

# JEAN-SÉBASTIEN TANCREZ

PROFESSOR OF OPERATIONS MANAGEMENT  
UNIVERSITE CATHOLIQUE DE LOUVAIN

Center for Operations Research and Econometrics (CORE)  
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Université catholique de Louvain (UCLouvain)

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## EMPLOYMENT

- Sept. 2011 – *Assistant professor*, tenured in 2014, CORE, LSM, UCLouvain, Mons, Belgium.
- Sept. 2009 – *Post-doctoral researcher*, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland.  
August 2011 Research projects in operations management, supervision of Ph.D. students and lecturer.
- April 2005 – *Ph.D. student in engineering sciences*, CORE, Université catholique de Louvain.  
August 2009 *Research assistant*, Louvain School of Management, FUCaM, Mons.
- Visiting Ph.D. student*, School of Computer Science, University College Dublin, Ireland.
- Post-doctoral researcher*, TransLogisTIC Project, CORE, Université catholique de Louvain.  
Optimization of the supply chain network and its inventory (with company AGC).
- March 2004 – *Research & development engineer*, Multitel research centre, Mons.  
March 2005 Development of a framework coupling simulation and optimization for production management.

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## EDUCATION

- 2005 – 2009 *Ph.D. in engineering sciences*, CORE, Université catholique de Louvain.  
Supervisors: Prof. Ph. Chevalier and Prof. P. Semal. Final defense: March 2009.  
Title: “Modelling Queueing Networks with Blocking using Probability Mass Fitting”.
- 2005 – 2007 *MAS, Doctoral program in engineering sciences*, Université catholique de Louvain.  
Summa cum laude (“la plus grande distinction”, 18/20).
- 1998 – 2003 *Engineer in applied mathematics*, Université catholique de Louvain.  
Summa cum laude (“la plus grande distinction”, 86%). Master’s thesis (Prof. P. Semal):  
“A discrete method to evaluate the productivity of stochastic production lines”.
- 1992 – 1998 *High school, Math-Languages option*, Collège Notre-Dame de Tournai.

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## TEACHING

- UCL
- 2011-...
  - Operations Research (Bac3, Fr.)
  - Project Management (Master1, Fr.)
  - Supply Chain Management (Master, Eng.)
- 2014-...
  - Quantitative Project (Master1, Fr.)
  - Project Management (Evening Master, Fr., Mons & Charleroi)
- 2016+19
  - Management Science (Bac2, Fr., LLN)
- 2017
  - Operations Research (Evening Master, Fr.)
- EPFL, 2011
  - Supply Chain Management, lecturer (Master, Eng., 45h)
- UCL 2005-08
  - Stochastic Modelling, exercises (Master, Fr.)

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## RESEARCH

Research Interests	<ul style="list-style-type: none"><li>• Supply chain management: supply chain network design, location-inventory problems, horizontal collaboration, robustness.</li><li>• Stochastic modelling and applications to operations management: production lines, healthcare, product portfolio management.</li><li>• Applications of mathematical modelling and operations research in general.</li></ul>
Research Grants	<ul style="list-style-type: none"><li>• FSR Project, 1 Ph.D. Student, 2 years, UCL, 2012. “Strategic Supply Chain Design and the Impacts of Demand Uncertainty”.</li><li>• Doctiris Project (Brussels region), 1 Ph.D. Student, 2+2 years, in collaboration (half-time) with FedEx Europe, 2013. “Express Shipment Service Network Design: Challenges, Advances and Robustness”.</li><li>• FRESH research fellowship (M. Schuster), 1 Ph.D. Student, 1+2 years, FNRS, 2014. “Strategic Supply Chain Design and Impacts of Demand Uncertainty”.</li></ul>
Ph.D. Thesis Supervision	<ul style="list-style-type: none"><li>• Matias Schuster Puga, “Supply Chain Network Design under Demand Uncertainty”, UCL, LSM, 2013-2017.</li><li>• José Miguel Quesada Pérez, “Express Shipment Service Network Design: Challenges, Advances and Robustness”, UCL, LSM, 2014-...</li><li>• Thomas Hacardiaux, “The Benefits of Horizontal Cooperation in Supply Chains”, UCL, LSM, 2016-...</li></ul>
Ph.D. Theses Juries	<ul style="list-style-type: none"><li>• Jean-Charles Lange, “Design and Management of Networks with Fixed Transportation Costs for the Reverse Flows of Reusable Packages”, September 2010, LSM, UCL.</li><li>• Géraldine Strack, “An integrated decision making process: An application on inventory, warehouse, production and distribution decisions”, September 2012, LSM, UCL.</li><li>• Ariel Zeballos, “Inventory Management with Working Capital Restrictions”, April 2013, EPFLausanne, Switzerland.</li><li>• Argyro Katsifou, “Variable Product Portfolio Management in Retail Operations”, June 2013, EPFLausanne, Switzerland.</li><li>• Tanja Mlinar, “Stochastic Models for Shared Production Resources in Supply Chains”, March 2014, LSM, UCL.</li><li>• Alejandro Lamas, “Three Models for Operations Planning in a Supply Chain Context”, December 2014, LSM, UCL.</li><li>• Martine Mostert, “Design and Management of Freight Transport Networks: Intermodal Transport and Externalities”, March 2017, ULg, HEC Liège.</li><li>• Wouter Lefever, “Stochastic and Robust Optimization Algorithms for the Inventory-Routing Problem and its Extensions”, September 2017, UGent.</li></ul>
Awards	<ul style="list-style-type: none"><li>• Louvain School of Management Research Excellence Award, 2013.</li><li>• Best Student Paper Award, Giseh conference, 2008.</li></ul>
Refereeing	<ul style="list-style-type: none"><li>• International journals: EJOR, IJPE, TRE, TRB, AOR, ...</li><li>• Projects: SNSF (Switzerland), Innoviris.</li><li>• OR2018 Conference, Supply Chain Management stream organizer.</li><li>• ILS Conference, 2010 and 2012, Student competition committee member.</li></ul>
Projects with companies	<ul style="list-style-type: none"><li>• AGC Glass Europe, FedEx Express Europe, Fruytier Group, Galactic, Oxfam, Wabco.</li></ul>

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## PUBLICATIONS

Peer-  
Reviewed  
International  
Journals

- J.-S. Tancrez. "A decomposition method for assembly/disassembly systems with blocking and general distributions". *Flexible Services and Manufacturing Journal*, forthcoming, 2019.
- J.M. Quesada Perez, J.-C. Lange and J.-S. Tancrez. "A Multi-Hub Express Shipment Service Network Design Model with Flexible Hub Assignment". *Transportation Research Part E*, 120, pp. 116-131, 2018.
- T. Hacardiaux and J.-S. Tancrez. "Assessing the Environmental Benefits of Horizontal Cooperation using a Location-Inventory Model". *Central European Journal of Operations Research*, forthcoming, 2018.
- M. Schuster Puga, S. Minner and J.-S. Tancrez. "Two-stage supply chain design with safety stock placement decisions". *International Journal of Production Economics*, forthcoming, 2018.
- M. Schuster Puga and J.-S. Tancrez. "A heuristic algorithm for solving large location-inventory problems with demand uncertainty". *European Journal of Operational Research*, 259(2), pp. 413-423, 2017.
- R.W. Seifert, J.-S. Tancrez and Işık Biçer. "Dynamic product portfolio management with life cycle considerations". *International Journal of Production Economics*, 171, pp. 71-83, 2016.
- J.M. Comas Marti, J.-S. Tancrez and R.W. Seifert. "Carbon footprint and responsiveness trade-offs in supply chain network design". *International Journal of Production Economics*, 166, pp. 129-142, 2015.
- A. Katsifou, R.W. Seifert and J.-S. Tancrez. "Joint Product Assortment, Inventory and Price Optimization to Attract Loyal and Non-Loyal Customers". *Omega*, 46, pp. 36-50, 2014.
- J.-S. Tancrez, B. Roland, J.-P. Cordier and F. Riane. "Assessing the Impact of Stochasticity for Operating Theater Sizing". *Decision Support Systems*, 55 (2), pp. 616-628, 2013.
- J.-S. Tancrez, J.-C. Lange and P. Semal. "A Location-Inventory Model for Large Three-Level Supply Chains". *Transportation Research Part E*, 48 (2), pp. 485-502, 2012.
- K.U. Langenberg, R.W. Seifert and J.-S. Tancrez. "Aligning Supply Chain Portfolios with Product Portfolios". *International Journal of Production Economics*, 135 (1), pp. 500-513, 2012.
- J.-S. Tancrez, Ph. Chevalier and P. Semal. "Probability Masses Fitting in the Analysis of Manufacturing Flow Lines". *Annals of Operations Research*, 182 (1), pp. 163-191, 2011.
- J.-S. Tancrez, P. Semal and Ph. Chevalier. "Histogram Based Bounds and Approximations for Production Lines". *European Journal of Operational Research*, 197 (3), pp. 1133-1141, 2009.

Book  
Chapters

- J.-S. Tancrez, Ph. Chevalier and P. Semal. "A Tight Bound on the Throughput of Queueing Networks with Blocking". In K. De Turck and A. Dudin, editors, *ASMTA 2013*, Lecture Notes in Computer Science (LNCS) 7984, pp. 396-415, Springer-Verlag Berlin, 2013.
- J.-S. Tancrez, B. Roland, J.-P. Cordier and F. Riane. "How Stochasticity and Emergencies Disrupt the Surgical Schedule". In S. McClean, P. Millard, E. El-Darzi and C. Nugent, editors, *Intelligent Patient Management*, Studies in Computational Intelligence, pp. 221-239, Springer Berlin, 2009.
- J.-S. Tancrez and P. Semal. "The Bounding Discrete Phase-type Method". In A.N. Langville and W.J. Stewart, editors, *MAM 2006: Markov Anniversary Meeting*, pp. 257-269, Bosen Books, Raleigh, North Carolina, 2006.

- Peer-Reviewed International Conference Proceedings
- J.-S. Tancrez. "A Log-Truck Scheduling Model Applied to a Belgian Forest Company". *ILS'2016*, Bordeaux, France, 2016.
  - J.-S. Tancrez. "Performance Evaluation of Stochastic Systems: Discretization and Decomposition". *ILS'2012*, Quebec, Canada, 2012.
  - J.-C. Lange, J.-S. Tancrez, P. Semal, G. Strack and K. Evrard. "Should Reusable Items Be Accumulated in Regional Depots?". *ILS'2010*, Casablanca, Morocco, 2010.
  - B. Roland, J.-P. Cordier, J.-S. Tancrez and F. Riane. "Recovery Beds and Blocking in Stochastic Operating Theaters". *IESM'2009*, Montréal, Canada, 2009.
  - J.-S. Tancrez, B. Roland, J.-P. Cordier and F. Riane. "Étude de la perturbation par les urgences du planning opératoire". *GISEH'08*, pp. 795-805, Lausanne, Switzerland, 2008. Also published in the journal *Logistique & Management*, 19 (2), pp. 43-52, 2011.
  - J.-S. Tancrez, Ph. Chevalier and P. Semal. "Estimations, bornes et distributions des performances pour les chaînes de production stochastiques". *MOSIM'08*, pp. 800-808, Tec&Doc Lavoisier, Paris, France, 2008.
  - J.-S. Tancrez, P. Semal and Ph. Chevalier. "Bounds on the Productivity of Stochastic Production Lines by Probability Masses Fitting". *IESM'2007*, Tsinghua University Press, Beijing, China, 2007.
  - J.-S. Tancrez and P. Semal. "Production Line Analysis by Bounding Discretization". *MOSIM'06*, pp. 1555-1565, Lavoisier, Rabat, Morocco, 2006.
- Talks in International Conferences
- *EURO XXIX*, 29<sup>th</sup> European Conference on Operational Research, Valencia, Spain, 2018.
  - *EURO XXVIII*, 28<sup>th</sup> European Conference on Operational Research, Poznan, Poland, 2016.
  - *OR2014*, GOR International Conference, Aachen, Germany, 2014.
  - *IFORS 20<sup>th</sup> Conference*, Barcelona, Spain, 2014.
  - *ORBEL Annual Meeting*, Mons, Belgium, 2014.
  - *EURO-INFORMS Joint International Conference*, Rome, Italy, 2013.
  - *ORBEL Annual Meeting*, Kortrijk, Belgium, 2013.
  - *EURO XXV*, 25<sup>th</sup> European Conference on Operational Research, Vilnius, Lithuania, 2012.
  - *CEMS Research Seminar on Supply Chain Management*, Riezlern, Austria, 2012.
  - *INFORMS Annual Meeting*, Austin, Texas, USA, 2010.
  - *EURO XXIV*, 24<sup>th</sup> European Conference on OR, 2 talks, Lisbon, Portugal, 2010.
  - *ORBEL Annual Meeting*, Leuven, Belgium, 2009.
  - *INFORMS Annual Meeting*, Washington D.C., USA, 2008.
  - *Meeting of the Euro Working Group on Stochastic Modelling*, Istanbul, Turkey, 2008.
  - *Workshop in Logistics and Supply Chain Management*, Louvain-la-Neuve, Belgium, 2007.
  - *CEMS Research Seminar on Supply Chain Mgmt*, Riezlern, Austria, 2006, 2007, 2008.
- Others
- T. Hacardiaux and J.-S. Tancrez. "Assessing the benefits of horizontal cooperation using a location-inventory model". *CORE Discussion Paper 2018/14*, UCL, 2018.
  - T. Hacardiaux and J.-S. Tancrez. "Les promesses de la collaboration en logistique". *La Libre Belgique*, 28 octobre 2017.
  - M. Schuster Puga, S. Minner and J.-S. Tancrez. "Two-stage supply chain design with safety stock placement decisions". *CORE Discussion Paper 2017/01*, UCL, 2017.
  - J.-S. Tancrez. "Vers une logistique efficace et durable". *La Libre Belgique*, 1<sup>er</sup> octobre 2016.
  - J.M. Quesada, J.-C. Lange and J.-S. Tancrez. "A Multi-Hub Express Shipment Service Network Design Model with Flexible Hub Assignment". *LSM Working Paper*, UCL, 2016.
  - M. Schuster Puga and J.-S. Tancrez. "A Heuristic Algorithm for Solving Large Location-Inventory Problems with Demand Uncertainty". *LSM Working Paper*, UCL, 2015.
  - *Invited Talk*, Department of Supply Chain Management and Management Science, University of Cologne, Germany, 2013.

- *Invited Talk*, QuantOM, HEC, University of Liège, Belgium, 2013.
- R.W. Seifert and J.-S. Tancrez. “Teaching Note: Hilti Case”. IMD-6-0313-T, IMD Business School, Lausanne, Switzerland, 2011.
- *Invited Talk*, Research Center for Operations Management, KUL, Leuven, Belgium, 2009.
- J.-S. Tancrez and F. Riane. “Modélisation de systèmes productifs stochastiques par discrétisation (Mustperf)”. *Projet Rég. Wallonne First Objectif 1, rapports*, 2007 et 2009.
- J.-S. Tancrez, B. Roland, J.-P. Cordier and F. Riane. “How Stochasticity and Emergencies Disrupt the Surgical Schedule”. *CORE Discussion Paper 2008/82*, UCL, 2008.
- J.-S. Tancrez, Ph. Chevalier and P. Semal. “A Tight Bound on the Throughput of Queueing Networks with Blocking”. *CORE Discussion Paper 2008/63*, UCL, 2008.
- J.-S. Tancrez, Ph. Chevalier and P. Semal. “Probability Masses Fitting in the Analysis of Manufacturing Flow Lines”. *CORE Discussion Paper 2008/28*, UCL, 2008.
- J.-S. Tancrez and P. Semal. “The Bounding Discrete Phase-type Method”. *LSM Working Paper*, UCL, 2006.