



Detailed CV

Dr. Mounir HEMAM

Last modification: June 19, 2023

1 PERSONAL INFORMATION

Name:HEMAM

First name:Mounir

Date of birth:June 27, 1975 **Place of**

birth:Constantine, Algeria

Nationality :Algerian

Family situation :Married, three children

Business address :Department of Mathematics and Computer Science, Faculty of Science and Technology, Abbes Laghrour University, Khenchela 4000 Algeria

current function:Teacher-researcher

Speciality:Computer science

University degree:Class A lecturer **Research**

grade:Researcher

Attached laboratory:ICOSI Laboratory (C Engineering on births and Computer Security), University of Khenchela

Phone number:07 77 95 95 51

E-mail address:mounir.hemam@gmail.com , hemam.mounir@univ-khenchela.dz

1.1 University itinerary and diplomas

June 1993: Baccalaureate, Youghourta High School, Constantine, Algeria

- Option: Mathematics
- Rating: Fairly Good

June 1998: State Engineer from the Mentouri University of Constantine, Algeria

- Specialty: Computer Science
- Option: Information Systems
- Title: "Reasoning by classification: application to the classification of molecules in organic chemistry"
- Supervisor: Pr. Zizette Boufaida
- Mention: Good"

June 2005: Master of the University of Oum El Bouaghi, Algeria

- Specialty: Computer Science
- Option: Software Engineering
- Title: "A process of developing ontologies within the framework of the Semantic Web"
- Thesis director: Pr. Zizette Boufaida
- Location: LIRE Laboratory, Mentouri University, Constantine
- Mention: Good

January 2012: Doctorate in Sciences from Mentouri University of Constantine, Algeria

- Specialty: Computer science
- Title: "Development of multi-point of view ontologies: an approach based on the logic of descriptions"
- Thesis director: Pr. Zizette Boufaida
- Location: LIRE Laboratory, Mentouri University, Constantine
- Mention: Very honorable

November 2017: University Accreditation - Mohamed Khider Biskra University, Algeria

-Specialty: Computer science

1.2 Language skills

- Arabic: native language
- French: full professional capacity
- English: professional competence

1.3 Training carried out

May 2009 2-day training on Semantic Web technologies carried out in Yasmine Hammamet, Tunisia. Sponsored by INRIA, Sophia Antipolis.

1.4 Professional career

Since November 2017:Class A lecturer at the University of Khenchela.

Since September 2013:Head of the GECO (Knowledge Management) research team affiliated with the ICOSI laboratory, University of Khenchela.

2 EDUCATIONAL CONTRIBUTIONS

2.1 Graduation teaching

I began my teaching activities in November 1998, as soon as I obtained my state engineering diploma, thanks to sessions of Directed Work (TD) and Practical Work (TP) in the computer science department. from the Mentouri University of Constantine.

Since my recruitment in October 2005 at the computer science department of the University of Khenchela, I have participated in various theoretical and practical courses for the classical system (DEUA and state engineer) and the LMD system (Bachelor's and Master's degrees).

- **Responsible for the subject or module**

1. Semantic Web and Data Web (Doctorate in Computer Science).
2. ICT (Doctorate in Mathematics (PhD)).
3. Introduction to didactics and pedagogy (Doctorate in Mathematics / Computer Science).
4. Data warehouse and mining (M2 Security and Web Technologies).
5. Structure Machine 1 (L1 MI).
6. Knowledge representation (M1 Security and Web Technologies).
7. Ontologies and Semantic Web (M1 Security and Web Technologies).
8. Computer Science 1 and Computer Science 2 (Common Core St and SM)
9. Parallel Architectures and Parallel Algorithmics (M2 Fundamental and Applied Computer Science).
10. Databases (L2 Computer Science).
11. Object-oriented programming (L2 Computer Science).
12. Internet Tools and XML Technologies (M2 Fundamental and Applied Computer Science).
13. English (M1 Fundamental and applied computer science).
14. Mathematical logic (L2 Computer Science).
15. Computer Science 1 (L1 Mathematics and Computer Science).
16. Computer Science 2 (L1 Mathematics and Computer Science).
17. Abstract types of data (2nd year state engineer in Computer Science).
18. Computer architectures (2nd year state engineer in Computer Science).
19. Information systems (2nd year DEUA in Computer Science).

2.2 Supervision

- **Supervision of defended doctoral theses**

1. Sihem BENKHALED, "An approach to interoperability between interconnected objects in the context of the Internet of Things". Doctoral thesis defended on 11/13/2022.

- **Supervision of ongoing doctoral theses**

1. Mehdi MALAH, "A deep learning approach for 3D face reconstruction". Doctoral thesis in progress.
2. Khedidja Mekhilef, "Deep learning for quality control inspections in industry 4.0". Doctoral thesis in progress.
3. Nabila SID, "Proposal of a Coalition Formation Algorithm for Multi-Agent Systems". Doctoral thesis in progress.
4. Fatima Zohra AMARA, "Knowledge representation in the Internet of Things: Semantic modeling and reasoning.". Doctoral thesis in progress.

- **Supervision of several DEUA, Engineering, License and Master theses**

2.3 Educational productions (handouts)

- Mounir HEMAM, "*Knowledge representation*". Handout intended for 1st year Master's students. Last update: September 1, 2016. Handout validated by the Scientific Council of the Faculty of Science and Technology, University of Khenchela.
- Mounir HEMAM, "*Machine Structure 1*". Handout intended for students of the 1st year Bachelor of Mathematics and Computer Science. Handout validated on 02/08/2022 by the Scientific Council of the Faculty of Science and Technology, University of Khenchela.

http://41.111.224.107/cours/st/PolycopieStruture_Machine1.Dr.Mounir.Hemam.pdf

- Mounir HEMAM, "*Data Warehouse and Mining*". Handout intended for students of the 2nd year Master's degree in Web Security and Technologies. Handout validated on 07/11/2022 by the Scientific Council of the Faculty of Science and Technology, University of Khenchela.

<http://41.111.224.107/cours/st/PolycopieDatamining.Dr.Mounir.Hemam.pdf>

2.4 Responsibilities and administrative tasks

Since December 30, 2021 to date:Head of Department of Mathematics and Computer Science, Faculty of Science and Technology, University of Khenchela.

From October 2014 to September 2016:Deputy head of the department responsible for postgraduation and scientific research, Department of Science and Technology, Faculty of Science and Technology, University of Khenchela.

From September 2013 to September 2014:Deputy head of the department in charge of graduation and pedagogy, Department of Mathematics and Computer Science, Faculty of Science and Technology, University of Khenchela.

3. Scientific contributions

3.1. International publications

- 1- Mehdi Malah, **Mounir Hemam**, Faisal Abbas (2023). "3D face reconstruction from single image with generative adversarial networks", Journal of King Saud University - Computer and Information Sciences, Volume 35, Issue 1, Pages 250-256.
- 2- Nabila Sid, Meriem Djezzar, Mohamed Elhabib Souidi, **Mounir Hemam**(2023). "A New Game-Theoretic Convolutional Neural Network Applied the Multi-Pursuer Multi-Evader Game", Volume 42, Issue 3, Pages 1001-1022.
- 3-Zianou Ahmed Seghir, Meriem Djezzar, **Mounir Hemam**, Ahmed Zeggari and Fella Hashouf. (2023). "Stereo image quality assessment using deformed pixels and Sobel magnitude". Journal of Intelligent & Fuzzy Systems, 44(5), Pages 7599-7611.
- 4- Sihem Benkhaled and **Mounir Hemam**(2022). "A Semantic Gateway for Internet of Things Interoperability at the Application Layer." Journal of Applied Computer Systems, Volume 27, Issue 2, Pages 198-206.

- 5-Ahmed Zeggari, Zianou Ahmed Seghir,**Mounir Hemam**, Fella Hachouf, and Meriem Djezzar (2022). "Color distortion and edge feature for perceptual quality assessment." *Informatica*, Volume 46, Issue 6, Pages 53-65.
- 6- Fatima Zahra Amara,**Mounir Hemam**, Meriem Djezzar, and Moufida Maimour (2022). "Semantic Web and Internet of Things: Challenges, Applications and Perspectives." *Journal of ICT Standardization*, Volume 10, Issue 2, Pages 261-292.
- 7- Sihem Benkhaled,**Mounir Hemam**, Meriem Djezzar, and Moufida Maimour (2022). "An ontology-based contextual approach for cross-domain applications in internet of things", *Informatica*, Volume 46, Issue 5, Pages 198-206.
- 8-Meriem Djezzar,**Mounir Hemam**, Djama Ouahiba, and Zianou Ahmed Seghir(2021). "Generation of Heterogeneous Semantic Annotations of XML Pages: a Multi-viewpoints Approach." *Informatica* Volume 45, Issue. 7, Pages 137-146.
- 9- Ahmed Zeggari, Zianou Ahmed Seghir, and**Mounir Hemam**(2021). "Perceptual image quality assessment based on gradient similarity and Ruderman operator" *Int. J. Computational Vision and Robotics* Volume 11, Issue 2. Pages 151-74.
- 10-**Mounir Hemam**(2018). "An extension of the ontology web language with multi-viewpoints and probabilistic reasoning". *Int. Journal of Advanced Intelligence Paradigms (IJAIP)*, Inderscience Publishers Ltd. Vol. 10, No. 3, Pages 247-265.
- 11-**Mounir Hemam**, Meriem Djezzar and Zizette Boufaida (2017). "Multi-viewpoint Ontological Representation of Composite Concepts: a Description Logics Based Approach". *Int. Journal of Intelligent Information and Database Systems (IJIIDS)*, Inderscience Publishers Ltd. Vol. 10, No. 1/2, Pages 51-68.
- 12-Lynda Djakhdjakha,**Mounir Hemam**and Zizette Boufaida (2014). "Toward a Representation for Multi-Viewpoints Ontology Alignments". *Int Journal of Metadata, Semantics and Ontologies (IJMSO)*, Inderscience Publishers Ltd, Vol. 9, No. 2, Pages 91-102.
- 13-**Mounir Hemam**and Zizette Boufaida (2014). "Towards a Multi-Viewpoint Ontological Model for Knowledge Sharing in E-health". *Int Journal of Information Science and Intelligent System (IJISIS)*, Vol. 3, No. 3, Pages 5-14. ISSN 2307-9142 (Online).(Online).
- 14-**Mounir Hemam**and Zizette Boufaida (2011). "Mvp-OWL: A Multi-Viewpoints Ontology Language for the Semantic Web". *Int. Journal of Reasoning-based Intelligent Systems (IJRIS)*, Inderscience Publishers, Vol. 3, No. 3/4, Pages 147-155.

3.2. Chapter Book

- 1- Fatima Zahra Amara, Mounir Hemam, Meriem Djezzar, Moufida Maimour. (2022). "Semantic web approach for smart health to enhance patient monitoring in resuscitation". Editor(s): Shikha Mehta and Sanju Tiwari and Patrick Siarry and MA Jabbar. *Tools, Languages, Methodologies for Representing Semantics on the Web of Things*, ISTE - Wiley, pp.41-60, 2022, 9781786307644.

3.3.International communications

- 1- Hafidi. M., Djezzar, M., Hemam, M., Ahmed Seghir, Z., Maimour, M. (2022). "Semantic Models and Machine Learning Approach in CPS: A Survey". *Proceedings of International Workshop on Semantic IoT (SIoT-2022)*, pp.130-149.

- 2-Amara, FZ,Hemam, M.,Amara, T., Djezzar, M. (2022). "Ontological Modeling of ERP for Industry 4.0".Proceedings of International Workshop on Semantic IoT (SIoT-2022), pp.161-170
- 3-Benkhaled, S., Hemam, M., Maimour, M. (2022). "SDN-Based Approaches for Heterogeneity and Interoperability in Internet of Things: An Overview". Distributed Sensing and Intelligent Systems: Proceedings of ICDSIS 2020 (pp. 489-499).Springer International Publishing.
- 4- Amara, FZ, Hemam, M., Djezzar, M., Maimour, M. (2022). "Semantic web technologies for internet of things semantic interoperability". In Advances in Information, Communication and Cybersecurity: Proceedings of ICI2C'21 (pp. 133-143). Springer International Publishing.
- 5- Djakhdjakha, L., Boukara, D., Hemam, M., Boufaida, Z. (2020). "An Extended Business Process Representation for Integrating IoT Based on SWRL/OWL". In Artificial Intelligence and Applied Mathematics in Engineering Problems: Proceedings of the International Conference on Artificial Intelligence and Applied Mathematics in Engineering (ICAIAME 2019) (pp. 386-405). Springer International Publishing.
- 6- Seghir, ZA, Hachouf, F., Hemam, M., Morain-Nicolier, F., Zeggari, A. (2018). "Quality Evaluation Algorithm: New Structural Similarity by Using Distance Transform Approach and Gradient Similarity". In 2018 International Conference on Signal, Image, Vision and their Applications (SIVA) (pp. 1-6). IEEE.
- 7- Hemam, M., Djezzar, M., & Seghir, ZA (2018). "Multi-Viewpoints Ontological Knowledge Representation: A Fuzzy Description Logic Based Approach". In Proceedings of the Fourth International Conference on Engineering & MIS 2018 (pp. 1-6). ACM Publishing.
- 8- Djezzar, M., Hemam, M., Maimour, M., Amara, FZ, Falek, K., & Seghir, ZA (2018). "An approach for semantic enrichment of sensor data". In 2018 3rd International Conference on Pattern Analysis and Intelligent Systems (PAIS) (pp. 1-7). IEEE.
- 9-Hemam, M., Djezzar, M., Maimour, M., Djouad, T., & Aounallah, A. (2016). "Year ontological approach for domain knowledge modeling and querying in wireless sensor networks". In In Proceedings of 2nd International Conference on Pattern Analysis and Intelligent Systems, PAIS'2016 (pp.116–122).Khenchela, Algeria.
- 10-Djouad, T., Boudjidj A., & Hemam, M. "A multi-agent system to compute human learning indicators activities in Technology Enhanced Learning systems". In In Proceedings of 2nd International Conference on Pattern Analysis and Intelligent Systems, PAIS'2016 (pp. 359–365), Khenchela, Algeria.
- 11-Lynda, D., Mounir, H., & Zizette, B. (2014). « Semantics of multi-viewpoint ontology alignments". In 2014 IEEE/ACS 11th International Conference on Computer Systems and Applications (AICCSA) (pp. 214-221). IEEE.
- 12-Hemam, M., & Boufaida, Z. (2013). "A method for constructing multi-point of view ontologies in description logic". Proceedings of the 7th edition of the Maghreb Conference on Advances in Decision Systems (ASD'13), pp. 261–272, Marrakech, Morocco.
- 13-Djemaa, O., Hemam, M., & Boufaida, Z. (2013). "Semantic Annotation of XML Page Based on OWL Ontology Alignment".InProceedings of the 5th International Conference on Web and Information Technologies, (ICWIT'13), pp. 421–430, Hammamet, Tunisia.

- 14-Djakhdjakha, L., Hemam, M., & Boufaida, Z. (2012). "Foundations on Multi-Viewpoints Ontology Alignment". In Proceedings of the 4th International Conference on Web and Information Technologies, (ICWIT'12), pp. 214-221.
- 15-Djakhdjakha, L., Hemam, M., & Boufaida, Z. (2012). "Multi-viewpoint ontology alignment based on description logics". In Networked Digital Technologies: 4th International Conference, NDT 2012, Dubai, UAE, April 24-26, 2012, Proceedings, Part II 4 (pp. 109-122). Springer Berlin Heidelberg.
- 16-Djezzar, M., Hemam, M., Boufaida, Z. (2012). Ontological Re-classification of Individuals: A Multi-viewpoints Approach. In: Abelló, A., Bellatreche, L., Benatallah, B. (eds) Model and Data Engineering. MEDI 2012. Lecture Notes in Computer Science, vol 7602. Springer, Berlin, Heidelberg.
- 17-Djellal, A., Hemam, M., Boufaida, Z. (2010). "An Extension of the Ontology Web Language with Viewpoint and Fuzzy Notions". Proceedings of the International Symposium on Modeling and Implementation of Complex Systems, pp. 149–159. Constantine, Algeria, May 2010.
- 18-Djakhdjakha, L., Hemam, M. (2010). "Alignment optimization of a multi-ontology points of view and a classic ontology". Proceedings of the International Conference on Optimization and Information Systems (COSI'10), pp. 332–343. Ouragla, Algeria, 2010.
- 19-Hemam, M., & Boufaida, Z. (2010). "Mvp-OWL: A Multi-Viewpoints Ontology Language for the Semantic Web". Proceedings of the 3rd International Conference on Web and Information Technologies (ICWIT'10), pp.120–131, Marrakech, Morocco. May 2010.
- 20-Djakhdjakha, L., Hemam, M. (2009). "An Alignment Approach for a Multi-Ontology points of view and a classical Ontology". Proceedings of the International Conference on Applied Computers (ICAI'09), pp. 390–396. Bordj Bou Arréridj, Algeria.
- 21-Djellal, A., Hemam, M., Boufaida, Z. (2009). "The notion of vagueness in multi-ontologies points of view", Proceedings of the International Conference on Applied Informatics (ICAI'09), pp. 170–174. Bordj Bou Arréridj, Algeria, November 2009.
- 22-Hemam, M., & Boufaida, Z. (2009). "Reasoning by classification on an ontology multi-points of view". Proceedings of the 3rd Francophone Day on Ontologies (JFO'09), ACM Edition, pp.149–156, Poitiers, France, Hemam, M., & Boufaida, Z. (2009). "Representation of multi-point of view ontologies: an approach based on the logic of descriptions". Short paper In 20th Francophone Knowledge Engineering Days (IC'09), Hammamet, Tunisia.
- 23-Hemam, M., & Boufaida, Z. (2008). Taking points of view into account in the construction of ontologies in description logic". In Proceedings of the Fifth Conference on Optimization and Information Systems COSI'2008 (pp.287–298).
- 24-Djezzar, M., Hemam, M., & Boufaida, Z. (2007). A construction method of ontologies in description logic". Proceedings of the 8th International Symposium on Programming and Systems (ISPS'07), pp.32–41. Algiers, Algeria. May 2007.
- 25-Hemam, M., & Boufaida, Z. (2004). "An Ontology Development Process for the Semantic Web". In Proceedings of the International Arab Conference on Information Technology (ACIT'2004), pp.390–398. Constantine, Algeria.

3.4. National communications

- 26-Sihem Bekhaled, Mounir Hemam, Moufida Maimour "Literature review: Software-Defined-Networking Solutions for Heterogeneous Internet of Things". Conference on Innovative Trends in Computer Science (CITCS'2019), Guelma - Algeria. November 2019.
- 27-Sihem Bekhaled, Hichem Houassi, Mounir Hemam "A Quantum Particle Swarm Optimization Approach for Feature Selection in the Data Classification". In CEUR Workshop Proceedings, Vol. 2379, pp. 33–41, 2019. <http://ceur-ws.org/Vol-2379/paper4.pdf>
- 28-Mounir Hemam, Ouahiba Djemaa and Zizette Boufaïda. "Towards an annotation approach semantics from a multi-point of view ontology". Proceedings of Journées d'Etudes Doctorales (JED'10), pp.13–18, Annaba, Algeria. June 2010.
- 29-Mounir Hemam and Zizette Boufaïda. "Conceptualization of multi-point ontologies view", Proceedings of 6th National Seminar in Computer Science (SNIB'08), pp.5–10. Biskra, Algeria, May 2008.
- 1- Mounir Hemam and Zizette Boufaïda. "A process of developing ontologies within the framework of the Semantic Web", Second Computer Science Days for Business (JIE2'04), pp.204–216. Blida, Algeria, October 2004.

4. CNEPRU/PRFU research projects

Since my registration in science doctorate to date, I have participated as a member in three CNEPRU research projects then, as leader of two projects (PRFU).

- **From January 2022 to date:** Manager of the University project PRFU C00L07UN400120220002 entitled: "Three-dimensional visual inspection based on Deep learning approaches in an IoT environment: applications for industry 4.0" (duration: 4 years)
- **From January 2018 to December 2021:** Manager of the University project PRFU C00L07UN400120180002 entitled: "Semantic interoperability and security in the IoT: Application to environmental monitoring and monitoring of people losing their autonomy" (duration: 4 years)
- **From January 2013 to December 2016:** Member of the CNEPRU National Project B*00920120066 entitled: "Design and exploitation of multi-point of view ontologies in the Semantic Web" (duration: 4 years)
- **From January 2010 to December 2012:** Member of the CNEPRU National Project number N°B*00820090002 entitled: "Semantic Web, ontologies and points of view" (duration: 3 years)
- **From January 2006 to December 2009:** Member of the CNEPRU National Project number N° B2501/52/06 entitled: "Ontologies and Semantic Web" (duration: 4 years)

5. Scientific Animations

Member of the scientific committee:

- MatScience'2022: International Conference on Materials Sciences and technology, Khenchela - Algeria, Dec, 13-15th, 2022.
- AIA'22: First study days on Artificial Intelligence and its Applications, Khenchela - Algeria, 18-20 December 2022.

- MSE'22: National Conference on Materials Sciences and Engineering, 28-29 June 2022, Khenchela - Algeria
- FICC'2020: Future of Information and Communication Conference, San Francisco, March 5-6, 2020.
- ICeND'2019: The fifth International Conference on e-Technologies and Networks for Development, Marrakech, Morocco, Dec. 14-15, 2019.
- DINWC'2018: The Sixth International Conference on Digital Information, Networking, and Wireless Communications, Beirut, Lebanon, April 25-27, 2018.
- ACSAT'2017: International Conference on Advanced Computer Science Applications and Technologies. Kuala Lumpur, Malaysia, 11-13 December 2017.
- PAIS'2016: 2nd IEEE International Conference on Pattern Analysis and Intelligent Systems. Khenchela, Algeria. 16-17 November 2016.
- IEEE-SOLI'2015: 10th IEEE International Conference on Service Operations and Logistics, and Informatics. Tunisia, 15-17 November 2015.
- IJACSA: International Journal of Advanced Computer Science and Applications.
- KSU2012: Summer University for Scientific Research and Advanced Technology: Innovation and valorization. Abbas Laghrour University, Khenchela, Algeria. July 7-12, 2012

Member of the organizing committee:

- JNIM'22: National Day on the Impact of Mathematics. Khenchela, Algeria December 01, 2022.
- ICMSE'2021: First International video-Conference on Materials Science and Engineering. Khenchela, Algeria. November 17-18, 2021.
- CIMA'2017: International Conference on Materials and their Applications. Khenchela, Algeria. October 29-31, 2017.
- CACPM3C-1'2015: 1st Congress Algerian Characterization, Properties and Modeling of Materials and Composite Materials. Khenchela, Algeria. 19-21 May 2015.
- JNIAK'2012: 1st national days on IT and its applications. Khenchela, Algeria. April 29-30, 2012.
- IWAISE'08: International Workshop on Advanced Information Systems for Enterprises. Constantine, Algeria. 19-20 April 2008

6. Contribution to the university community

- Member of the doctoral training committee authorized by ministerial decree No. 33 of 01/13/2022 for the 2021/2022 academic year.
- Member of the doctoral training committee authorized by ministerial decree No. 615 of 07/16/2022 for the 2018/2019 academic year.
- Member of the joint committee of the University of Khenchela. From April 2018 to December 2021.

- Member of the disciplinary council of the mathematics and computer science department. From October 2022 to date.
- Member of the educational monitoring unit of the Faculty of Science and Technology. University of Khenchela. From March 2023 to date.
- Member of the thematic group of the establishment project, Faculty of Science and Technology. University of Khenchela. From March 2019 to date.
- Member of the scientific council of the Faculty of Science and Technology. University of Khenchela. From October 2022 to date.

Google Scholar

<https://scholar.google.com/citations?user=y6yNpUgAAAAJ&hl=fr>

ResearchGate

<https://www.researchgate.net/profile/Mounir-Hemam>

Orcid iD

<https://orcid.org/0000-0002-4410-4528>

Scopus Author iD

<https://www.scopus.com/authid/detail.uri?authorId=55014442600>