

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.

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.

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.)

RESEARCH

Research Interests	<ul style="list-style-type: none">• Supply chain management: supply chain network design, location-inventory problems, horizontal collaboration, robustness.• Stochastic modelling and applications to operations management: production lines, healthcare, product portfolio management.• Applications of mathematical modelling and operations research in general.
Research Grants	<ul style="list-style-type: none">• FSR Project, 1 Ph.D. Student, 2 years, UCL, 2012. “Strategic Supply Chain Design and the Impacts of Demand Uncertainty”.• 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”.• FRESH research fellowship (M. Schuster), 1 Ph.D. Student, 1+2 years, FNRS, 2014. “Strategic Supply Chain Design and Impacts of Demand Uncertainty”.• ARC Project, 4 Ph.D. Students and 2 Post-Docs, 4 years, UCL and UNamur, 2019. “PROSEco: Platform Regulation and Operations in the Sharing Economy”.
Ph.D. Thesis Supervision	<ul style="list-style-type: none">• Matias Schuster Puga, “Supply Chain Network Design under Demand Uncertainty”, UCL, LSM, 2013-2017.• José Miguel Quesada Pérez, “Express Shipment Service Network Design: Challenges, Advances and Robustness”, UCL, LSM, 2014-...• Thomas Hacardiaux, “The Benefits of Horizontal Cooperation in Supply Chains”, UCL, LSM, 2016-...
Ph.D. Theses Juries	<ul style="list-style-type: none">• Jean-Charles Lange, “Design and Management of Networks with Fixed Transportation Costs for the Reverse Flows of Reusable Packages”, September 2010, LSM, UCL.• Géraldine Strack, “An integrated decision making process: An application on inventory, warehouse, production and distribution decisions”, September 2012, LSM, UCL.• Ariel Zeballos, “Inventory Management with Working Capital Restrictions”, April 2013, EPFLausanne, Switzerland.• Argyro Katsifou, “Variable Product Portfolio Management in Retail Operations”, June 2013, EPFLausanne, Switzerland.• Tanja Mlinar, “Stochastic Models for Shared Production Resources in Supply Chains”, March 2014, LSM, UCL.• Alejandro Lamas, “Three Models for Operations Planning in a Supply Chain Context”, December 2014, LSM, UCL.• Martine Mostert, “Design and Management of Freight Transport Networks: Intermodal Transport and Externalities”, March 2017, ULg, HEC Liège.• Wouter Lefever, “Stochastic and Robust Optimization Algorithms for the Inventory-Routing Problem and its Extensions”, September 2017, UGent.
Awards	<ul style="list-style-type: none">• Louvain School of Management Research Excellence Award, 2013.• Best Student Paper Award, Giseh conference, 2008.
Refereeing	<ul style="list-style-type: none">• International journals: EJOR, IJPE, TRE, TRB, AOR, ...• Projects: SNSF (Switzerland), Innoviris.• OR2018 Conference, Supply Chain Management stream organizer.• ILS Conference, 2010 and 2012, Student competition committee member.
Projects with companies	<ul style="list-style-type: none">• AGC Glass Europe, FedEx Express Europe, Fruytier Group, Galactic, Oxfam, Wabco.

PUBLICATIONS

Peer-
Reviewed
International
Journals

- M. Schuster Puga, S. Minner and J.-S. Tancrez. "Two-stage supply chain design with safety stock placement decisions". *International Journal of Production Economics*, 209, pp. 183-193, 2019.
- J.-S. Tancrez. "A decomposition method for assembly/disassembly systems with blocking and general distributions". *Flexible Services and Manufacturing Journal*, forthcoming, 2019.
- 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, 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.
- 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, Bosc 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*, 29th European Conference on Operational Research, Valencia, Spain, 2018.
 - *EURO XXVIII*, 28th European Conference on Operational Research, Poznan, Poland, 2016.
 - *OR2014*, GOR International Conference, Aachen, Germany, 2014.
 - *IFORS 20th 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*, 25th 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*, 24th 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^{er} 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.