Pr. Sofiane Mounine HEMAM

Teacher Researcher

P R O F I L

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L A N G U A G E S

Arab

French

English

University itinerary and diplomas

November 2017
Biskra, Algeria
Habilitation qualification in Computer science
Mohamed Khider University of Biskra

December 2013
Oued-Smar, Algiers, Algeria
Doctorate in Computer Science
Higher School of Computer Science

April 2005
Tebessa, Algeria
Magiter in computer science
Laarbi TEBESSI University of Tebessa

September 1996
Constantine, Algeria
State Informatic engineer
Mentouri University of Constantine

June 1991
Constantine, Algeria
Mathematics Baccalaureate
Ibn Taymia college of Constantine

Professional Career

Abbes Laghrour University of Khenchela, Algeria

- Since November 2022   **Full Professor**
- From November 2017 to November 2022   **Associate Professor –A-**
- From Janury 2014 to November 2017   **Associate Professor –B-**
- From Janury 2011 to Decembre 2013   **Assistant Professor –A-**
- From Octobre 2005 to December 2011   **Assistant Professor –B-**

National Social Insurance Fund Khenchela, Algeria

- From October 2004 to March 2005 **Head of the Computing Center**
- FromJune1996 to September 2004   **Inspector**

Larbi Tebessi University of Tebessa, Algeria

- From October 2003 to June 2004   **Part-time teacher**

Responsibilities and Administrative Tasks

- Since October 2022: Chairman of the MAB recruitment committee.
- Since February 2022: Member of the Doctoral Training in Computer Science.
- From February 2022 until the end of March 2022: Chairman of the organization's cell and monitoring of the progress of the doctoral competition at faculty level.
- From February 2022 until the end of March 2022: Cell member of the organization and monitoring of the progress of the doctoral competition at the university level.
- From September 2021 to November 2021: Chairman of the MAB recruitment committee.
- From February 2021 until the end of March 2021: Chairman of the organization's cell and monitoring of the progress of the doctoral competition at faculty level.
- From February 2021 until the end of March 2021: Cell member of the organization and monitoring of the progress of the doctoral competition at the university level.
- From October 2019 to October 2023: Member of the Scientific Council of the Faculty of Natural and Life Sciences
- From October 2019 to October 2023: Member of the University Scientific Council
- From September 2019 until the end of November 2019: Member of the organization's cell and followed the progress of the doctoral competition in Computer Science.
- From April 2019 until the end of October 2023: Dean of the Faculty of Natural and Life Sciences.
- Since April 2019 to date: Member of the establishment project unit
- From March 2018 until April 2019: Dean of the Faculty of Science and Technology.
- From July 2018 to date: Chairman of the Doctoral Training Committee (CFD) in Computer Science.
- From July 2013 until March 2018:Vice Dean of the Faculty of Science and Technology in charge of Post-Graduation, Scientific Research and External Relations
- From February 2007 until June 2013: Vice Director of the Science and Technology Institute in charge of post-graduation and scientific research.
- Since October 2008 to December 2012: Local manager of the S.T.I.C Doctoral School of Computer Science

Pedagogical Career

- Advanced Software Engineering 2022-2023 (1st year Master Specialty: Security and Web Technologies).
- Expert System 2022-2023 (1st year Master Specialty: Security and Web Technologies).
- Introduction to Research Methodology 2022-2023 (1st year doctorate).
- Expression techniques 2021-2022 (1st year Master Specialty: Security and Web Technologies).
- Advanced Software Engineering 2021-2022 (1st year Master Specialty: Security and Web Technologies).
- Introduction to Research Methodology 2020-2021 (1st year doctorate).
- Write and publish a scientific article 2020-2021 (1st year doctorate).
- Machine learning2 2020-2021 (2nd year Master Specialty: Security and Web Technologies).
- Expression techniques 2020-2021 (1st year Master Specialty: Security and Web Technologies).
- Meta-Heuristics and Evolutionary Algorithms1 2019-2020 (1st year doctorate).
- Meta-Heuristics and Evolutionary Algorithms2 2019-2020 (1st year doctorate).
- Machine learning2 2019-2020 (2nd year Master Specialty: Security and Web Technologies).
- Expression techniques 2019-2020 (1st year Master Specialty: Security and Web Technologies).
- Information research and monitoring 2018-2019 (2nd year Master Specialty: Security and Web Technologies).
- Operating system1 2018-2019 (2nd year Computer Science License
- Database administration 2018-2019 (3rd year License Specialty: Information systems).
- Advanced Database Concepts 2018-2019 (1st year Master Specialty: Security and Web Technologies).
- Meta-Heuristics and Evolutionary Algorithms2 2018-2019 (1st year doctorate).
- Meta-heuristics and evolutionary algorithms1 2018-2019 (1st year doctorate).
- Database administration 2017-2018 (3rd year License Specialty: Information systems).
- Operating system1 2017-2018 (2nd year Computer Science License).
- Web Service and Security 2017-2018 (2nd year Master Specialty: Security and Web Technologies).
- Advanced Algorithms and complexity 2017-2018 (1st year Master Specialty: Security and Web Technologies).
- Machine Learning 2 (2nd year master's degree in computer science, specialty: Security and Web Technologies)
- Advanced database concepts (1st year master's degree in computer science, specialty: Security and Web Technologies)
- Expression techniques (1st year master's degree in computer science, specialty:

Security and Web Technologies)

- Advanced Algorithms and Complexity (1st year master's degree in computer science, specialty: Security and Web Technologies)
- Distributed Operating System (2nd year master's degree in computer science, specialty: Fundamental and Applied Computer Science)
- Graph Theory (3rd year Computer science license specialty: Computer Systems)
- Machine Structure (1st year Mathematics and Computer Science)
- Operating System2 (3rd year Computer Science degree, specialty: General Computer Science)
- Operating System2 (3rd year Computer science degree, specialty: Network)
- Operating System1 (2nd year IT license)
- Operating System (3rd year Computer Engineer)
- Distributed System (4th year Computer Engineer, Option: Advanced Information System)
- Operating System (2nd year DUEA IT)
- Computer science (1st year Material science)
- Computer science (1st year master's degree in Chemistry, specialty: Analytical Chemistry)

Directed Work Teaching

- Expression techniques 2021-2022 (1st year Master Specialty: Security and Web Technologies).
- Expression techniques 2020-2021 (1st year Master Specialty: Security and Web Technologies).
- Machine learning2 2020-2021 (2nd year Master Specialty: Security and Web Technologies).
- Expression techniques 2019-2020 (1st year Master Specialty: Security and Web Technologies).
- Machine learning2 2019-2020 (2nd year Master Specialty: Security and Web Technologies).
- Database administration 2018-2019 (3rd year License Specialty: Information systems).
- Operating system1 2018-2019 (2nd year Computer Science License).
- Advanced Algorithms and complexity 2017-2018 (1st year Master Specialty: Security and Web Technologies).
- Web Service and Security 2017-2018 (2nd year Master Specialty: Security and Web Technologies).
- Operating system1 2017-2018 (2nd year Computer Science License).
- Database administration 2017-2018 (3rd year License Specialty: Information systems).
- Machine Learning 2 (2nd year master's degree in computer science, specialty: Security and Web Technologies)
- Advanced database concepts (1st year master's degree in computer science, specialty: Security and Web Technologies)
- Expression techniques (1st year master's degree in computer science, specialty:

Security and Web Technologies)

- Advanced Algorithms and Complexity (1st year master's degree in computer science, specialty: Security and Web Technologies)

- Distributed Operating System (2nd year master's degree in computer science, specialty: Fundamental and Applied Computer Science)

- Graph Theory (3rd year Computer science license specialty: Computer Systems)

- Machine Structure (1st year Mathematics and Computer Science)

- Operating System2 (3rd year Computer Science degree, specialty: General Computer Science)

- Operating System2 (3rd year Computer science degree, specialty: Network)

- Operating System1 (2nd year IT license)

- Operating System (3rd year Computer Engineer)

- Distributed System (4th year Computer Engineer, Option: Advanced Information System)

- Operating System (2nd year DUEA IT)

Practical Work Teaching

- Information research and monitoring 2018-2019 (2nd year Master Specialty: Security and Web Technologies).

- Operating system1 2018-2019 (2nd year Computer Science License).

- Operating system1 2017-2018 (2nd year Computer Science License).

- Operating System1 (2nd year IT license)

- Operating System (3rd year Computer Engineer)

- Operating System (2nd year DUEA IT)

- "Fortran" Numerical Analysis (2nd year Mathematics)

- Mathlab (1st year master physics)

- Office automation (1st year Material science)

Supervision of doctoral thesis defended

- Ledmi Abdeldjalil: «**Fault Tolerance in Distributed Systems**», Larbi Tebessi University, Tebessa. Thesis defended on July 14, 2019.

- Boucetti Rabeh: «**AI approach for the composition of IoT services through needs analysis**". Abbes Laghrour University, Khenchela. Thesis defended on October 31, 2022.

- Benabbes Sofiane: "*Learning* **Methods-Based Approach for Dynamic Load Balancing in CloudIoT**» Abbès Laghrour University, Khenchela. Thesis defended on October 24, 2023.

- Bettayeb Sami: "**Communication Security in an Internet of Things Context**", Abbes Laghrour University, Khenchela. Thesis defended on February 24, 2024.

Supervision of in progress doctoral thesis

- Ghaoui Sara : «**Descriptive modeling of collaborative practices in a human learning computing environment**», Abbes Laghrour University, Khenchela.

- Bouguerra Adil: "**Recognition and prediction of human action based on a new action representation and deep learning**», Abbes Laghrour University, Khenchela.

- Chemini Nawel: "**Semantic interoperability in an IoT system",**Abbès Laghrour University, Khenchela.

- Bouhroum Ayoub : «**Contribution to the specification and formal analysis of cyber-physical systems: Application to Industry 4.0",**Abbès Laghrour University, Khenchela.

- Semmadi Nacer-Eddine : «**Development of a testing platform for the security of CPS systems using machine learning and deep learning techniques.**», Abbès Laghrour University, Khenchela.

Supervision of engineer

- Saidi Karima and Hannachi Rahima, "Design and Creation of a Website for the creation of a Virtual Library", Khenchela University Center, June 2009.

- Nessaba Sarah and Derbal Ryma, "Creation of a distributed transaction analyzer", Khenchela University Center, June 2010.

- Ledmi Abdeldjalil and Maamria Harkati, "Execution Simulation of the distributed transactions in a quorum-based system with the PeerSim Simulator", Khenchela University Center, June 2010.

Supervision of Master

- Saci Marwa and Benazzouz Lina: "Towards a decision support system based on supervised algorithms for student guidance", Abbes Laghrour Khenchela University, June 2023.

- Boukehil Mounir and Kellil Rami "Design of an Intelligent Information System: Application for the management of student orientation", Abbes Laghrour Khenchela University, June 2022.

- Kacha Karam Allah and Aissaoui Sana "Approach based on Genetic and K-means algorithms for the composition of IoT Services", Abbes Laghrour Khenchela University, July 2021.

- Arroudj Tarek and Hamidani Anouar, "Design and Creation of a Web Platform for Online Courses", Abbes Laghrour Khenchela University, July 2021.

- Falek Mohamed and Mahfoud Souleimane, "Tower a New Method to Unbalancing Load Detection in Cloud Computing", Abbes Laghrour Khenchela University, September 2020.

- Benabbes Sofiane and Necib Abderahim, "Towards a new model for load balancing in CloudIoT", Abbes Laghrour Khenchela University, June 2018.

- Benabbes Sofiane Necib Abderahim "Towards a new model for load balancing in CloudIoT", ABBES Laghrour University of Khenchela, June 2018.

- Sabbeg Aya "A Probabilistic Approach for Reputation-Based Node Selection in CloudIoT", ABBES Laghrour University of Khenchela, June 2018.

- Boudjidj Houssem and Bourhani Islam, "Task scheduling based on a decision support system", ABBES Laghrour University of Khenchela, September 2016.

- Zeroual Hanane and Bouguandoura Leila, "Proposal of a model for deleting

replicated resources without degrading load balancing", ABBES Laghrour University of Khenchela, September 2016.

- Abrouk Abderrahim and Djoghlal Montasir, "Load balancing by redistribution of requests between dynamic Web servers", ABBES Laghrour University of Khenchela, June 2015.

- Lakhneche Ramzi and Messaoudi Dhaya Eddine, "Cloning web services for load balancing", ABBES Laghrour University of Khenchela, June 2015.

- Ledmi Abdeldjalil and Boutobba Hacene "Simulation of balancing in a Peer-to-Peer system with the PeerSim simulator", ABBES Laghrour University of Khenchela, June 2014.

- Zedira Mouaad, "Study of the Impact of connecting and disconnecting nodes on response time", ABBES Laghrour University of Khenchela, June 2013.

- Sebaa Dalila, "Design of a system for deadlock management in distributed quorum-based systems", ABBES Laghrour University of Khenchela, June 2013.

- Hani Assia and Robai Salwa, "Simulation of maintaining the consistency of replicated data in a pure P2P environment", Khenchela University Center, June 2012.

- Ghezlaoui Abdelfateh and Yahia Batoul, "Simulation of the consistency of distributed and replicated data in a quorum-based P2P network", Khenchela University Center, June 2012.

Supervision of License

- Messaoudi Dhaya Eddine, "Design of a data exchange system in a distributed environment", Khenchela University Center, June 2012.

- Berkane Souad, "Design and creation of a system for the management of post-graduation sub-direction", ABBES Laghrour University of Khenchela, June 2013.

- Borhani Islam and Hoggas Amine, "Design and creation of a website for the management of end-of-cycle subject assignments", ABBES Laghrour University of Khenchela, June 2013.

- Derardja Mourad and Suidi Mohamed El-habib, "Simulation of the consistency of data distributed on the P2P network based on the NS2 simulator, Khenchela University Center, June 2011

- Bourmada Amel, Bouttaba Rafik and Djebaili Yasmine, "Design and creation of a dynamic website for the management of post-graduation competitions at the university center of Khenchela", Center Universitaire de Khenchela, June 2009.

Supervision of University Degree in Applied Studies

- Falek Salem, Monsouri Kamel and Mamen Khaled, "Design and creation of an Information System for the management of personal service within the OPGI of Khenchela", University Center of Khenchela, June 2007

- Bouali Djalal and Khallef Abdelaziz "Design and creation of an Information System for the management of main education at the university center of Khenchela", University Center of Khenchela, June 2006.

- Djoghlal Nadia, Slimani Hanane and Rahrah Samiha, "Design and creation of an Information System for the management of a notary's office", Khenchela University Center, June 2006.

Course Materials and Online Courses

1. **Sofiane Mounine HAMAM,** "Web Services", course material intended for 2nd year computer science master's students specializing in Security and Web Technologies. Course materials validated by the scientific committee of the Department of Mathematics and Computer Science, and the scientific council of the Faculty of Science and Technology, Abbes LAGHROUR University of Khenchela.

2. **Sofiane Mounine HAMAM,** "Advanced Algorithms and Complexity", online course intended for 1st year computer science master's students specializing in Security and Web Technologies. Online course validated by the scientific committee of the mathematics and computer science department, and the scientific council of the Faculty of Science and Technology, Abbès LAGHROUR University of Khenchela

Scientific Career

Internationals Publications

1. Sami Bettayeb, Mohamed Lamine Messai, **Sofiane Mounine Hemam**.: "A robust and efficient vector-based key management scheme for IoT networks" 2023, Ad Hoc Networks Journal, Volume 149,

    DOI: https://doi.org/10.1016/j.adhoc.2023.103250.

2. Sofiane Benabbes, **Sofiane Mounine Hemam**.: "An Approach Based on Genetic and Grasshopper Optimization Algorithms for Dynamic Load Balancing in CloudIoT", 2023, Computing and Incformatics Journal, 42(2), 364-391. **DOI**: https://doi.org/10.31577/cai_2023_2_364.

3. **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

4. 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

5. 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

6. Hioual Ouassila. **Sofiane Mounine Hemam**, Hioual Ouided,, Mordjane, Rania, & Bouhlala Nessrine: "Fault Tolerance for Composite Cloud Services: A MAS-Based Novel Approach", 2022. *Inteligencia Artificial, 25*(69), 183–200. **DOI:** https://doi.org/10.4114/intartif.vol25iss69pp183-200

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. Ouided Hioual, Mohamed Tayeb Laskri, **Sofiane Mounine Hemam**, Ouassila Hioual and Lyes Maafa: "Towards An Implementation of A Modified Static Load Balancing Algorithm to Minimize Execution Time", 2019. Recent Patents on Computer Science, 12(1) 2019, pp 69-77. **DOI:** 10.2174/2213275911666181022113733

9. Abdeldjalil Ledmi, Hakim Bendjenna and **Hemam Sofiane Mounine**. "Optimizing Both the User Requirements and the Load Balancing in the

Volunteer Computing System by using Markov Chain Model ». International Journal of Enterprise Information Systems (IJEIS) Vol 14 N°1, pp 35-62

10. **Hemam Sofiane Mounine**, and Hioual Ouassila.: "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** Volume 10 Issue 2 Juin 2017, pp 99-114, **DOI**: 10.1504/IJIPT.2017.10002662

11. Hioual Ouassila and **Hemam Sofiane Mounine**.: "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.2017.10001871

12. **Hemam Sofiane Mounine** and Khaled Walid Hidouci.: "D3-P2P: Managing Distributed and Replicated Database in P2P Environment by Using Quorum System". Journal of Digital Information Management *JDIM* Volume 10 Issue 6 Décembre 2012, pp 352-364. http://dline.info/fpaper/jdim/v10i6/1.pdf

13. **Hemam Sofiane Mounine** and Khaled Walid Hidouci..: "Replicated Database Transactions Processing in Peer-To-Peer Environment". Journal of Networking Technology Volume 2 Number 2 June 2011, pp 63-72. www.dline.info/jnt/v2n2ed.pdf

Internationals Communications

1. 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

2. Sami Bettayeb, Mohamed Lamine Messai, **Sofiane Mounine Hemam**.:"BKRSC-IoT Blockchain-Based Key Revocation Using Smart Contracts for IoT Networks" 2023 14th International Conference on Management of Digital EcoSystems (MEDES), Heraklio, Greece 5-7 Mai 2023, pp 331–344

3. 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.

4. Bouhroum Ayoub, Benmerzoug Djamel, **Hemam Sofiane Mounine**, Belala Faiza, Lehambi Aya and Aouissate Radhia.: "A Formal Integrated Approach for Cyber Physical", *4th International Conference on Pattern Analysis and Intelligent Systems **PAIS'22***, Algeria (Oum-El-Bouaghi), 12-13 Octobre 2022.

5. Bouhroum Ayoub, Benmerzoug Djamel, **Hemam Sofiane Mounine** and Belala Faiza.: "From CA-BRS to BPMN: Formal Approach for Modeling Adaptive Security in Cyber-Physical Systems", Tunisian-Algerian Joint Conference on Applied Computing. ***TACC'21***, Tunisia (Tabarka, 20 Decembre 2021.

6. Boucetti Rabah, **Hemam Sofiane Mounine**, Hioual Ouassila: "Multicriteria Approach for Discovering IoT Services". In: Senouci, M.R., Boudaren, M.E.Y., Sebbak, F., Mataoui, M. (eds) Advances in Computing Systems and Applications. ***CSA 2020***. Lecture Notes in Networks and Systems, vol 199. Springer, Cham. https://doi.org/10.1007/978-3-030-69418-0_19.

7. Rabah Boucetti, **Sofiane Mounine Hemam** and Ouassila Hioual: "QoS-Aware IoT Services Composition: A Survey '', International Conference on Distributed Sensing and Intelligent Systems, ***ICDSIS 2020***, February 1-3, 2021, Agadir, Morocco.

8. Ouided Hioual, Ouassila, Hioual, **Mounine Sofiane Hemam**, Lyes Maifi: "A New Method for Predicting Failures in Cloud Computing". In: Kacprzyk, J., Balas, V.E., Ezziyyani, M. (eds) Advanced Intelligent Systems for Sustainable

Development, **AI2SD 2020**. Advances in Intelligent Systems and Computing, vol 1418. Springer, Cham. https://doi.org/10.1007/978-3-030-90639-9_49.

9. Hioual Ouassila, Hioual Ouided, **Hemam Sofiane Mounine**: "A Hybrid Approach for Clustering and Selecting of Cloud Services Based on User Preferences Evaluation". In: Kahraman, C., Cevik Onar, S., Oztaysi, B., Sari, I., Cebi, S., Tolga, A. (eds) Intelligent and Fuzzy Techniques: Smart and Innovative Solutions. **INFUS 2020**. Advances in Intelligent Systems and Computing, vol 1197. Springer, Cham. https://doi.org/10.1007/978-3-030-51156-2_9.

10. Benabbes Sofiane, **Sofiane Mounin Hemam :** "An Approach Based on (Tasks-VMs) Classification and MCDA for Dynamic Load Balancing in the CloudIoT". In: Hatti, M. (eds) Smart Energy Empowerment in Smart and Resilient Cities. ICAIRES 2019. Lecture Notes in Networks and Systems, vol 102. Springer, Cham pp 387-396. https://doi.org/10.1007/978-3-030-37207-1_41

11. Ledmi Abdeldjalil, Bendjenna Hakim and **Hemam Sofiane Mounine**: "Fault Tolerence in Distributed System: A Survey", 3th _International Conference on Pattern Analysis and Intelligent Systems_ **PAIS'18**, Algeria (Tebessa), 24-25 Octobre 2018.

12. Hioual Ouassila, Amamiche Abdelhakim, **Hemam Sofiane Mounine** et Zidane Redha: "Proposition d'une méthode hybride 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.

13. Benabbes Sofiane, **Sofiane Mounin Hemam :** "Proposition d'une méthode hybride 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.601-613.

14. **Sofiane Mounin Hemam**, Ouassila Hioual and Ouided Hioual: "Load balancing between nodes in a volunteer cloud computing by taking into consideration the number of cloud services replicas," _2017 3rd International Conference of Cloud Computing Technologies and Applications,_ **CloudTech 2017**, pp. 1-8, doi: 10.1109/CloudTech.2017.8284713.

15. **Sofiane Mounine Hemam** and Zizette Boufaïda.: "A contribution to middleware interoperability". International Conference on Computer Theory and Application **ICCTA'2004**, Egypt (Alexandria), 28-30 September 2004.

16. **Sofiane Mounine Hemam** and Zizette Boufaïda.: "Meta-middleware: A Solution Allowing Interoperability Between Middlewares". 5th International Arab Conference on Information Technology.**ACIT'2004,** Algeria (Constantine), 12-15 December 2004.

17. **Sofiane Mounine Hemam** and Khaled Walid Hidouci.: "A Fully Decentralized Algorithm to Timestamping Transactions in Peer-To-Peer Environments". IEEE International Conference on Machine and Web Intelligence **IEEE ICMWI'10** . Algeria (Algiers) 3-5 October 2010, pp 164-168. http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=5647903

18. **Sofiane Mounine Hemam** and Khaled Walid Hidouci.: "A Fully Decentralized Algorithm To Processing Transactions in a Peer-To-Peer Environments". International Conference on Information Technology and e-Services **ICITeS'11**. Tunisia (Sousse), 10-12 April 2011, PP 264-269. www.dline.info/content.htm

19. **Sofiane Mounine Hemam** and Khaled Walid Hidouci.: "Towards a Novel Architecture for Managing Distributed and Replicated Database in P2P System with Node Dynamicity". Word Conference on Information Technology **WCIT'11**. Turkey (Antalya), 23-27 November 2011.

20. **Sofiane Mounine Hemam** and Khaled Walid Hidouci.: "A Deadlock Managing Process for Distributed and Replicated Database in P2P System". Second International Conference on Innovation Technology **INTECH'12**. Morocco (Casablanca), 18-20 September 2012.

21. 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.

22. **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.

23. 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.

24. Abbrouk Abderahim, Djoghlal 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.

25. Hioual Ouassila and **Hemam Sofiane Mounine**.: "Cloud Services Selection by Load Balancing between Clouds: A Hybrid MCDM/Markov Chain Approach". 12th International Conference on Web Information Systems and Technologies **WEBIST'16** - Special Session on New Trends in Web Intelligence and Services (**WIS 2016**), Italy (Rome), 23-25 April 2016, Vol. 1, pp 289-295, ISBN: 978-989-758-186-1

26. **Hemam Sofiane Mounine** and Hioual Ouassila.: "Load Balancing Issue in Cloud Services Selection By Using MCDA and Markov Chain Model Approaches". 2nd International Conference on Cloud Computing Technologies and Applications **CloudTech'16**, Morocco (Marrakech).24-26 May 2016.

27. Boudjidj Houssem, 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'16**, Algeria (Khenchela), 16-17 November 2016, pp 266-272.

Nationals Communications

1. **Sofiane Mounine Hemam** et Zizette Boufaïda.: "Une architecture permettant l'interopérabilité des composants dans un contexte B2B". Deuxièmes journées d'informatique pour l'entreprise **JIE2 2004**. Algérie (Blida). 04-06 octobre 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". 2éme Journées Ouvertes sur le Mathématiques et Informatique **JOMI 2015**, Algérie (Tébessa), 25-26 Mai 2015.

3. Abderahim Abbrouk, Montaser Djoghlal, **Sofiane Mounine Hemam** et Ouassila Hioual. : « Equilibrage de charge par redistribution des requêtes dans un contexte Services Web P2P ». 2éme Journées Ouvertes sur le Mathématiques et Informatique **JOMI 2015**, Algérie (Tébessa), 25-26 Mai 2015.

Research Projects

1. **From January 2022 to date:** Responsible for PRFU number C00L07UN400120230008 entitled: Contribution of the Future IoT for the Optimization of energy consumption in Industry 4.0

2. **From January 2018 to December 2021:** Member of PRFU number C00L07UN400120180001 entitled: "CloudIoT and Human Learning: Design, Modeling and Experimentation"

3. **From January 2010 to December 2012**: Member of the CNEPRU National Project number B*03520090002 entitled: "Model-Driven Architecture (MDA) applied to the design of software".

Scientific Activities

Conferences Chairman

1. **I2CGSD'22**: 1st International Hybrid Conference on Climate Change, Geo-resources and Sustainable Development, 23 Mai 2022, Khenchela, Algeria.

2. **VBRV'22**: 1st National Seminar on the Valorization of Plant Bio-resources in Algeria, 07/ June 2022, Khenchela, Algeria

3. **SNHEA'22 :** 1st National Seminar on Essential Oils and Aromatherapy, 19-20 September 2022, Khenchela, Algeria

4. **BBM'22** : 1st National Seminar Biotechnology and Microbial Biodiversity, 26-27 October 2022, Khenchela, Algeria.

5. **BVSA'22** : The First International Seminar on Green Biotechnology and Food Security, 16-17 November 2022, Khenchela, Algeria

6. **ICC 2017**: 2nd International Conference on Internet of Things, Data and Cloud Computing: Special Session "MCDA methods for Cloud Services discovery, selection and composition", Mars 22-23, Cambridge, Kingdom, http://icc-conference.org/index.php/cfp

7. **PAIS 2016** : 2nd International Conference on Pattern Analysis and Intelligent Systems, November 16-17, Khenchela, Algeria.

8. **DICTAP 2016** : 6th International Conference on Digital Information & Communication Technology & its Applications: Special Session "Cloud/P2P Services Discovery, Selection and Composition", July 21-23, Konya, Turkey, http://sdiwc.net/conferences/dictap2016/wp-content/uploads/dictap1.html

Member of the Scientific Committee

1. ***Journal of Intelligent & Fuzzy Systems.*** Indexed in the Web of Science database.

2. ***Egyptian Informatics Journal. Elsevier.*** Indexed in the Web of Science database..

3. ***Journal of Network and computer Applications. Elsevier.*** Indexed in the Web of Science database..

4. ***Journal of Parallel and Distributed Computing. Elsevier.*** Indexed in the Web of Science database..

5. ***ISPR'2023***: The Third International Conference on Intelligent Systems and Pattern Recognition, May 11-13, 2023, Hammamet, Tunisia.

6. **SETIT'2022**: The 9th International Conference on Sciences of Electronics, Technologies of Information and Telecommunications, between 28 th and 30 th of May 2022, Genoa (Italy) and Hammamet (Tunisia).

7. **PAIS'2022**: The 4th International Conference on Pattern Analysis and Intelligent Systems, October 12-13, Oum-El-Bouaghi, Algeria.

8. **IC-AIRES'2020**: The 6th International Conference on Artificial Intelligence in Renewable Energetic Systems, 20-2 Novembre 2020, Tamanraset, Algeria.

9. **ICRAMI'2021**: The International Conference on Recent Advances in Mathematics and Informatics, September 21-22, 2021, Tebessa, Algeria.

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 3th International Conference on Pattern Analysis and Intelligent Systems, October 24-25, Tebessa, Algeria.

14. **DSC'2017**: The 3rd International Workshop for Data Science and Computing, October 30th to October 3rd, 2017, Hammamet, Tunisia.

15. **ICMIT2017:** The International Conference on Mathematics and Information Technology, December, 4-5, 2017, Adrar, Algeria.

16. **NG2CT2017:** Next Generation Computing and Communication Technologies, December, 16-18, 2017, Hammamet, Tunisia.

17. **PAIS 2016** : 2nd International Conference on Pattern Analysis and Intelligent Systems, November 16-17, Khenchela, Algerie.

18. **SETIT 2016**: 7th International Conference on Sciences of Electronics, Technologies of Information and Telecommunications, 18-20 December, Hammamet, Tunisia

19. **ICCITR 2016**: 2nd International Conference on Communication, Information Technology and Robotics, 2-4 June, Dubai, U.A.E

20. **IT4OD 2016**: 2nd International Conference on Information Technology for Organizations Development, 30 Mars-1 Avril, Fes, Morocco.

21. **PAIS 2015** : 1st International Conference on Pattern Analysis and Intelligent Systems, October 25-26, 2016, Tebessa, Algeria.

22. **JOMI 2015**: 2nd Open Days on Mathematics and Computer Science, 25-26 Mai, Tebessa, Algeria

Member of the Organization Committee

1. **Workshop**: Preparation of the National Strategy for Research and Innovation on Artificial Intelligence. 1-2 December 2019

2. **WRSIOT'2022**: Workshop on Role of semantic IoT: Reasoning and Representation. Online workshop 08 Mai 2022

3. **Workshop** on structural resolution by x-ray diffraction. 6-7 November 2022

4. **TAC'1-2011** : 1st National Days "Ceramic Technologies and Applications", October 25-26, Khenchela, Algeria.

5. **JNIAK 2012**: 1st National Days on IT and its Applications Khenchela, April 29-30, Khenchela, Algeria.

6. **Summer University** for Scientific Research and Advanced Technology: Innovation and valorization, July 07-12, Khenchela, Algeria.

7. ***JENM 2012*** : 5th National Mechanics Study Days, 12-13 November, Khenchela, Algeria.

8. ***ICEECA'12*** : 1st International Conference on Electrical Engineering and Control Applications, 20-22 November, Khenchela, Algeria.

9. ***CACPM3C-1-2015*** : 1st Algerian Congress of Characterization, Properties and Modeling of Materials and Composite Materials, 19-21 Mai, Khenchela, 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

Course handout expertise

1. Expertise on the handout of Mr. Haouam Yacine, Larbi Tebessi University, Tebessa. **Date of expert submission: October 11, 2023**.

2. Expertise on the handout of Ms. Bardo Dalel, Abbes Laghrour University, Khenchela. **Date of expert submission: October 7, 2021**.

Defense Jury

1. Member of the doctoral defense jury of Mr. Bettayeb Sami, Abbes Laghrour University, Khenchela. **Defense date: February 24, 2024.**

2. Member of the doctoral defense jury of Mr. Benabbes Sofiane, Abbes Laghrour University, Khenchela. **Defense date: October 24, 2023**.

3. Member of the doctoral defense jury of Mr. Boucetti Rabeh, Abbes Laghrour University, Khenchela. **Defense date: October 31, 2022**.

4. Member of the doctoral defense jury of Ms. Saidi Karima, Abbes Laghrour University, Khenchela. **Defense date: June 2, 2022**.

5. Member of the University Accreditation Defense jury of Ms. Saighi Asma, Larbi Benmehidi University, Oum-El-Bouaghi. **Defense date: December 28, 2020**.

6. Member of the doctoral defense jury of Mr. Chergui Wahid, Batna 2 University. **Defense date: September 20, 2020**.

7. Member of the doctoral defense jury of Mr. Ledmi Abdeldjalil, Larbi Tebessi University, Tebssa. **Defense date: July 24, 2019**.

8. Member of the University Accreditation Defense jury of Ms. Koli Manel, Mohamed Khider University, Biskra. **Defense date: November 18, 2018**.