






# Pr. Ouassila HIOUAL

Teacher Researcher

## PROFIL

 BP 2594 RP 40000 Khenchela,  
Algerie [hioual\\_ouassila@univ-  
khenchela.dz](mailto:hioual_ouassila@univ-khenchela.dz)  
  
 +(213) 7-73-43-48-71



## LANGUAGES

Arab   
French   
English 

## University itinerary and diplomas

October 2017

Biskra, Algeria

**Habilitation qualification in Computer science**

Mohamed Khider University of Biskra

October 2011

Constantine, Algeria

**Doctorate in Computer Science**

Mentouri University of Constantine 2

April 2005

Tebessa, Algeria

**Magister in Computer Science**

Mentouri University of Constantine 2

September 2002

Constantine, Algeria

**State Informatic Engineer**

Mentouri University of Constantine 2

June 1999

Constantine, Algeria

**University Diploma of Applied study**

Mentouri University of Constantine 2

June 1997

Constantine, Algeria

**Natural Science Baccalaureate**

Free baccalauriate, Constantine

June 1996

Constantine, Algeria

**Natural Science Baccalaureate**

Soumia college of Constantine

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## Professional Careers

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### **Abbes Laghrour University of Khenchela, Algeria**

- **Since July 2022** Full Professor.
- **From October 2017 to June 2022** Associate professor Class A.
- **From October 2011 to Octobre 2017** Associate professor Class B.
- **From September 2005 to Septembre 2011** Assistant professor.

### **Mentouri University of Constantine2, Algeria**

- **Since March 2023** Director of Research, at LIRE Laboratory.
- **From March 2022 to March 2023** Research assistant class –A-, at LIRE Laboratory.
- **From October 2015 to March 2018** Research Assistant at LIRE Laboratory.
- **From February 2003 to July 2004** substitute teacher at the computer science department.

### **Constantine Institutes, Algeria**

- **From September 2003 to July 2005** Computer science trainer at ISIAM Institute.
- **From September 2003 to July 2005** Computer science trainer at ITM Institute.

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## Responsibilities and Administrative Tasks

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- **From February 2022 until now:** Head of the Doctoral Training in Computer Science.
- **From February 2022 until the end of March 2022:** Member of the cell responsible of organizing and monitoring the progress of the doctoral competition in Computer Science.
- **From October 2019 until the end of October 2022:** Member of the Scientific Council of the Faculty of Science and Technology.
- **From October 2019 until the end of October 2022:** Member of the Scientific Committee of the Department of Mathematics and Computer Science.
- **From July 2018 until Now:** Member of the Doctoral Training Committee (CFD) in Computer Science.
- **From November 2017 until November 2020:** Head of the Master's Speciality: Security and Web Technologies.
- **From November 2015 to January 2017:** Head of the Master entitled « Security and Web Technologies ».
- **From December 2013 to November 2015:** Head of the Master entitled « Fundamental and Applied Computer Science ».

- **From October 2013 to February 2016:** Member of the scientific committee at the Mathematics and Informatics department

## Pedagogical Career

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### Teaching Courses, DWs and PWs

- Advanced Algorithm and Complexity (1st Master, Speciality: Security and Web Technologies).
- Machine Learning 2 (2<sup>nd</sup> Master, Speciality: Security and Web Technologies).
- Informatics 5 (3rd year Analytical Chemistry).
- Data Warehouse and Data Mining 1 (1st Master, Speciality: Security and Web Technologies).
- Research Methodology Course (Ph.D.).
- Introduction to Research Methodology (Ph.D.).
- Advanced Information Systems and Interoperability (Ph.D.).
- Advanced Database Concepts (1st Master, Speciality: Security and Web Technologies).
- Data Warehouse and Data Mining 2 (2<sup>nd</sup> Master, Speciality: Security and Web Technologies).
- Web Application Development (2nd year Bachelor's in Computer Science).
- Computer Science 1 (1st Licence in Material Sciences).
- Computer Science 2 (2nd Licence in Material Sciences).
- Advanced Software Engineering (1st Master, Speciality: Security and Web Technologies).
- Techniques of Expression (1st Master, Speciality: Security and Web Technologies).
- Algorithms and Data Structures 3 (2nd Licence in Computer Science).
- Object-Oriented Programming (2nd Licence in Computer Science).
- Computer Science (1st Master: Analytical Chemistry).
- XML Tools and Technologies (2nd Master, Speciality: Fundamental and Applied Computer Science).
- Graph Theory (3<sup>rd</sup> Licence in Computer Science, Speciality: General Computer Science).
- Web Services (3rd Licence in Computer Science, Speciality: Networks).
- Compilation (3rd Licence in Computer Science, Speciality: Networks).
- Compilation (3rd Licence in Computer Science, Speciality: General Computer Science).
- Information Systems Development: Internet Technology (3<sup>rd</sup> Licence, Speciality: Information Systems).
- Operating System 1 (2nd Licence in Computer Science).
- Algorithms and Data Structures (2nd Licence in Computer Science).
- Computer Science 1 (1st Licence Material Sciences).

- Fortran 90 (2nd Master in Chemistry).

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### Supervising

- **PhD:** 09 themes (6 Supervising + 3 Co-Supervising)
- **Engineer:** 03 themes
- **Master:** 17 themes
- **License:** 14 themes

### Course Material

« **Advanced Data Base** », Ouassila Hioual, Course Handout reserved for students of the master **Security and Web Technologies**.

### Training Offers

- **February 2015:** Proposition of a master CANEVAS in computer science entitled *Security et Web Technologies*. Agreed by a ministerial order N° 874 du 03 October 2015.
- **Mars 2016:** Proposition of a master harmonization CANEVAS in computer science entitled *Security et Web Technologies*. Agreed by a ministerial order N° 1282 du 09 August 2016

## Scientific Career

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### Internationals Publications

1. Ouassila Hioual and Zizette Boufaïda. An Agent Based Architecture (Using Planning) for Dynamic and Semantic Web Services Composition In an ebXML Context. International Journal of Database Management Systems (*IJDMS*), Volume 3, N°1, February 2011, pp. 110 - 131.
2. Ouassila Hioual and Sofiane Mounine Hemam: "Load balancing, Cost and Response Time Minimization Issues in Agent Based Multi Cloud Service Composition". International Journal of Internet Protocol Technology (IJIPT). Volume 10 Issue 2 Juin 2017, pp 73-88, DOI: 10.1504/IJIPT.2017.10002662 <http://www.inderscience.com/info/inarticletoc.php?jcode=ijipt&year=2017&vol=10&issue=2>
3. Sofiane Mounine Hemam, and Ouassila Hioual.: "A Hybrid Load Balancing Algorithm for P2P-Cloud System Aware of Constraints Optimization of Cost and Reliability Criteria". International Journal of Internet Protocol Technology (*IJIPT*). Vol 10 N° 2 Juin 2017, pp 99-114 DOI: 10.1504/IJIPT.2017.10001871 <http://www.inderscience.com/info/inarticletoc.php?jcode=ijipt&year=2017&vol=10&issue=2>
4. Ouided Hioual, Mohamed Tayeb Laskri, Sofiane Mounine Hemam, Ouassila Hioual and Lyes Maifi: "Towards An Implementation of A Modified Static Load Balancing Algorithm to Minimize Execution Time". Recent Patents on Computer Science, vol 12 N° 1 2019, pp 69-77
5. Saidi, Karima, Hioual, Ouassila, and Siam, Abderrahim: "Novel Energy-aware Approach to Resource Allocation in Cloud Computing", 2021. Multi agent and Grid Systems, vol. 17, no. 3, pp. 197-218. DOI :10.3233/MGS-210350.

6. Hioual Ouided, Sofiane Mounine Hemam, Hioual Ouassila and Maifi Lyes: "A Hybrid Approach for Web Page Classification", 2022. *Ingénierie des Systèmes d'Information*, 27(5), 747-755. DOI: <https://doi.org/10.18280/isi.270507>
7. Rabah Boucetti, Ouassila Hioual, Sofiane Mounine Hemam: "An approach based on genetic algorithms and neural networks for QoS-aware IoT services composition", *Journal of King Saud University - Computer and Information Sciences*, 2022. DOI: <https://doi.org/10.1016/j.jksuci.2022.02.012>
8. Hioual Ouassila. Sofiane Mounine Hemam, Hioual Ouided,,Mordjane, Rania, & Bouhlala Nessrine: "Fault Tolerance for Composite Cloud Services: A MAS-Based Novel Approach", 2022. *InteligenciaArtificial*, 25(69), 183–200. DOI: <https://doi.org/10.4114/intartif.vol25iss69pp183-200>
9. Bezza Youcef., Hioual Ouassila., Hioual Ouided., Yiltas-Kaplan Derya., &Gürkaş-Aydin Zeynep. (2023). MOOA-CSF: A Multi-Objective Optimization Approach for Cloud Services Finding. *Computing and informatics*, 42(4), 896– 922. [https://doi.org/10.31577/cai\\_2023\\_4\\_896](https://doi.org/10.31577/cai_2023_4_896)
- 10.Sofiane Mounine Hemam, Hioual Ouided, Hioual Ouassila,: "Dynamic Load Balancing Upon the Replication and Deletion of Cloud Services", 2023. *Journal of Intelligent &Fuzzy Systems*, 44(1), 381-393. DOI: 10.3233/JIFS-221989.
- 11.Hioual Ouided, Hioual Ouassila, Hemam Mounine Sofiane and Maifi Lyes, "A Method Based on Multi-Agent Systems and Passive Replication Technique for Predicting Failures in Cloud Computing", 2023. *Recent Advances in Computer Science and Communications*; 16(1), 18-32. DOI: <https://dx.doi.org/10.2174/2666255815666220429092324>

## Internationals Communications

1. Zizette Boufaïda and Ouassila Hioual.: "Contribution to Parameters Negotiation in the Context of B2B". 14th International Conference on Computer Theory and Application **ICCTA'2004**, Egypt (Alexandria), 28-30 September 2004.
2. Ouassila Hioual and Zizette Boufaïda.: "Using Intelligent Agents in Conjunction with Heuristic Model for Negotiating ebXML CPP". 2nd International conference on Information and Communication Technologies. **ICTTA '06**, Syria (Damas), 24-28 April 2006, pp.268-273.
3. Ouassila Hioual and Zizette Boufaïda.: "Towards a Semantic Composition of ebXML Business Processes". International Conference on Innovations in Information Technology. **IIT'08**, UAE (Dubai), 16-18 December 2008, pp.165-169.
4. Ouassila Hioual and Zizette Boufaïda.: "Vers une architecture à base d'agents pour une composition sémantique et dynamique des services web dans un contexte d'ebXML". 8th ENIM/IFAC International Conference on Modelling and Simulation. **MOSIM'10**, Tunisia (Hammamet). 10-12 May 2010. pp 931-939.
5. Hioual Ouassila and Hemam Sofiane Mounine: "Cost minimization and Load Balancing Issues to Compose Web Services in a Multi Cloud Environment". International conference on Intelligent Information Processing, Security and Advanced Communication **IPAC'15**. Algeria (Batna), 23-25 November 2015,
6. Hemam Sofiane Mounine, and Hioual Ouassila: "Load Balancing by Request Redistribution in Failure Nodes Context", International conference on Intelligent Information Processing, Security and Advanced Communication **IPAC'15**. Algeria (Batna), 23-25 November 2015.
7. Lakhneche Ramzi, Messaoudi Diyaadine, Hioual Ouassila and Hemam Sofiane Mounine.: "Cloning web services in a P2P System: A New Model for Load Balancing". The International Conference on Advanced Communication Systems and Signal Processing **ICOSIP'15**. Algeria (Tlemcen). 08-09 November 2015.

8. Abbrouk Abderahim, Djoghla Montaser, Hemam Sofiane Mounine and Hioual Ouassila: "Load Balancing of P2P Web Servers: Case of Predictable Failure Node", The 2015 International Conference on Advanced Communication Systems and Signal Processing **ICOSIP'15**. Algeria (Tlemcen). 08-09 November 2015.
9. Hioual Ouassila and Hemam Sofiane Mounine.: "Cloud Services Selection by Load Balancing between Clouds: A Hybrid MCDM/Markov Chain Approach". 12<sup>th</sup> International Conference on Web Information Systems and Technologies **WEBIST 2016** - Special Session on New Trends in Web Intelligence and Services (WIS 2016). Italy (Roma) 23-25 April 2016, , Vol. 1, pp 289-295, ISBN: 978-989-758-186-1
10. Hemam Sofiane Mounine and Hioual Ouassila.: "Load Balancing Issue in Cloud Services Selection By Using MCDA and Markov Chain Model Approaches". 2<sup>nd</sup> International Conference on Cloud Computing Technologies and Applications **CloudTech 2016**, Marrakech (Marroc), 24-26 May 2016,
11. Boudjidi Housseem, Borhani Islam, Hemam Sofiane Mounine and Hioual Ouassila.: "MCDM for Scheduling Unilatory Tasks in Distributed and Heterogeneous Environment", 2nd International Conference on Pattern Analysis and Intelligent Systems **PAIS 2016**. Algeria (Khenchela), 16-17 November 2016, pp 266-272.
12. Hemam Sofiane Mounine, Hioual Ouassila and Hioual Ouided.: "Load Balancing Between Nodes in a Volunteer Cloud Computing by Taking Into Consideration the Number of Cloud Services Replicas". 3rd International Conference on Cloud Computing Technologies and Applications CloudTech'17, Morocco (Rabat).24-26 October 2017. Indexed in IEEE
13. Hioual Ouassila, Amamiche Abdelhakim, Hemam Sofiane Mounine et Zidane Redha: "Proposition d'uneméthodehybride pour la sélection des services Cloud", 12th edition of the Conference on Advances of Decisional Systems. ASD 2018: Big data & Applications., Morocco (Marrakech). 2-3, May 2018, pp.63-76.
14. Derbal Rayen, Hassad Amira, Hioual Ouassila: "Supervised Learning and Multi Agent Systems for Fault Tolerance en Cloud Computing", 12th edition of the Conference on Advances of Decisional Systems. ASD 2018: Big data & Applications., Morocco (Marrakech). 2-3, May 2018, pp.113-122.
15. Mimouni Abderrazak, Aggoun Amer, Hioual Ouassila: "Back Recovery Protocol Based Multi-Agent Planning for the Fault Tolerance of Composite Cloud services", 12th edition of the Conference on Advances of Decisional Systems. ASD 2018: Big data & Applications., Morocco (Marrakech). 2-3, May 2018, pp.138-150.
16. Khellaf, Douaa, Kenatef, Hana, Hioual, Ouassila: "Towards a SaaS Contracts Negotiation Model Based on a Multi Agent System". In: Ezziyyani, M. (eds)Advanced Intelligent Systems for Sustainable Development (AI2SD'2019). AI2SD 2019. Advances in Intelligent Systems and Computing, vol 1105. Springer, Cham. [https://doi.org/10.1007/978-3-030-36674-2\\_49](https://doi.org/10.1007/978-3-030-36674-2_49)
17. Saidi, Karima, Hioual, Ouassila, Siam, Abderrahim: "Resources Allocation in Cloud Computing: A Survey". In: Hatti, M. (eds) Smart Energy Empowerment in Smart and Resilient Cities. ICAIRES 2019. Lecture Notes in Networks and Systems, vol 102. Springer, Cham. [https://doi.org/10.1007/978-3-030-37207-1\\_37](https://doi.org/10.1007/978-3-030-37207-1_37).
18. Karima Saidi, Ouassila Hioual and Abderrahim Siam: "A DSL-MCDA Model for Energy Consumption-Aware in Cloud Computing," 2019 International Conference on Internet of Things, Embedded Systems and Communications, IINTEC'2019, pp. 168-173, doi: 10.1109/IINTEC48298.2019.9112111.

19. Ouided Hioual, Ouassila Hioual, Sofiane Mounine Hemam, Lyes Maifi: 'A new method for predicting failures in Cloud Computing', Advanced Intelligent Systems for Sustainable Development (AI2SD'2020), Tanger, Morocco, December 2020.
20. Karima Saidi, Ouassila Hioual: 'Task Scheduling-Energy Efficient in Cloud Computing', International Conference in Artificial Intelligence in Renewable Energetic Systems, Tipaza, Algeria, 2020.
21. Youcef Bezza, Ouassila Hioual, Ouided Hioual: 'A Multi-Criteria Decision Model for Optimizing Costs and Performances for a Cloud User', The 1st International Conference on Distributed Sensing and Intelligent Systems (ICDSIS2020), Agadir, Morocco, 2020.
22. Rabah Boucetti, Sofiane Mounine Hemam, Ouassila Hioual: 'QOS-Aware IoT Services Composition: A Survey', The 1st International Conference on Distributed Sensing and Intelligent Systems (ICDSIS2020), Agadir, Morocco, 2020.
23. Ouassila Hioual, Ouided Hioual, Sofiane Mounine Hemam: 'A Hybrid Approach for Clustering and Selecting of Cloud Services Based on User Preferences Evaluation', Intelligent and Fuzzy Techniques: Smart and Innovative Solutions. INFUS 2020. Advances in Intelligent Systems and Computing, vol 1197. Springer, Cham. Izmir, Turkey 2020.
24. Nabila Azeri, Ouassila Hioual and Ouided Hioual: "Towards an Approach for Modeling and Architecting of Self-Adaptive Cyber-Physical Systems" 2022 4<sup>th</sup> International Conference on Pattern Analysis and Intelligent Systems (PAIS), Oum El Bouaghi, Algeria, 2022, pp. 1-7, doi: 10.1109/PAIS56586.2022.9946921.
25. Nabila Azeri, Z. Zouikri, M. Rezgui, Ouassila Hioual and Ouided Hioual, "Fault Prediction Using Supervised and Unsupervised Learning Algorithms in Cyber Physical Systems" 2022 2nd International Conference on New Technologies of Information and Communication (NTIC), Mila, Algeria, 2022, pp. 1-6, doi: 10.1109/NTIC55069.2022.10100404.
26. Ouassila Hioual, Arridj Elouroud Sassi and Walid Djaballah: "A decision-making model for self-adaptation of cyber-physical systems: application to smart grids" 7th International Conference on Artificial Intelligence in Renewable Energetic Systems, IC-AIRES 2023, 26-28 Novembre 2023, Tipasa, Algeria.
27. Nabila Azeri, Ouided Hioual and Ouassila Hioual: "Enhancing Self-Adaptive Cyber-Physical Systems using Federated Machine Learning" 3rd Tunisian-Algerian Conference on Applied Computing, TACC 2023, Sousse, Tunisia.
28. Nawel Chemini, Ouassila Hioual and Sofiane Mounine Hemam: "Semantic interoperability in Electronic health Record System Based on Blockchain Technology: a Survey" 2023 5th International Conference on Pattern Analysis and Intelligent Systems (PAIS), Setif, Algeria, 2023
29. Adil Bougerra, Sofiane Mounine Hemam and Ouassila Hioual: "Real-Time Human Action Representation Based on 2D Skeleton Joints" 6th International Conference On Networking And Advanced Systems, ICNAS'23, Algeria.

## NationalsCommunications

1. Ouassila Hioual et Zizette Boufaïda.: " Proposition d'un protocole de négociation dans un contexte B2B ". Deuxièmes journées d'informatique pour l'entreprise **JIE2 2004**. Algeria (Blida). 04-06 october 2004.
2. Ramzi Lakhneche, Diyaaeddine Messaoudi, **Ouassila Hioual** et Sofiane Mounine Hemam.: "Clonage des services web pour l'équilibrage de charge dans

un système P2P". 2<sup>ème</sup> Journées Ouvertes sur le Mathématiques et Informatique **JOMI 2015**, Algeria (Tébessa), 25-26 May 2015.

3. Karima Saidi, Ouassila Hioual : ' An overview of machine learning and deep learning', First National Conference on Artificial Intelligence and Information Technologies, El-Taref, Algeria, 2021.
4. Rabah Boucetti, Sofiane Mounine Hemam, Ouassila Hioual: 'Multicriteria Approach for Discovering IoT Services', The 4th Conference on Computing Systems and Applications, CSA 2020. Lecture Notes in Networks and Systems 199, Springer 2021, ISBN 978-3-030-69417-3, Algiers, Algeria, 2020.

## Research Projects

1. **From January 2007 to December 2010:** Member of the National Project N° B2501/52/2006 entitled : «Ontology and Semantic Web ».
2. **From January 2013 to December 2016:** Member of the National Project B00L07UN250220120010 entitled: «Semantic Web and knowledge engineering: extraction, management and semantic elements enrichment».
3. **From January 2018 to December 2021:** Head of the national Project N° C00L07UN400120180001 entitled « The CloudIoT and Humain learning : conception, modeling and experimentations»
4. **From January 2022 until now:** Member of RFU Project N° C00L07UN400120230008 entitled: « Contribution of Future IoT for Energy Consumption Optimization in Industry 4.0».

## Scientific Activities

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### Conferences Chair

1. **PAIS'2016** : The 2<sup>nd</sup> International Conference on Pattern Analysis and Intelligent Systems, November 16-17, 2016, Khenchela, Algeria.
2. **Special Session entitled:** "MCDA methods for Cloud Services discovery, selection and composition", Cambridge, United Kingdom, Jointly with **ICC'2017:** 2<sup>nd</sup> International Conference on Internet of Things, Data and Cloud Computing, March 22-23, 2017. HU<http://icc-conference.org/index.php/cfpU>
3. **Special Session entitled:** "Cloud/P2P Services Discovery, Selection and Composition", Jointly with **DICTAP'2016** : 6<sup>th</sup> International Conference on Digital Information & Communication Technology & its Applications, July 21-23, Konya, Turkey, <http://sdiwc.net/conferences/dictap2016/wp-content/uploads/dictap1.html>

### Chair of the publication committee

1. **PAIS'2016** : The 2<sup>nd</sup> International Conference on Pattern Analysis and Intelligent Systems, November 16-17, 2016, Khenchela, Algeria.

### Member of the Scientific Committee

#### A. International Journals

1. Egyptian Informatics Journal. Elsevier. Indexed: WoS.
2. Journal of King Saud University Computer and Information Sciences.



3. Elsevier. Indexed: WoS.
4. Computers and Electrical Engineering. Elsevier. Indexed: WoS.
5. Journal of Industrial Information Integration. Elsevier. Indexed: WoS.
6. Journal of Intelligent and Fuzzy Systems. IOS Press. Indexed: WoS.
7. International Journal of Ad Hoc and Ubiquitous Computing. Inderscience Indexed: WoS.
8. IEEE Access. Indexed: WoS.
9. SN Computer Science. Springer Indexed: SCOPUS.

## **B. International Conferences**

1. **IAAI'2023**: The 1st International Conference proceedings on Applications on Artificial Intelligence, September 07, 08, 2023, India.
2. **PAIS'2023**: The 5th International Conference on Pattern Analysis and Intelligent Systems, October 25, 26, 2022, Setif, Algeria.
3. **ISPR'2023**: The Third International Conference on Intelligent Systems and Pattern Recognition, May 11-13, 2023, Hammamet, Tunisia.
4. **RIF'2023**: The 12th Seminary of Computer Science Research at Feminine, March 9, 2023, Constantine, Algeria.
5. **PAIS'2022**: The 4th International Conference on Pattern Analysis and Intelligent Systems, October 12, 13, 2022, Oum El Bouaghi, Algeria.
6. **SETIT'2022**: The 9th International Conference on Sciences of Electronics, Technologies of Information and Telecommunications, between 28<sup>th</sup> and 30<sup>th</sup> of May 2022, Genoa (Italy) and Hammamet (Tunisia).
7. **ISPR'2022**: The Second International Conference on Intelligent Systems and Pattern Recognition, March 24-26, 2022, Hammamet, Tunisia.
8. **ICRAMI'2021**: The International Conference on Recent Advances in Mathematics and Informatics, September 21-22, 2021, Tebessa, Algeria.
9. **NISS'2020** : The 3rd edition of the International Conference on Networking, Information Systems & Security, from March 31th to April 2nd, 2020, Marrakech, Morocco.
10. **IC-AIRES'2020**: The 4th International Conference on Artificial Intelligence in Renewable Energetic Systems, December 22-24, 2020, Tipasa, Algeria.
11. **ICMIT'2020**: The International Conference on Mathematics and Information Technology, February 18-19, 2020, Adrar, Algeria.
12. **ASD2018**: The 12th Edition of the Conference on Advances of Decisional Sytems, May 2-3, 2018, Marrakech, Morocco.
13. **PAIS'2018**: The 4th International Conference on Pattern Analysis and Intelligent Systems, October 24-25, Tebessa, Algeria.
14. **MISC'2018** : The International Conference on Modern Intelligent Systems Concepts, December 12-13, 2018, Rabat, Morocco.
15. **SETIT'2018**: The 8th International Conference on Sciences of Electronics, Technologies of Information and Telecommunications, between 18<sup>th</sup> and 20<sup>th</sup> of December 2018, Genoa (Italy) and Hammamet (Tunisia).
16. **DSC'2017**: The 3rd International Workshop for Data Science and Computing, October 30<sup>th</sup> to October 3rd, 2017, Hammamet, Tunisia.
17. **ICMIT2017**: The International Conference on Mathematics and Information Technology, December, 4-5, 2017, Adrar, Algeria.

18. **NG2CT2017**: Next Generation Computing and Communication Technologies, December, 16-18, 2017, Hammamet, Tunisia.
19. **PAIS'2016**: The 2nd International Conference on Pattern Analysis and Intelligent Systems, November 16-17, Khenchela, Algeria.
20. **SETIT'2016**: The 7<sup>th</sup> International Conference on Sciences of Electronics, Technologies of Information and Telecommunications, December 18-20, 2016 Hammamet, Tunisia.
21. **IT4OD'2016**: The 2nd International Conference on Information Technology for Organizations Development, March 30th to April 1st, 2016, Fes, Morocco.
22. **PAIS'2015**: The 1st International Conference on Pattern Analysis and Intelligent Systems, October 25-26, 2016, Tebessa, Algeria.

### Member of the Organization Committee

1. **JNIAK'2012**: 1<sup>ières</sup> Journées Nationales sur l'Informatique et ses Applications Khenchela, April 29-30, Khenchela, Algeria.
2. **Summer University (2012) for Scientific Research and Cutting-Edge Technology: Innovation and Valorization**, July 07-12, Khenchela, Algeria."
4. Organization and chairing of the workshop entitled 'PhD Candidate's Journey: Obstacles and Challenges' for doctoral students during the doctoral days. **'PhD Candidate's Journey: Obstacles and Challenges,' January 20, 2022**, AbbesLaghrour University, Khenchela, Algeria.
5. **AI2019**: Workshop on the Preparation of the National Research and Innovation Strategy on Artificial Intelligence, December 1-2, 2019, Constantine, Algeria."

### Guest Researcher

Presentation of a seminar entitled "Managing Transaction in P2P Database Environment", January 29, 2014, Istanbul Technical University, Avcilar, Turkey <http://ce.istanbul.edu.tr/Duyuru.aspx?duyuruId=2297>

### Expertise

1. Expertise of the Habilitation File of Mrs. Mellal Nassima, Larbi Ben Mhidi University, Oum El Bouaghi. Designation Date: April 18<sup>th</sup>, 2021."
3. Expertise of Course Handout of Mrs. Kolli Manel, Assia Djebbar Superior National College, Constantine. Designation date : July 18<sup>th</sup>, 2021.
4. Expertise of Course Handout of Mr. Zeggari Ahmed, Larbi Tebessi University of Tebessa. Date: February 10th, 2020.
5. Expertise of Habilitation File of Mr. Moudjari Abdelkader, Abdelhamid Mehri, Constantine 2 University. Designation date : October 09th, 2019.

### Defense Jury

1. President of the Doctoral Defense Jury for Mr. Benabbes Sofiane, Abbès Laghrour University, Khenchela. Defense Date: October 24, 2023.
2. Member of the Doctoral Defense Jury for Mr. Boucetti Rabeh, Abbès Laghrour University, Khenchela. Defense Date: October 31, 2022.

3. Member of the Doctoral Defense Jury for Mr. Seghiri Akram, Abdelhamid Mehri University, Constantine 2. Defense Date: June 11, 2022.
4. Member of the Doctoral Defense Jury for Mrs. Saidi Karima, Abbès Laghrour University, Khenchela. Defense Date: June 2, 2022.
5. Member of the Jury for the Academic Habilitation Defense of Mrs. Ghenai Afifa, Abdelhamid Mehri University, Constantine 2. Defense Date: July 11, 2021.
6. Member of the Jury for the Academic Habilitation Defense of Mr. Moudjari Abdelkader, Abdelhamid Mehri University, Constantine 2. Defense Date: February 18, 2020.
7. Member of the Doctoral Defense Jury for Mr. Chergui Wahid, Batna 2 University. Defense Date: September 20, 2020.
8. Member of the Doctoral Defense Jury for Mr. Ledmi Abdeldjalil, Larbi Tebessi University, Tebessa. Defense Date: July 24, 2019.