

Curriculum Vitae of

Dr. Jihene Kaabi

Associate Professor, IEEE Senior Member



Personal Information

Birth date: 19/02/1975–Tunisia
Marital Status: Married
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Education

March 2005

University of Besancon-France

Ph.D. in Computer Science, [Contribution to the scheduling of maintenance activities in the production systems.](#)

September 2001

University of Besancon-France

M.Sc. in Computer Science

June 2000

Polytechnic National Institute: Grenoble – France

M.Sc. in Operational Research, Combinatorial, and Optimization

June 1999

University of Science: Monastir – Tunisia

Bachelor Degree in Applied Mathematics

June 1994

Secondary School: Sfax – Tunisia

High school Certificate in Mathematics.

Teaching experience

July. 2023-Present

Dakota State University

- Associate Professor in Computer Science at the Beacom College of Computer and Cyber Sciences

- **Keywords:** x86 Assembly Language, Data Structures

Level: Bachelor's degree.

- **Keywords:** Cyber Problems

Level: Master's degree.

Feb. 2023-May. 2023

Kingdom University-Bahrain

- Associate Professor in Computer Science (**Chair of the department of Computer Science**)

- **Keywords:** Database Management Systems, Database Development, Discrete structures, Discrete Mathematics, Computer Programming

Level: Bachelor's degree.

<p>Dec. 2021-Aug.2022</p>	<p>University of Bahrain</p> <ul style="list-style-type: none"> - Associate Professor in Computer Science (Operations Research) <ul style="list-style-type: none"> ○ Keywords: Object Oriented Systems, Database Management Systems, Database Development, Operations Research, Information retrieval, Data Mining, Big Data Analytics, Discrete structures, Computer Programming - Level: Bachelor's degree.
<p>Sep. 2010– Dec. 2020</p>	<p>University of Bahrain</p> <ul style="list-style-type: none"> - Assistant Professor in Computer Science (Operations Research) <ul style="list-style-type: none"> ○ Keywords: Object Oriented Systems, Database Management Systems, Database Development, Operations Research, Information retrieval, Data Mining, Big Data Analytics, Discrete structures, Computer Programming ○ Level: Bachelor's degree.
<p>Feb. 2007 – Aug. 2010</p>	<p>University of Hail – Saudi Arabia</p> <ul style="list-style-type: none"> - Assistant Professor in the department of Computer Science <ul style="list-style-type: none"> ○ Keywords: Software Engineering, Design and analysis of algorithms, Java programming, Data Structures, Microsoft office, Discrete Mathematics ○ Level: Bachelor's degree.
<p>Feb. 2006 – Feb 2007</p>	<p>University of Hail – Saudi Arabia</p> <ul style="list-style-type: none"> - Lecturer in Mathematics Department <ul style="list-style-type: none"> ○ Keywords: Math 001, Math 002, Math 101, and Math 121 (Math & calculus) ○ Level: Bachelor's degree, Preparatory Year.
<p>Sep. 2005 – Aug. 2006</p>	<p>Arab Open University – Hail-Saudi Arabia</p> <ul style="list-style-type: none"> - Assistant Professor in Computer Science and Applied mathematics <ul style="list-style-type: none"> ○ Keywords: Telematics, communication technology, mathematics.
<p>Sep. 2004 – Aug. 2005</p>	<p>Polytechnic National Institute: Nancy - France</p> <ul style="list-style-type: none"> - Assistant Professor in Operational Research <ul style="list-style-type: none"> ○ Keywords: Graphs, Dynamic programming, linear programming and scheduling. ○ Level: Bachelor's degree
<p>Sep. 2002 – Aug. 2003</p>	<p>University of Science & Technique, Besancon-France</p> <ul style="list-style-type: none"> - Teaching Assistant in Computer Science <ul style="list-style-type: none"> ○ Keywords: Word, Excel and Internet. ○ Level: Diploma Degree
<p>Sep. 2001 – Aug. 2002</p>	<p>University of Science & Technique, Besancon-France</p> <ul style="list-style-type: none"> - Teaching Assistant in Computer Science <ul style="list-style-type: none"> ○ Keywords: C programming and system programming. ○ Level: Diploma Degree.

Administrative Experience

Sep. 2021 – Aug. 2022	University of Bahrain - Coordinator of the Master of Science in Information Technology
Dec. 2018 – Aug. 2021	University of Bahrain - Coordinator of the Quality Assurance Committee of the Master of Science in Information Technology program
Sep. 2012 – Aug. 2015	University of Bahrain - Coordinator of the Senior project committee at the department of Information Systems.

Distinctions

2001	Best student GPA in master's degree - University of Science & Technique, Besancon-France.
2001 – 2004	Ph.D. scholarship from the Ministry of Higher Education of France for getting the best Master GPA.
2008 – 2009	University of H'ail (Saudi Arabia) award for serving the university as a coordinator of the Computer Science department (Girl's branch),
2009 – 2010	Best faculty member college evaluation (teaching + research + university services)
2019	Awarded in the "Bahraini woman day" by the university of Bahrain president for having published the highest number of Scopus papers at the college of Information Technology

Professional organizations & Indexing

2019 – Present	Bahraini Academician Society member
2019 – Present	INFORMS Optimization Society member
2017 – Present	IEEE member
2019 – Present	IEEE Senior member
2018 – Present	IEEE Computer Society Bahrain Chapter member
Feb. 2007 – Aug. 2010	Coordinator of Computer Science and Software Engineering program at the University of Ha'il—KSA (Girls branch)
Sep. 2020 – Present	Coordinator of the Master of Science in Information Technology, College of IT
	Google scholar : h-index=9, i10-index=7 Researchgate score = 8 Scopus: hindex = 4

Supervising experience

2021—2022	- Co-Supervisor of a Master Thesis in Big Data <i>An Incremental Deep Learning Approach for Pricing Prediction Strategy in the Insurance Industry.</i>
2020—2021	- Co-Supervisor of a Master Thesis in Big Data Exploring the effectiveness of Deep Embedded Clustering methods on highly semantic image datasets.
2018—2019	- Supervisor of a Master Thesis A bi-objective scheduling problem in a cloud environment

2017—2019	<ul style="list-style-type: none"> - Supervisor of a Master Thesis Multi-Objective 3D Bin-Packing problem
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Research experience

1999 – 2000	<p>Logistical Industrial Engineering and Design Laboratory of Grenoble – France</p> <p>MSc. Thesis: “Development of heuristic methods for solving a vendor's dynamic scheduling problem in a synchronous delivery context”.</p> <p>Key words: synchronous delivery context, dynamic scheduling problems.</p>
2000 – 2001	<p>Automatic Laboratory of Besançon (UMR CNRS 6596) – France</p> <p>MSc. Thesis: “Development of a systematic preventive maintenance policy for the management of a fleet of robotized soldering clamps of PSA Sochaux”.</p> <p>Key words: Preventive maintenance, production manufacturing, maintenance, industrial systems.</p>
2001 – 2004	<p>Automatic Laboratory of Besançon (UMR CNRS 6596) – France</p> <p>Ph.D. Thesis: “Contribution to the scheduling of maintenance activities in production systems.”</p> <p>Key words: Linear programming, Simulation, Heuristics, priority rules, flow shop.</p>

Research Grants

Sep. 2020—May. 2022	<ul style="list-style-type: none"> - Title: Design of Efficient Algorithms for Smart Transportation systems and vehicle routing - Source: University of Bahrain. - Delivery: 1 Scopus/ISI journal paper
Sep. 2015 – Dec. 2017	<ul style="list-style-type: none"> - Title: Scheduling of parallel machines under availability constraints - Source: University of Bahrain - Delivery: 3 Scopus/ISI journal papers

Publications

	Book chapters
2024	<p>Alaa Tareq Mohamed, Riadh Ksantini, Jihene Kaabi, <i>An Incremental Deep Learning Approach for Pricing Prediction Strategy in the Insurance Industry</i>. Transformations in Banking, Finance and Regulation, Artificial Intelligence and Beyond for Finance, DOI: https://doi.org/10.1142/q0449, 2024.</p>
	International Journals
2023	<p>(Scopus, Q1) K. Abdulsattar, Y. Harrath, J. Kaabi, Ant Colony-based Approach for solving an Unmanned Aerial Vehicle Routing Problem, <i>Arab Journal of Basic and Applied Sciences</i>. DOI: https://doi.org/10.1080/25765299.2023.2275505, 2023.</p>

2022	1. (Scopus Q2 and ISI) Jihene Kaabi , Youssef Harrath, Amine Mahjoub, Nabil Hewahi, Khadija Abdulsattar, A 2-phase approach for planning of hazardous waste collection using an Unmanned Aerial Vehicle, <i>4OR - A Quarterly Journal of Operations Research</i> , DOI: https://doi.org/10.1007/s10288-022-00526-0 , 2022.
2022	2. (Scopus, Q2) Zahra Mohammed, Riadh Ksantini, Jihene Kaabi , Convolutional dynamic auto-encoder: a clustering method for semantic images, <i>Neural Computing and Applications</i>
2021	3. (Scopus (Q1) & ISI), Mahjoub, Amine, Jihene Kaabi , and Youssef Harrath. "Absolute bounds of list algorithms for parallel machines scheduling with unavailability periods." <i>International Transactions in Operational Research</i> 28.3 (2021): 1594-1610.
2019	4. (Scopus, Q3), Jihene Kaabi , Modeling and Solving a Scheduling Problem with m Uniform Parallel Machines Subject to Unavailability Constraints, <i>Algorithms</i> . Vol. 12, No. 12, doi: 10.3390/a12120247, 2019
2019	5. (Scopus, Q1), Jihene Kaabi , Youssef Harrath, Permutation Rules and Genetic Algorithm to solve the Traveling Salesman Problem, <i>Arab Journal of Basic and Applied Sciences</i> . Vol. 26, No. 1, pp. 283-291, 2019
2019	6. (Scopus, Q3), Youssef Harrath, Amine Mahjoub, Jihene Kaabi , A multi-objective genetic algorithm to solve a scheduling problem on a single machine with setup-times, <i>International Journal of Services and Operations Management</i> . Vol. 33, No. 4, pp. 494-511, 2019.
2019	7. (Scopus (Q1) & ISI), Jihene Kaabi , Youssef Harrath, Scheduling of uniform parallel machines under availability constraints, <i>International Journal of Production Research</i> , Vol. 57, No. 1, pp. 216-227, 2019.
2018	8. (Scopus, Q2), Youssef Harrath, Jihene Kaabi , New Method to Generate an Initial Basic Feasible Solution to the Balanced Transportation Problem, <i>International Journal of Industrial and Systems Engineering</i> , Vol. 30, No. 2, pp. 193-204, 2018.
2015	9. J. Kaabi , Y. Harrath, A Genetic Algorithm to Schedule the Flow Shop Problem under Preventive Maintenance Activities, <i>International Journal of mechanical, Aerospace, Industrial, Mechatronic and manufacturing Engineering</i> , Vol. 9, No. 10, pp. 1760-1764, 2015.
2014	10. J. Kaabi , Y. Harrath, A Survey of parallel machine scheduling under availability constraints, <i>International Journal of Computer and Information Technology</i> , Volume 03, Issue 02, pp. 238-245, March 2014.
2003	11. J. Kaabi , C. Varnier, N. Zerhouni. Ordonnancement de la production et de la maintenance: Cas d'un atelier de type Flow Shop à deux machines, <i>APII - JESA</i> , Vol 37, N° 5, pp. 641-660, December 2003.
	International Conferences
November 2021	12. Hassan, Fatima, and Jihene Kaabi . "An Efficient Heuristic to Solve a Multi-objective Scheduling Problem in a Cloud Environment." <i>2nd International Conference on Industry 4.0 and Artificial Intelligence (ICIAI 2021)</i> . Atlantis Press, 2022. (Best paper award)
April 2019	13. Jassim Ebrahim , Jihene Kaabi , Youssef Harrath , Multi-objective 3D bin-packing problem, <i>Proceeding of the 8th International conference on modeling, Simulation and Applied Optimization, 15-17 April 2019</i> , Kingdom of Bahrain.

November 2018	14. A. Mahjoub, J. Kaabi , Single machine scheduling problem in uncertain environment, Proceeding of the 3 rd ICT Conference, IEEE digital library, 18-20 November 2018, Kingdom of Bahrain.
April 2018	15. J. Kaabi , Y. Harrath, H.E. Bououdina, A.T. Qasim, Toward Smart Logistics: A new Algorithm for a Multi-Objective 3D Bin Packing Problem, <i>Proceeding of the IET Smart Cities Symposium</i> , IET digital library, https://digital-library.theiet.org/content/conferences/cp747 , 22-23 April 2018, Kingdom of Bahrain.
May 2017	16. Khadija AbdulSattar, Youssef Harrath, Jihene Kaabi , Amine Mahjoub, A multi-objective genetic algorithm to solve a real life travelling salesman problem, The 9 th IEEE GCC conference & exhibition, 6-9 May 2017, Kingdom of Bahrain.
October 2015	17. J. Kaabi , Y. Harrath, A genetic algorithm to schedule the flow shop problem under preventive maintenance activities. 17 th International Conference on Computational and Applied Mathematics, October 23-24 2015, London, UK.
September 2012	18. Y. Harrath, J. Kaabi , Mohamed Ben Ali and Mohamed Sassi, "Multiobjective genetic algorithm-based method for job shop scheduling problem: Machines under preventive and corrective maintenance activities", The 2012 4th Conference on Data Mining and Optimization, Sep. 2-4 2012, Langkawi-Malaysia.
September 2004	19. J. Kaabi , C. Varnier, N. Zerhouni, Ordonnancement conjoint de la production et de la maintenance dans un Flow Shop. 5 th Conference on 'Modeling and Simulation MOSIM'04, 1-3 September 2004, Nantes, France.
July 2004	20. J. Kaabi , C. Varnier, N. Zerhouni, Genetic algorithm for scheduling production and maintenance. Intelligent Maintenance Systems IMS'2004, in CD ROM, 15-17 July 2004, Arles, France.
May 2003	21. J. Kaabi , C. Varnier, N. Zerhouni, Scheduling with machine availability: An integrated approach, Proceedings of <i>International conference on industrial Engineering and Production Management</i> , IEPM'03, in CD ROM, 7 pages, 26-28 may 2003, Porto, Portugal.
Mars 2003	22. J. Kaabi , C. Varnier, N. Zerhouni, Ordonnancement de la production et de la maintenance: Cas d'un atelier de type flow shop à deux machines, Acte du Colloque francophone sur les Performances et Nouvelles Technologies en Maintenance, PENTOM'03, in CD ROM, 10 pages, 26-28 mars 2003, Valenciennes, France.
April 2002	23. J. Kaabi , D. Racoceanu, N. Zerhouni, Elaboration d'une politique de maintenance préventive pour la gestion d'un parc à pinces à souder robotisées, Actes de la Conférence Internationale d'Ingénierie Intégrée, C2I'2002, in CD Rom, 6 pages, 25-26 April 2002, Timisoara, Roumanie.

October 2002	24. J. Kaabi , C. Varnier, N. Zerhouni, Heuristics for scheduling maintenance and production on a single machine, Proceedings of IEEE International Conference on Systems, Man and Cybernetics, SMC'2002, sur CD ROM, 5 pages, 6-9 October 2002, Hammamet, Tunisia.
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In Progress Research

	25. Y. Harrath , M. Abdulla Alnoaimi, N. Nasser Alawadhi, E. A.Ameer Alaradi, J. Kaabi , Priority rules for solving a routing problem using multiple Unmanned Aerial Vehicles, (submitted), 2023
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Journal & Conference reviewing and organizing

- Reviewer in:
 - International Journal of Production Research (IJPR)
 - International Journal of Computer and Information Technology (IJCIT)
 - Computers and Industrial engineering Journal (CAIE)
- Member of the technical program committee of the 1st International conference On Innovation And Intelligence For Informatics, Computing, And Technologies (3ICT2018), 18-20 November 2018, Bahrain.
- Member of the Technical Program Committee of the 8th International Conference on Modeling, Simulation and Applied Optimization (ICMSAO'19), <http://icmsao.uob.edu.bh/>, Kingdom of Bahrain, April 15-17, 2019.
- Member of the Public Relations Committee of the 1st International Conference on Information Systems and Applications, ICISA2016, <http://icisa.uob.edu.bh/>, University of Bahrain, Kingdom of Bahrain.
- Member of the scientific committee of the Palestinian International Conference on Information and Communication Technology, PICICT 2013, <http://fit.iugaza.edu.ps/picict/ie/index.html>, Gaza – Palestine.
- Member of the organizing committee of the French-Japanese international congress, MECATRONICS2001, Besançon – France.
- Member of the organizing committee of the 5th International Symposium on Assembly and Task Planning, ISATP2003, Besançon – France.

9-11 October 2001	MECATRONICS: Besançon – France - Member of the organizing comities of the French-Japanese international congress “MECATRONICS”.
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9-11 July 2003	ISATP: Besançon – France - Member of the organizing comities of the 5 th International Symposium on Assembly and Task Planning: “ISATP”.
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Programming languages and software

- Dos, Windows, Unix – Linux.
- Rational Rose, Java, C, C++, Prolog, Visual C, Ada, Oracle.
- Minitab, MASM, MATLAB, Sees5, C45, Arena, CPLEX, XPRESS-MP, R studio.
- Latex, Word, Excel, Power Point, Access.

Miscellaneous

Languages

- English: speaking, reading and writing (Very good level).
- French: speaking, reading and writing (Excellent level).
- Arabic: speaking, reading and writing (Excellent level).

Visited countries

- Tunisia (Native country),
France, Italy, Belgium, Netherlands, Switzerland, Portugal, Libya, Saudi Arabia, Malaysia, Jordan, Turkey and Qatar.