



# Full Professor Chaaben KOUKI

Academic Department: Operations Management  
and Decision Science

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## RESEARCH INTERESTS

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- Green supply chain management and sustainable production systems
- Production and operations management
- Simulation and queueing theory

## TEACHING DOMAINS

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- Supply chain purchasing and costing
- Supply chain performance
- Logistics flows management
- Operations and Services Management

## EDUCATION

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*Highest degree :*

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| 2010 | PhD, Industrial Engineering, Ecole Centrale Paris, France<br><i>La gestion des stocks de produits périssables et l'utilisation des intégrateurs temps - température</i> |
| 2007 | Master of Science in industrial Engineering, Ecole Centrale Paris, France   |
| 2006 | Bachelor of Science in Industrial Engineering, Ecole Nationale d'Ingénieur de Tunis, Tunisia  |

## PROFESSIONAL EXPERIENCE

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### Academic experience and positions

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| Since 2022  | Professor, ESSCA School of Management, France           |
| 2015 - 2022 | Associate Professor, ESSCA School of Management, France |
| 2012 - 2015 | Associate Professor, Rennes School of Business, France  |

### Professional experience

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| 2010 - 2012 | Inventory Manager, Michelin Group, France |
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## INTELLECTUAL CONTRIBUTIONS

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### Peer-reviewed Articles

KOUKI, C., DRENT, M., BABAI, M.Z. and DRENT, C. (2025). Dedicated maintenance and repair shop control for spare parts networks. *European Journal of Operational Research*.

- KOUKI, C., MOUSSAWI-HAIDAR, L. and JABER, M.Y. (2025). A divergent two-echelon spare part inventory system with lost sales and compound Poisson demand. *International Journal of Production Economics*, 285, pp. 109625.
- STRANIERI, F., STELLA, F. and KOUKI, C. (2024). Performance of Deep Reinforcement Learning Algorithms in Two-Echelon Inventory Control Systems. *International Journal of Production Research*, 62(17), pp. 6211-6226.
- KOUKI, C., ARTS, J. and BABAI, M.Z. (2024). Performance evaluation of a two-echelon inventory system with network lost sales. *European Journal of Operational Research*, 314(2), pp. 647-664.
- KHALIFA, F.B., KOUKI, C., SAFRA, I. and JEMAI, Z. (2023). Analysis and optimisation of periodic inventory models for perishable items with a general lifetime. *International Journal of Production Research*, 61(21), pp. 7483-7501.
- KOUKI, C. and LARSEN, C. (2021). Rationing policies in a spare parts inventory system with customers differentiation. *International Journal of Production Research*, 51(20), pp. 6270-6290.
- KOUKI, C., LEGROS, B., BABAI, M.Z. and JOUINI, O. (2020). Analysis of base-stock perishable inventory systems with general lifetime and lead-time. *European Journal of Operational Research*, 287(3), pp. 901-915.
- KOUKI, C., BABAI, Z., JEMAI, Z. and MINNER, S. (2019). Solutions procedures for Lost Sales Base-Stock Inventory Systems with Compound Poisson Demand. *International Journal of Production Economics*, 209, pp. 172-182.
- KOUKI, C., BABAI, M.Z. and MINNER, S. (2018). On the benefit of dual-sourcing in managing perishable inventory. *International Journal of Production Economics*, 204, pp. 1-17.
- KOUKI, C., BABAI, M.Z., JEMAI, Z. and MINNER, S. (2016). A coordinated multi-item inventory system for perishables with random lifetime. *International Journal of Production Economics*, 181(A), pp. 226-237.
- KOUKI, C., JEMAI, Z. and MINNER, S. (2015). A Lost Sales (r,Q) Inventory Control Model for Perishables with Fixed Lifetime and Lead Time. *International Journal of Production Economics*, 168, pp. 143-157.
- KOUKI, C. and JOUINI, O. (2015). On the Effect of Lifetime Variability on the Performance of Inventory Systems. *International Journal of Production Economics*, 167, pp. 23-24.
- KOUKI, C. and JOUINI, O. (2015). On the effect of lifetime variability on the performance of inventory systems. *International Journal of Production Economics*, 167, pp. 23-34.
- KOUKI, C., JEMAI, Z., SAHIN, E. and DALLERY, Y. (2014). Analysis of a Periodic Review Inventory Control System with Perishables having Random Lifetime. *International Journal of Production Research*, 52(1), pp. 283-298.
- KOUKI, C., JEMAI, Z., SAHIN, E. and DALLERY, Y. (2013). Assessing the Impact of Perishability and the Use of Time Temperature Technologies on Inventory Management. *International Journal of Production Economics*, 143(1), pp. 72-85.

#### Conference paper (with selection committee)

- KOUKI, C. (2025). Le transport et la supply chain à l'ère du digital. In: Tunisia Digital Summit. Tunis.
- KOUKI, C. (2024). Drugs Inventory: Human Decision Making Versus Deep Reinforcement Learning. In: 22nd International Symposium on Inventories: ISIR 2024. Budapest.

STRANIER, F., STELLA, F. and KOUKI, C. (2023). Performance of Deep Reinforcement Learning Algorithms in Two-Echelon Inventory Control Systems. In: ISIR 2023 Summer School: Mitigating inventory uncertainty through whole systems thinking. Cardiff University.

KOUKI, C., DRENT, M., DRENT, C. and BABAI, M.Z. (2022). Dedicated maintenance and repair shop control. In: 21st International Symposium on Inventories (ISIR2022). Budapest.

KOUKI, C. (2018). Base-stock Inventory Systems for Service Parts with Service Differentiation and Multiple Batch Demand Classes. In: 20th International Symposium on Inventories. Budapest.

KOUKI, C. (2016). Exact analysis of lost sales base stock inventory systems with compound Poisson demand. In: 19th international symposium on inventories. Budapest.

KOUKI, C. (2010). A lost sales periodic review perishable inventory with random lifetime. In: Production and Operations Management Society 21st annual conference. Vancouver.

KOUKI, C. (2009). Discrete Time inventory policy for perishable items with fixed lifetime. In: 13th International Federation of automatic control: Symposium on Information Control Problems in Manufacturing. Moscow.

KOUKI, C. (2009). Inventory Control for Perishable Products and the Use of a New Technology: Time Temperature Integrator technology. In: International Conference on Industrial Engineering and Systems Management. Montreal.

KOUKI, C. (2008). A continuous review inventory control for perishable products having a deterministic lifetime and lead time. In: The International Society for Inventory Research. Budapest.

KOUKI, C. (2008). An  $(r,Q)$  inventory policy for perishable products having a fixed lifetime. In: 7e conference de Modélisation et Simulation. Paris.

### Practice-oriented contributions

KOUKI, C. (2025). Inteligencia Artificial y Cadena de Suministro, una alianza estratégica para un futuro más ágil. Interempresas - Manutención e almacenaje, Spain.

KOUKI, C. (2025). Inteligencia Artificial y Cadena de Suministro, una alianza estratégica para un futuro más ágil. Interempresas - Almacenaje y logística, Spain.

KOUKI, C. (2025). Inteligencia Artificial y Cadena de Suministro, una alianza estratégica para un futuro más ágil. Novologistica.com, Spain.

## RESEARCH ACTIVITIES

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### Editorial activities

#### Reviewer for an academic or professional publication

Since 2020     Ad-hoc Reviewer, Computers & Operations Research

Since 2008     Ad-hoc Reviewer, European Journal of Operational Research

Since 2008     Ad-hoc Reviewer, International Journal of Production Economics

Since 2008     Ad-hoc Reviewer, International Journal of Production Research

### Service to the institution

#### Active participation in an event organised by the institution

2024 - 2024     Artificial intelligence applied to human resources, ESSCA School of Management, France

2024 - 2024     Data Lab meeting on AI and education, ESSCA School of Management, France

- 2024 - 2024 IPSERA Education SIG workshop 'Artificial Intelligence Opportunities in PSM Education Initiative' was held on the role of AI in Purchasing and Supply Management (PSM) education, ESSCA School of Management, France
- 2023 - 2023 Intelligence artificielle générative modèles et applications, ESSCA School of Management, France
- 2023 - 2023 Large Language Models in marketing, ESSCA School of Management, France

#### **Service to the academic discipline**

##### **Scientific committee of an academic conference**

Since 2020 Member, International Society for Inventory Research (ISIR)

#### **Service to professional community**

##### **Participation in professional events, roundtables**

- 2024 - 2024 Experiences and approaches to developing innovative AI algorithms, products and services in higher education, International Purchasing and Supply Education and Research Association (IPSERA)
- 2023 - 2023 Seminar with Lokad TV: AI solutions for supply chains. With avec Joannès Vermorel, Lokad CEO and Li Ling, Eindhoven University of Technology

#### **PhD Supervision**

Since 2021, Doctoral Advisory Committee

B. BACHA, In progress, Impact des décisions d'inventaire des magasins et des clients sur le gaspillage alimentaire, Université Paris-Saclay - Paris 11 - Paris