Bernardo PAGNONCELLI

Professor

Academy: Digitalization

Research center: SKEMA Centre for Analytics and Management Science

Campus: Lille

Email: bernardo.pagnoncelli@skema.edu

Research interests

Operations Research, Optimization, Risk measures, Dynamic programming, Stochastic Programming, Simulation

Teaching interests

Data science, Machine learning, Operations Management, Operations Research, Portfolio optimization

Education

2009	Ph.D. in Mathematics, Pontifical Catholic University of Rio de Janeiro, Brazil
2004	MSc in Applied Mathematics, Pontifical Catholic University of Rio de Janeiro, Brazil
2002	Bachelor of Science, Sciences, Mathematics, Pontifical Catholic University of Rio de Janeiro, Brazil

Experience

Full-time academic positions

Since 2024	Professor, SKEMA Business School, France
2021 - 2023	Associate Professor, SKEMA Business School, France
2015 - 2020	Associate Professor, Business School, Universidad Adolfo Ibáñez, Chile
2009 - 2014	Assistant Professor, Business School, Universidad Adolfo Ibáñez, Chile

Research grants, Awards and Honors

Awards and Honors

2022	Most Productive Scholar Award, SKEMA Business School, France
2021	Best Professor Award - MBA International Program, Business School, Universidad Adolfo Ibáñez, Chile
2019	Best Researcher Award, Universidad Adolfo Ibanez
2018	Patrick and Amy McCarter Fellow in Residence at IEMS, Northwestern UniversityPatrick and Amy McCarter Fellow in Residence at IEMS, Northwestern University, Northwestern University, United States of America
2018	Best Professor Award in the MBA International Program, Universidad Adolfo Ibanez
2015	Reimagine Education Awards - category Presence Learning, GameLab, Chile
2015	Best researcher award, Business School, Universidad Adolfo Ibáñez, Chile
2015	Best Professor Award - MBA International Program, Business School, Universidad Adolfo Ibáñez, Chile
2007	Fellowship from a Brazilian Governmental Agency (CAPES) to spend 1 year as an exchange Ph.D.

	student at the ISYE Department at Georgia Tech,, CAPES, Brazil
2005	Fellowship at the Ph.D. program at the Department of Mathematics of PUC-Rio provided by FUNENSEG (private actuarial institution),, Pontifical Catholic University of Rio de Janeiro, Brazil

Research Grants

2023	PGMO: Modeling risk aversion in multi-stage stochastic lot-sizing problemsModeling risk aversion in multi-stage stochastic lot-sizing problems, France
2023	PGMO: Strategic Bidding in Price Coupling Regions: risk and uncertainty, France
2021	Combining Prediction And Stochastic Optimization: New Methods In Prescriptive Analytics (NOT EXECUTED), ANID, Chile
2018	Production maximization of oil in off-shore platforms that use gas-lift, Petrobras, Brazil
2017	Large scale optimization and uncertainty: Challenges in Strategic Mine Planning. An interdisciplinary approach (, ANID, France
2017	Optimization, Games and Renewable Energy, EDF, France
2014	Centralized versus Decentralized Energy Management in a Stochastic Setting, EDF, France
2013	Multistage stochastic optimization applied to finance and mining, ANID, Chile
2013	PGMO - Latin America Stochastic Optimization Network, EDF, France
2012	Models and Strategies for Multi-Stage Stochastic Programs with Risk Control, ANID, Chile
2012	PGMO - Latin America Stochastic Optimization Network,, EDF, France
2011	Mathematical Modeling for Industrial and Management Sci- ence Applications: An Interdisciplinary Approach., ANID, Chile

Publications

Peer-reviewed journal articles

LAMAS, P., GOYCOOLEA, M., PAGNONCELLI, B. and NEWMAN, A. (2024). A target-time-windows technique for project scheduling under uncertainty. *European Journal of Operational Research*, 314(2), pp. 792-806.

PAGNONCELLI, B., HOMEM-DE-MELLO, T., CASTAÑEDA, P., LAGOS, G. and GARCÍA, J. (2024). Solving constrained consumption-investment problems by decomposition algorithms. *European Journal of Operational Research*, 319(1), pp. 292-302.

PARAB, P., NTAIMO, L. and PAGNONCELLI, B. (2024). Stochastic Decomposition for Risk-Averse Two-Stage Stochastic Linear Programs. *Journal of Global Optimization*.

KHATAMI, M., SILVA, T., PAGNONCELLI, B. and NTAIMO, L. (2024). Risk-Averse Multistage Stochastic Programs with Expected Conditional Risk Measures. *Computers & Operations Research*, 172(106802).

KESLIN, G., NELSON, B., PAGNONCELLI, B., PLUMLEE, M. and RAHIMIAN, H. (2024). Ranking and Contextual Selection. *Operations Research*.

PAGNONCELLI, B., RAMÍREZ, D., RAHIMIAN, H. and CIFUENTES, A. (2023). A Synthetic Data-Plus-Features Driven Approach for Portfolio Optimization. *Computational Economics*, 62, pp. 187-204.

RAHIMIAN, H. and PAGNONCELLI, B. (2023). Data-Driven Approximation of Contextual Chance-Constrained Stochastic Programs. *SIAM Journal on Optimization*, 33(3), pp. 2248 - 2274.

PAGNONCELLI, B., REDROBAN, S. and CIFUENTES, A. (2023). A Useful (But Painful) Risk-Management Lesson from the Chilean Pension System. *The Journal of Retirement*, 11(1), pp. 74 - 83.

PIAZZA, A., PAGNONCELLI, B. and NTAIMO, L. (2022). What is the optimal cutoff surface for ore bodies with more than one mineral? *Operations Research Letters*, 50(2), pp. 137-144.

DOWSON, O., MORTON, D. and PAGNONCELLI, B. (2022). Incorporating convex risk measures into multistage stochastic programming algorithms. *Annals of Operations Research*.

PAGNONCELLI, B., PATRICIO, L., MARCOS, A. and PIAZZA, A. (2021). Lane's Algorithm Revisited. *Management Science*, 67(5), pp. 2657-3320.

ANDRÉ, R., GAMBOA, C., VALLADAO, D. and PAGNONCELLI, B. (2021). A Robust Short-Term Oil Production under a Bow-Tie Uncertainty Set for the Gas Lift Performance Curve. *SPE Journal*, pp. 1-13.

PAGNONCELLI, B., DEL CANTO, F. and CIFUENTES, A. (2021). The effect of regularization in portfolio selection problems. *TOP- An Official Journal of the Spanish Society of Statistics and Operations Research*, 29, pp. 156-176.

PAGNONCELLI, B., CANESSA, G. and MORENO, E. (2021). The risk-averse ultimate pit problem. *Optimization and Engineering*, 22, pp. 2655-2678.

PAGNONCELLI, B., DUQUE, D. and MORTON, D. (2021). How good are default investment policies in defined contribution pension plans? *Journal of Pension Economics and Finance*, 20(2), pp. 252-272.

NESBITT, P., BLAKE, L.R., LAMAS, P., GOYCOOLEA, M., PAGNONCELLI, B., NEWMAN, A. and BRICKEY, A. (2021). Underground mine scheduling under uncertainty. *European Journal of Operational Research*, 294(1), pp. 340-352.

ARPON, S., HOMEM-DE-MELLO, T. and PAGNONCELLI, B. (2020). An ADMM algorithm for two-stage stochastic programming problems. *Annals of Operations Research*, 286, pp. 559-582.

DOWSON, O., MORTON, D. and PAGNONCELLI, B. (2020). Partially observable multistage stochastic optimization. *Operations Research Letters*, 48(4), pp. 505-512.

PAGNONCELLI, B., GAMBOA, C., SILVA, T. and VALLADAO, D. (2020). A stochastic optimization model for short-term production of offshore oil platforms with satellite wells using gas lift. *TOP- An Official Journal of the Spanish Society of Statistics and Operations Research*, 28, pp. 549-574.

PAGNONCELLI, B. and CIFUENTES, A. (2020). Molecular biology and economics: a few funerals are needed. *Journal of Portfolio Management*, 46(7), pp. 5-7.

DELGADO, F., TRINCADO, R. and PAGNONCELLI, B. (2019). A multistage stochastic programming model for the network air cargo allocation under capacity uncertainty. *Transportation Research - Part E: Logistics and Transportation Review*, 131, pp. 292-307.

CANESSA, G., GALLEGO, J., NTAIMO, L. and PAGNONCELLI, B. (2019). An algorithm for binary linear chance-constrained problems using IIS. *Computational Optimization and Applications*, 72(3), pp. 589-608.

REUS, L., PAGNONCELLI, B. and ARMSTRONG, M. (2019). Better management of production incidents in mining using multistage stochastic optimization. *Resources Policy*, 63, pp. 101404.

GUTIERREZ, T., PAGNONCELLI, B., VALLADAO, D. and CIFUENTES, A. (2019). Can asset allocation limits determine portfolio risk–return profiles in DC pension schemes? *Insurance: Mathematics and Economics*, 86, pp. 134-144.

LE CADRE, H., PAGNONCELLI, B., HOMEM-DE-MELLO, T. and BEAUDE, O. (2019). Designing coalition-based fair and stable pricing mechanisms under private information on consumers' reservation prices. *European Journal of Operational Research*, 272(1), pp. 270-291.

PAGNONCELLI, B., ARPON, S. and HOMEM-DE-MELLO, T. (2018). Scenario reduction for stochastic programs with Conditional Value-at-Risk. *Mathematical Programming*, 170, pp. 327-356.

WADA, M., DELGADO, F. and PAGNONCELLI, B. (2017). A risk averse approach to the capacity allocation problem in the airline cargo industry. *Journal of the Operational Research Society*, 68(6), pp. 643-651.

PAGNONCELLI, B., CIFUENTES, A. and DENIS, G. (2017). A two-step hybrid investment strategy for pension funds. *North American Journal of Economics and Finance*, 42, pp. 574-583.

PAGNONCELLI, B. and PIAZZA, A. (2017). The optimal harvesting problem under price uncertainty: the risk averse case. *Annals of Operations Research*, 258, pp. 479-502.

PAGNONCELLI, B., HAWAS, F. and CIFUENTES, A. (2016). Credit-Risk behavior of homogeneous portfolios: A Theoretical Result with Surprising Practical Implications. *Journal of Structured Finance*, 22(2), pp. 7-15.

HOMEM-DE-MELLO, T. and PAGNONCELLI, B. (2016). Risk aversion in multistage stochastic programming: a modeling and algorithmic perspective. *European Journal of Operational Research*, 249(1), pp. 188-199.

BARRERA, J., HOMEM-DE-MELLO, T., MORENO, E., PAGNONCELLI, B. and CANESSA, G. (2016). Chance-constrained problems and rare events: an importance sampling approach. *Mathematical Programming*, 157(1), pp. 153-189.

PIAZZA, A. and PAGNONCELLI, B. (2015). The stochastic Mitra–Wan forestry model: risk neutral and risk averse cases. *Journal of Economics*, 115(2), pp. 175-194.

PIAZZA, A. and PAGNONCELLI, B. (2014). The optimal harvesting problem under price uncertainty. *Annals of Operations Research*, 217(1), pp. 425-445.

PAGNONCELLI, B. and CIFUENTES, A. (2014). Credit risk assessment of fixed income portfolios using explicit expressions. *Finance Research Letters*, 11(3), pp. 224-230.

CIFUENTES, A. and PAGNONCELLI, B. (2014). Demystifying Credit Risk Derivatives and Securitization: *Journal of Derivatives*, 22(2), pp. 110-118.

PAGNONCELLI, B. (2012). A provisioning problem with stochastic payments. *European Journal of Operational Research*, 221(2), pp. 445-453.

PAGNONCELLI, B. (2012). Risk-Return Trade-off with the Scenario Approach in Practice: A Case Study in Portfolio Selection. *Journal of Optimization Theory and Applications*, 155(2), pp. 707-722.

PAGNONCELLI, B. (2009). Sample Average Approximation Method for Chance Constrained Programming: Theory and Applications. *Journal of Optimization Theory and Applications*, 142(2), pp. 399-416.

PAGNONCELLI, B., SCHNOOR, M.A.K., PALMEIRA, C.F.B. and CAYRES, R. (2008). Cournot equilibrium: modern techniques applied to an old problem. *Journal of Interdisciplinary Mathematics*, 11(5), pp. 601-616.

PAGNONCELLI, B., TOMEI, C. and DE AZEVEDO, A. (2008). Custos de transação em investimentos coletivos. *Revista Brasileira de Economia*, 63(4).

PAGNONCELLI, B., PALMEIRA, C.F.B. and LOPES, H. (2008). Coeficientes aleatórios de equações diferenciais ordinárias lineares. *Revista Matemática Universitária*, (45).

Other research activities

Senior or associate editor

Since 2023	INFOR

PhD supervision

Since 2022	D. JIMENEZ, SKEMA Business School, PhD thesis, Thesis director
Since 2022	M. WAGA, Pontifical Catholic University of Rio de Janeiro, PhD thesis, Thesis co-director
2024	T. GUTIÉRREZ, Pontifical Catholic University of Rio de Janeiro, PhD thesis, Thesis co-director
2022	C. VESSAIRE, PhD thesis, Thesis Reviewer
2021	P. LAMAS, Business School, Universidad Adolfo Ibáñez, PhD thesis, Thesis director
2019	G. CANESSA, Business School, Universidad Adolfo Ibáñez, PhD thesis, Thesis director
2018	S. ARPON, Business School, Universidad Adolfo Ibáñez, PhD thesis, Thesis director