WAFIK HACHICHA

Prof. Ph.D, Eng. en Genie Industriel et Logistique

سيرة ذاتية قصيرة

ndustrial Engineering. He has an Industrial Engineer Diploma from the National School of Engineering of Tunis (ENIT, Tunisia) ssional experience in various industries, he has obtained his PhD in Mechanical and Manufacturing Engineering in 2009 and neering in 2014 from the University of Sfax, Tunisia. He is a reviewer in many international journals, author or co-author of include books, journal articles and communications. His specialisation is about applied quantitative methods in quality .improvement, industrial engineering, and Supply chain management

الخبرات المهنية

Professeur en Genie Industriel
سبتمبر 2019 - هنا (6 سنين, 7 شهر)
Institut Superieur de Gestion Industrielle de Sfax, Sfax

Maitre de Conferences en Genie Industriel
سبتمبر 2015 - سبتمبر 2019 (4 سنين)
Institut Superieur de Gestion Industrielle de Sfax, Sfax

Maitre Assistant en Genie Industriel
أغسطس 2009 - أغسطس 2015 (6 سنين)
Institut Superieur de Gestion Industrielle de Sfax, Sfax

Assistant en Genie Industriel
سبتمبر 2007 - يوليو 2009 (1 سنين, 10 شهر)
Institut Superieur de Gestion Industrielle de Sfax, Sfax

Assistant Contractuel en Genie Industriel
سبتمبر 2004 - سبتمبر 2007 (3 سنين)
Institut Superieur de Gestion Industrielle de Sfax, Sfax

Ingénieur Méthode et R&D
أبريل 2001 - أغسطس 2004 (3 سنين, 4 شهر)
Societe Patissrie Masmoudi, Sfax

Ingénieur Production
يوليو 1999 - مارس 2001 (1 سنين, 8 شهر)
Ak Khoutaf - Sekkinox, Sfax

الدبلومات

Mecanique et Ingenierie

2004

Mastère de recherche : عطوف

Ecole National d'Ingenieurs de Sfax, Sfax

Développement d'un modéle d'estimation des couts d'assemblages soudés

Diplome National d'Ingenieurs

1999

Ingénierie : عطوف

Ecole National d'Ingenieurs de Tunis, Tunis

تعاليم

Operation Research (1) – LP, Simplex Method, Branch and Bound...

سبتمبر 2019 - يونيو 2024 (4 سنين, 9 شهر)

College of Engineering in Taif University, Saudi Arabia

تيار (مسارات) التدريس : ingénieur génie industriel

- Introduction to Operations Research.
- Formulation of linear programming problems.
- Graphical solution.
- The Simplex algorithm, Big M method and Two Phase method
- Duality-Primal Problem
- Sensitivity analysis (Dual Price - Reduced Cost)
- Integer programming, 0-1 Integer programming and Mixed integer programming
- Branch and Bound and Cutting Plane Techniques
- Applications in Logistic and industrial Engineering Problems
- Introduction to the Problem complexity
- Excel Solver - Lingo Software

Operation Research (2) - Network Flows Models, Dynamic Programming, Goal Programming

سبتمبر 2019 - يونيو 2024 (4 سنين, 9 شهر)

College of Engineering in Taif University, Saudi Arabia

تيار (مسارات) التدريس : ingénieur génie industriel

- Algorithms for Transportations and Assignments: The Stepping-Stone Method, The Hungarian Method
- spanning tree, shortest-route algorithms, maximum-flow algorithms, minimum cost capacitated network algorithms, Critical path(CPM) algorithms
- cal recursive nature computation (such as Binomial Coefficients and Fibonacci Numbers and Sequence), Knapsack Problem, Shortest-Route
  ...Problem, Multiperiod Production and Inventory Planning Problem
- ing (GP): Introduction to a multi-objective programming, Formulation, Goal Programming Algorithms, the Weights Method, the Preemptive Method

Quality Control (Statistical Process Control)

سبتمبر 2019 - يونيو 2024 (4 سنين, 9 شهر)

College of Engineering in Taif University, Saudi Arabia

تيار (مسارات) التدريس : ingénieur génie industriel

- Use and interpret normal probability distribution in industrial engineering training
- Estimate and interpret Confidence Intervals.
- Explain and interpret Hypothesis Testing to make statement(s) and decision regarding unknown population parameter values based on sample data
- Define and describe Quality Control tools and methods
- Design and interpret control charts for variables
- Estimate and interpret process and machine capability.
- Analyze data using Ms Excel and Minitab software for statistical quality control

Design of Industrial Experiments

سبتمبر 2019 - يونيو 2024 (4 سنين, 9 شهر)

College of Engineering in Taif University, Saudi Arabia

تيار (مسارات) التدريس : ingénieur génie industriel

l theory for experimental design (One-sample z-test, One sample t-test, Two-sample t-test (z-test), Paired t-test, F-test / Hartley's Fmax test, -
One-way ANOVA, Two-way (taw-factor) ANOVA without Replication, Two-way (taw-factor) ANOVA with Replication
...Apply When and How apply Full Factorial Designs, Fractional Factorial Designs, Taguchi Design and Response Surface Methodology -
Apply Optimization using Design of experiments -
cal models for designed experiments, perform data analysis using appropriate software, and communicate results without use of statistical jargon -
gns for given problems: sample size determination, choice of levels of variables, designs with restrictions on randomization, utility functions for -
.measuring design objectives, use of simulation to characterize properties of designs

Production Planning & Control

سبتمبر 2019 - يوليو 2024 (4 سنين, 10 شهر)

College of Engineering in Taif University, Saudi Arabia

تيار (مسارات) التدريس : ingénieur génie industriel

- Recognize the objectives, functions, applications of Production Systems, Production Planning and Control (PPC), and Operations Management
- Explain different qualitative and quantitative demand forecasting techniques mainly regression analysis and time series based models
- lanagement concept and the different Inventory control models and techniques such as Economic order quantity, Economic Production Quantity, etc
- narize various Aggregate Production Planning strategies (level, mixed, chase) and policies, Materials Requirements Planning records and calculation
- ns (Apply the assignment method for loading jobs (0-1 formulation, Least Branch and Bound, the Hungarian Method), Name, describe and apply
- ncing rules (FCFS, LPT, etc.), Use Johnson's rule, Define finite capacity scheduling, Use linear programming models to solve scheduling problems, etc
- .Recognize the concept of the Kanban Method, Just in time (JIT), and introduce the lean Manufacturing concept

Modeling of Logistics Systems - Markov Chains, Petri Net

سبتمبر 2010 - يونيو 2019 (8 سنين, 9 شهر)

Institut Supeirur de Gestion Industrielle de Sfax

تيار (مسارات) التدريس : LAGL

Industrial Systems Modeling & Simulation

سبتمبر 2004 - يونيو 2018 (13 سنين, 9 شهر)

تيار (مسارات) التدريس : ingénieur génie industriel MPGL LAGL

Documentation of Quality Systems (ISO 9001 - ISO 22001 - ISO 14001)

سبتمبر 2004 - يونيو 2019 (14 سنين, 9 شهر)

Institut Superieur de Gestion Industrielle de Sfax

تيار (مسارات) التدريس : MPQSE LAGQ

الأنشطة البحثية

Publications

en Ammar, Abdelkarim Elloumi, **Wafik Hachicha (2023).** A new rolling forecasting framework using Microsoft Power BI for data study in a pharmaceutical industry, *Annales Pharmaceutiques Françaises*, In press 2023, DOI: 10.1016/j.pharma.2023.10.013

Bouri, S.; Hajji, S.; Aljuaid, A.M.; **Hachicha, W. (2023).** The Socio-Economic Effects of Floods and Ways to Prevent Them: A Case Study of the Khazir River Basin, Northern Iraq. Water 2023, 15, 4271. DOI: 10.3390/w15244271

afik Hachicha, **(2022)**. Empirical Safety Stock Estimation Using GARCH Model, Historical Simulation, and Extreme Value Theory: A Comparative Study, *Applied Sciences*, 12(19), 10023. DOI: 10.3390/app121910023

Marco D. R. Gomes da Silva, Riadh Ben Salah, Awad M. Aljuaid, Wafik Hachicha and Mohamed Bouaziz **(2022)**. Antioxidant and d Polysaccharide Extracted from Ceratonia siliqua L. and Its Involvement in the Enhancement Performance of Whipped Cream, *Separations*, 9(5), 117. DOI: 10.3390/separations9050117

msalmi, Awad M. Aljuaid, **Wafik Hachicha** and Sami Hammami **(2022)**. Joined Efficiency and Productivity Evaluation of Tunisian Commercial Seaports Using DEA-Based Approaches, *J. Marine Science Engineering*, 10(5), 626. DOI: 0.3390/jmse10050626

achicha, Awad M. Aljuaid, Neila Khabou Masmoudi and Faouzi Masmoudi. **(2022)** Multi-Objective Design Optimization of Flexible cems Using Design of Simulation Experiments: A Comparative Study, *Machines* 10(4), 247; DOI: 10.3390/machines10040247

d M. Aljuaid, **Wafik Hachicha** and Faouzi Masmoudi **(2022)** Design of Supply Chain Transportation Pooling Strategy for Reducing CO2 Emissions Using a Simulation-Based Methodology: A Case Study, *Sustainability*, 14(4), 2331 DOI: 10.3390/su14042331

msalmi, Awad M. Aljuaid and **Wafik Hachicha (2022).** Seaport Terminals Risks Prioritization Using a Structural Modeling-Based Approach: A Real Case Study, *J. Marine Science Engineering*, 10(2), 217, DOI: 10.3390/jmse10020217

llouche, Salem Bouri, Awad M. Aljuaid and Wafik Hachicha **(2022)** Assessment of Seawater Intrusion in Coastal Aquifers Using Multivariate Statistical Analyses and Hydrochemical Facies Evolution-Based Model, *Int. J. Environ. Res. Public Health*, 19(1),155; DOI:10.3390/ijerph19010155

Awad M. Aljuaid **(2021)** Modeling sustainable risks mitigation strategies using a morphological analysis-based approach: A real case study, Sustainability, 13(21), 12210 DOI: 10.3390/su132112210

yaoui, Sonda Bousnina, Salem Bouri, **Wafik Hachicha**, Awad M. Aljuaid **(2021)**. Using a Mamdani Fuzzy Inference System Model Quality in an Agri-Environmental Context: Case of the Hammamet-Nabeul Shallow Aquifer (Tunisia), Water, 13(18,) 2507 DOI: 10.3390/w13182507

Frikha, A., **Wafik Hachicha**, Aljuaid, A.M., Andejany. **(2021)** Solving a multiple user energy source selection problem using a fuzzy multi-criteria group decision-making approach, Energies, 14(14), 4313 DOI: 10.3390/en14144313

Hachicha, Awad M. Aljuaid **(2021)** Integrating quality tools and methods to analyze and improve a hospital sterilization process, *Healthcare*, 9(5), 544, DOI: 10.3390/healthcare9050544

icha, Awad M. Aljuaid **(2021)** Prioritization of the Best Sustainable Supply Chain Risk Management Practices Using a Structural Analysis Based-Approach, *Sustainability*, Vol. 13, No. 9 2021, 13(9), 4608; DOI: 10.3390/su13094608

, Younes Boujelben, Awad M. Aljuaid **(2021)**. Linking Entrepreneurial Innovation to Effectual Logic, *Sustainability*, *Vol. 13, No. 5,* 2626; DOI:10.3390/su13052626

ha, Awad M. Aljuaid **(2021)**. Sensitivity Analysis of the Optimal Inventory-Pooling Strategies According to Multivariate Demand Dependence, *Symmetry*, *Vol. 13, No. 2, 328*; https://doi.org/10.3390/sym13020328

Awad M. Alhuaid **(2021)** Sustainable Configuration of the Tunisian Olive Oil Supply Chain using a Fuzzy TOPSIS-based approach, ***Sustainability***, *Vol. 13*, No. 2, 722; DOI:10.3390/su13020722

a (2020) "The Impact of Demand Dependence on Optimal Inventory Level and Pooling Effect, International Journal of Industrial Engineering & Management Science, Vol. 7, No. 2, pp 5-63

Wafik Hachicha (2020) "Solving a routing problem of collect infectious healthcare waste with stochastic demand: case of Sfax Governorate in Tunisia, *World Review of Intermodal Transportation Research*, Vol. 9, No. 3, pp. 297-311

naissa, Amira Kammoun, Hamed Almalki **(2019)** "A Simulation Study to organize a Hospital Sterilization-Process of Maternity-Service", *International Journal of Engineering Research & Technology* (IJERT), Vol. 8 Issue 10, 2019, Page 140-146

Enacdrement de Theses

Student: Amira KAMMOUN **.1**
Title: Evaluation and improvement of sterilization services performance: the case of Sfax hospitals
Major: Management Science: Logistics and Production
Institution: Faculty of Economics and Management of Sfax, Tunisia
Defended on January 2019

Student: Mouna DERBEL **.2**
Title: The effect of demand dependency structure on the determination of the optimal procurement strategy using copula
Major: Management Science: Logistics and Production
Institution: Faculty of Economics and Management of Sfax, Tunisia
Defended on July 2019

Student: Manel MSALMI **.3**
Provisional Title: Using Prospective analysis base framework for the risk management in Supply Chains
Major: Management Science: Logistics and Production
Institution: Faculty of Economics and Management of Sfax, Tunisia
Defended on July 2019

Student: Rim DAOUD **.4**
Title: Incinerator Locating Problem and Healthcare Waste Routing Problem in Sfax Governorate- Tunisia
Major: Management Science: Operational Research and Decision Aid Support
Institution: Faculty of Economics and Management of Sfax, Tunisia
Defended on January 2020

Student: Ahlem JALLELI **.5**
Title: Sustainable Configuration of the Tunisian Olive Oil Supply Chain
Major: Management Science: Operational Research and Decision Aid Support
Institution: Faculty of Economics and Management of Sfax, Tunisia
Defended on June 2021

التخصصات

Conception et Exploitation des Systèmes de Production (Design and Manufacturing Management Systems)

Modélisation & Amélioration des Performances des Systèmes Complexes (Complex Systems Modeling & Performance Improvement)

Management des Risques et Maitrise des processus Industriels (Risk Management & Process Control and Monitoring)

Protection de l'Environnement et Développement Durable (Environmental Protection and Sustainable Development)