institute for Operations Research and Management Science (INFORMS) Project Management Institute (PMI)
Developer	ProTrack: Project Management software - <a href="http://www.protrack.be">www.protrack.be</a> P2 Engine: Project Management research tool - <a href="http://www.p2engine.com">www.p2engine.com</a> PM Knowledge Center: Online learning platform - <a href="http://www.pmknowledgecenter.com">www.pmknowledgecenter.com</a> ORASTalks: Student mobile app - <a href="http://www.or-as.be/orastalks">www.or-as.be/orastalks</a> PSG and PSG Extended: Project scheduling business games - <a href="http://www.pmgamecenter.com">www.pmgamecenter.com</a>
Ad-hoc reviewer	Annals of Operations Research, Applied Soft Computing, Automation in Construction, Computers and Industrial Engineering, Computers and Operations Research, Engineering Optimization, European Journal of Industrial Engineering, European Journal of Operational Research, IEE Transactions, INFORMS Transactions on Education, International Journal of Computer Integrated Manufacturing, International Journal of Production Economics, International Journal of Production Research, International Journal of Project Management, International Transactions in Operational Research, Journal of Civil Engineering and Management, Journal of Heuristics, Journal of Management in Engineering, Journal of Scheduling, Journal of Systems and Software, Journal of the Operational Research Society, Lecture Notes on Computer Science, Management Science, Mathematical Problems in Engineering, Naval Research Logistics, Networks, Neurocomputing, Omega - The International Journal of Management Science, Operations Research, Optimization Methods and Software

## Case Studies

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Project Management	The data-driven project manager (Parts I to IV) Plan - Game - Risk - Control
Project Management	The Mutum-Parana II Bridge (A, B and C) Project scheduling - Risk analysis - Project control
Applied Operations Research	Decision-making for business: The Sint Catherina Hospital (A to F) Data modelling - Budget partitioning - Shift design - Cyclic scheduling - Rostering
Decision Making	Decision-making for business Marketing - Production - Finance (in Dutch)

## Publications

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### International Journals Web of Science

- Vanhoucke, M., and Coelho, J., 2018, "A tool to test and validate algorithms for the resource-constrained project scheduling problem", *Computers and Industrial Engineering*, To Appear.
- Coelho, J., and Vanhoucke, M., 2018, "An exact composite lower bound strategy for the resource-constrained project scheduling problem", *Computers and Operations Research*, To Appear.
- Martens, A., and Vanhoucke, M., 2018, "An empirical validation of the performance of project control tolerance limits", *Automation in Construction*, 89, 71–85 (doi: 10.1016/j.autcon.2018.01.002).
- Wang, Y., He, Z., Kerkhove, L.-P., and Vanhoucke, M., 2017, "On the performance of priority rules for the stochastic resource constrained multi-project scheduling problem", *Computers and Industrial Engineering*, 114, 223-234 (doi: 10.1016/j.cie.2017.10.021).
- Kerkhove, L.-P., Vanhoucke, M. and Maenhout, B., 2017, "On the resource renting problem with overtime", *Computers and Industrial Engineering*, 111, 303–319 (doi: 10.1016/j.cie.2017.07.024).
- Martens, A., and Vanhoucke, M., 2017, "The integration of constrained resources into top-down project control", *Computers and Industrial Engineering*, 110, 277–288 (doi: 10.1016/j.cie.2017.05.020).
- Martens, A., and Vanhoucke, M., 2017, "A buffer control method for top-down project control", *European Journal of Operational Research*, 262(1), 274–286 (doi: 10.1016/j.ejor.2017.03.034).
- Kerkhove, L.-P. and Vanhoucke, M., 2017, "A parallel multi-objective parallel scatter search for optimising incentive contract design in projects", *European Journal of Operational Research*, 261(3), 1066–1084 (doi: 10.1016/j.ejor.2017.02.043).
- Kerkhove, L.-P. and Vanhoucke, M., 2017, "Optimised scheduling for weather sensitive offshore construction projects", *Omega - The International Journal of Management Science*, 66, 58–78 (doi: 10.1016/j.omega.2016.01.011).
- Wauters, M., and Vanhoucke, M., 2017, "A nearest neighbour extension to project duration forecasting with artificial intelligence", *European Journal of Operational Research*, 259(3), 1097–1111 (doi: 10.1016/j.ejor.2016.11.018).
- Batselier, J. and Vanhoucke, M., 2017, "Improving project forecast accuracy by integrating earned value management with exponential smoothing and reference class forecasting", *International Journal of Project Management*, 35, 28–43 (doi:10.1016/j.ijproman.2016.10.003).
- Leyman, P. and Vanhoucke, M., 2017, "Capital- and resource-constrained project scheduling with net present value optimization", *European Journal of Operational Research*, 256(3), 757–776 (doi:10.1016/j.ejor.2016.07.019).
- Kerkhove, L.-P. and Vanhoucke, M., 2017, "Extensions of earned value management: Using the earned incentive metric to improve signal quality", *International Journal of Project Management*, 35, 148–168 (doi: 10.1016/j.ijproman.2016.10.014).
- Verbeeck, C., Van Peteghem, V., Vanhoucke, M., Vansteenwegen, P., and Aghezzaf, E.-H., 2017, "A metaheuristic solution approach for the time-constrained project scheduling problem", *OR Spectrum*, 39(2), 353–371 (doi: 10.1007/s00291-016-0458-7).
- Batselier, J. and Vanhoucke, M., 2017, "Project regularity: Development and evaluation of a new project characteristic", *Journal of Systems Science and Systems Engineering*, 26(1), 100–120 (doi:10.1007/s11518-016-5312-6).
- Maenhout, B. and Vanhoucke, M., 2017, "A resource type analysis of the integrated project scheduling and personnel staffing problem", *Annals of Operations Research*, 252(2), 407–433 (doi:10.1007/s10479-015-2033-z).

- Batselier, J. and Vanhoucke, M., 2016, "Practical application and empirical evaluation of reference class forecasting for project management", *Project Management Journal*, 47(5), 36–51.
- Wauters, M. and Vanhoucke, M., 2016, "A study on complexity and uncertainty perception and solution strategies for the time/cost trade-off problem", *Project Management Journal*, 47(4), 29–50.
- Leyman, P. and Vanhoucke, M., 2016, "Payment models and net present value optimization for resource-constrained project scheduling", *Computers and Industrial Engineering*, 91, 139–153 (doi:10.1016/j.cie.2015.11.008).
- Wauters, M. and Vanhoucke, M., 2016, "A comparative study of Artificial Intelligence methods for project duration forecasting", *Expert Systems with Applications*, 46, 249–261 (doi:10.1016/j.eswa.2015.10.008).
- Kerkhove, L.-P. and Vanhoucke, M., 2016, "Incentive contract design for projects: The owner's perspective", *Omega - The International Journal of Management Science*, 62, 93–114 (doi:10.1016/j.omega.2015.09.002).
- Maenhout, B. and Vanhoucke, M., 2016, "An exact algorithm for an integrated project staffing problem with a homogeneous workforce", *Journal of Scheduling*, 19(2), 107–133 (doi:10.1007/s10951-015-0443-z).
- Vanhoucke, M. and Coelho, J., 2016, "An approach using SAT solvers for the RCPSp with logical constraints", *European Journal of Operational Research*, 249(2), 577–591 (doi:10.1016/j.ejor.2015.08.044).
- Vanhoucke, M. and Colin, J., 2016, "On the use of multivariate regression methods for longest path calculations from earned value management observations", *Omega - The International Journal of Management Science*, 61, 127–140 (doi:10.1016/j.omega.2015.07.013).
- Colin, J. and Vanhoucke, M., 2016, "Empirical perspective on activity durations for project management simulation studies", *Journal of Construction Engineering and Management*, 142(1), 04015047 (doi:10.1061/(asce)co.1943-7862.0001022).
- Vandenheede, L., Vanhoucke, M. and Maenhout, B., 2016, "A scatter search for the extended resource renting problem", *International Journal of Production Research*, 54(16), 4723–4743 (doi:10.1080/00207543.2015.1064177).
- Colin, J., Martens, A., Vanhoucke, M. and Wauters, M., 2015, "A multivariate approach for top down project control using earned value management", *Decision Support Systems*, 79, 65-76 (doi:10.1016/j.dss.2015.08.002).
- Willems, L. and Vanhoucke, M., 2015, "Classification of articles and journals on project control and earned value management", *International Journal of Project Management*, 33(7), 1610–1634 (doi:10.1016/j.ijproman.2015.06.003).
- Batselier, J. and Vanhoucke, M., 2015, "Empirical evaluation of earned value management forecasting accuracy for time and cost", *Journal of Construction Engineering and Management*, 141(11), 1–13 (doi:10.1061/(asce)co.1943-7862.0001008).
- Cardoen, B., Beliën, J. and Vanhoucke, M., 2015, "On the design of custom packs: Grouping of medical disposable items for surgeries", *International Journal of Production Research*, 53(24), 7343–7359 (doi:10.1080/00207543.2015.1061221).
- Batselier, J. and Vanhoucke, M., 2015, "Evaluation of deterministic state-of-the-art forecasting approaches for project duration based on earned value management", *International Journal of Project Management*, 33(7), 1588–1596 (doi:10.1016/j.ijproman.2015.04.003).
- Van Peteghem, V. and Vanhoucke, M., 2015, "Influence of learning in resource-constrained project scheduling", *Computers and Industrial Engineering*, 87, 569–579 (doi:10.1016/j.cie.2015.06.007).
- Colin, J. and Vanhoucke, M., 2015, "Developing a framework for statistical process control approaches in project management", *International Journal of Project Management*, 33(6), 1289–1300 (doi:10.1016/j.ijproman.2015.03.014).
- Batselier, J. and Vanhoucke, M., 2015, "Construction and evaluation framework for a real-life project database", *International Journal of Project Management*, 33(3), 697–710 (doi:10.1016/j.ijproman.2014.09.004).
- Colin, J. and Vanhoucke, M., 2015, "A comparison of the performance of various project control methods using earned value management systems", *Expert Systems with Applications*, 42(6), 3159–3175 (doi:10.1016/j.eswa.2014.12.007).
- Sels, V., Coelho, J., Dias, A.M. and Vanhoucke, M., 2015, "Hybrid tabu search and a truncated branch-and-bound for the unrelated parallel machine scheduling problem", *Computers and Operations Research*, 53, 107–117 (doi:10.1016/j.cor.2014.08.002).
- Leyman, P. and Vanhoucke, M., 2015, "A new scheduling technique for the resource-constrained project scheduling problem with discounted cash flows", *International Journal of Production Research*, 53(9), 2771–2786 (doi:10.1080/00207543.2014.980463).

- Wauters, M. and Vanhoucke, M., 2015, "Study of the stability of Earned Value Management forecasting", *Journal of Construction Engineering and Management*, 141(4), 04015047–1 (doi:10.1061/(asce)co.1943-7862.0000947).
- Van Huele, C. and Vanhoucke, M., 2015, "Operating theatre modelling: integrating social measures", *Journal of Simulation*, 9(2), 121-128 (doi:10.1057/jos.2014.32).
- Colin, J. and Vanhoucke, M., 2014, "Setting tolerance limits for statistical project control Using Earned Value Management", *Omega - The International Journal of Management Science*, 49, 107–122 (doi:10.1016/j.omega.2014.06.001).
- Van Huele, C. and Vanhoucke, M., 2014, "Analysis of the integration of the physician rostering problem and the surgery scheduling problem", *Journal of medical systems*, 38(6), 1–16 (doi:10.1007/s10916-014-0043-z).
- Kerkhove, L.-P. and Vanhoucke, M., 2014, "Scheduling of unrelated parallel machines with limited server availability on multiple production locations: a case study in knitted fabrics", *International Journal of Production Research*, 52(9), 2630–2653 (doi:10.1080/00207543.2013.865855).
- Van Peteghem, V. and Vanhoucke, M., 2014, "An experimental investigation of metaheuristics for the multi-mode resource-constrained project scheduling problem on new dataset instances", *European Journal of Operational Research*, 235(1), 62–72 (doi:10.1016/j.ejor.2013.10.012).
- Sels, V. and Vanhoucke, M., 2014, "A hybrid Electromagnetism-like Mechanism/tabu search procedure for the single machine scheduling problem with a maximum lateness objective", *Computers and Industrial Engineering*, 67, 44–55 (doi:10.1016/j.cie.2013.10.013).
- Wauters, M. and Vanhoucke, M., 2014, "Support Vector Machine Regression for project control forecasting", *Automation in Construction*, 47, 92–106 (doi:10.1016/j.autcon.2014.07.014).
- Maenhout, B. and Vanhoucke, M., 2013, "An integrated nurse staffing and scheduling analysis for longer-term nursing staff allocation problems", *Omega - The International Journal of Management Science*, 41(2), 485–499 (doi:10.1016/j.omega.2012.01.002).
- Maenhout, B. and Vanhoucke, M., 2013, "Analyzing the nursing organizational structure and process from a scheduling perspective", *Health Care Management Science*, 16(3), 177–196 (doi:10.1007/s10729-013-9222-6).
- Maenhout, B. and Vanhoucke, M., 2013, "Reconstructing nurse schedules: computational insights in the problem size parameters", *Omega - The International Journal of Management Science*, 41(5), 903–918 (doi:10.1016/j.omega.2012.10.010).
- Van Peteghem, V. and Vanhoucke, M., 2013, "An artificial immune system algorithm for the resource availability cost problem", *Flexible Services and Manufacturing Journal*, 25(1-2), 122–144 (doi:10.1007/s10696-011-9117-0).
- Sels, V., Gheysen, N. and Vanhoucke, M., 2012, "A comparison of priority rules for the job shop scheduling problem under different flow time- and tardiness-related objective functions", *International Journal of Production Research*, 50(15), 4255–4270 (doi:10.1080/00207543.2011.611539).
- Sels, V. and Vanhoucke, M., 2012, "A hybrid genetic algorithm for the single machine maximum lateness problem with release times and family setups", *Computers and Operations Research*, 39(10), 2346–2358 (doi:10.1016/j.cor.2011.12.014).
- Vanhoucke, M., 2012, "Measuring the efficiency of project control using fictitious and empirical project data", *International Journal of Project Management*, 30(2), 252–263 (doi:10.1016/j.ijproman.2011.05.006).
- Coelho, J. and Vanhoucke, M., 2011, "Multi-mode resource-constrained project scheduling using RCPSP and SAT solvers", *European Journal of Operational Research*, 213(1), 73–82 (doi:10.1016/j.ejor.2011.03.019).
- Maenhout, B. and Vanhoucke, M., 2011, "An evolutionary approach for the nurse rostering problem", *Computers and Operations Research*, 38(10), 1400–1411 (doi:10.1016/j.cor.2010.12.012).
- Van Peteghem, V. and Vanhoucke, M., 2011, "Using resource scarceness characteristics to solve the multi-mode resource-constrained project scheduling problem", *Journal of Heuristics*, 17(6), 705–728 (doi:10.1007/s10732-010-9152-0).
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## Conferences

### **Creative Construction Conference (CCC)**

1 presentation and 1 keynote speech (2016)

### **International Workshop on Project Management and Scheduling (PMS)**

19 presentations and 1 keynote speech (1998 - 2016)

### **European Conference on Operational Research (EURO)**

26 presentations (1998 - 2014)

### **International Federation of Operational Research Societies (IFORS)**

5 presentations (2014)

### **International Conference on Applied Operational Research (ICAOR)**

1 presentation, 1 keynote speech and 1 x member of organizing committee (2012 - 2014)

### **Multidisciplinary International Scheduling Conference: Theory & Applications (MISTA)**

6 presentations (2009 - 2015)

### **EVM Europe - Yearly European Conference**

5 presentations and 5 x local organizer (2009 - 2013)

### **European Conference on Evolutionary Computation in Combinatorial Optimization (EVOCOP)**

6 presentations (2005 - 2013)

### **EVM World - Annual International Workshop**

1 presentation and 1 keynote speech (2012)

### **Belgian OR Society (ORBEL)**

2 presentations (2011 - 2012)

### **INFORMS Annual Meeting**

16 presentations (1998 - 2011)

### **Technical Workshop on Optimization (TWO)**

2 presentations (2005 - 2006)

## Invited Talks

Selection

### **Luxatia International, Germany**

The big data project manager: A story about project data for academics and professionals (Berlin, February 15, 2018)

### **Xi'an Jiaotong University, China**

A summary of data-driven project management research and a personal reflection on doing good research (Xi'an, October 31, 2017)

### **MundoPM, Brazil**

The big data project manager: Harder, better, faster, stronger (São Paulo and Rio de Janeiro, 2016)

### **INESC Technology and Science (INESC TEC), Portugal**

An overview of the current research on project and machine scheduling at Ghent University and Vlerick Business School (2015)

### **Aarhus School of Business, Denmark**

If time is money, accuracy pays: An Overview of Past and Future Research on Integrated Project Management and Control Research (2014)

### **Technical University Munich, Germany**

Measuring Time: A simulation study of earned value metrics to forecast the total project duration (2008)

### **London School of Economics, UK**

The discrete time/cost trade-off problem: New computation results (2007)

### **The University of Nottingham, UK**

Exact & heuristic procedures for the discrete time/cost trade-off problem under various assumptions (2004)

**Technical University Lisbon, Portugal**  
Combinatorial optimization in project scheduling (2003)

**Research Stays**

**Universidade Aberta** (Lisbon, Portugal)  
and **INESC Technology and Science** (INESC TEC, Porto, Portugal)  
May 2016 - August 2016  
April 2015 - September 2015