

Sourour AMMAR

Associate Professor

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Qualifications

Engineer in Computer Science

Master in Computer Science

Ph.D. degree in Computer Science

HDR. degree in Computer Science

Work Experience

Associate Professor

January 2025 - , Higher Institute of Computer Science and Multimedia of
Sfax – Tunisia

Assistant Professor

2017 - 2025, Digital Research Centre of Sfax - Tunisia

Assistant Professor

2013 - 2017, University of Monastir, Tunisia

Research and Teaching Assistant

2011 - 2013, University of Rouen, France

Research and Teaching Assistant

2010 - 2011, INSA of Rouen, France

Education

HDR. in Computer Science

February 2024 , ENIS - University of Sfax, Tunisia

Topic : Contributions à l'apprentissage profond : vers une meilleure
représentation visuelle dans un contexte de données limitées et privées

Ph.D. in Computer Science

December 2010 , University of Nantes, France

Topic : Probabilistic Graphical Models for Density Estimation in high
dimensional spaces : Applications of “Perturb & Combine” principle for
mixtures of trees

Master in Computer Science

September 2007, University of Rouen, France

Topic : Application of Bayesian networks to intrusion detection

Diploma in Computer Engineering

July 2006, ENIS, Tunisia

Grade : Very Good

Baccalauréat Mathematics

June 2001, Lycée Majida Boulila, Sfax

Research Interest

- Artificial Intelligence
- Machine Learning
- Deep Learning
- Image processing
- Graph theory
- Supervised / Unsupervised learning
- Bayesian Networks : Inference, parameter and structure Learning

Scientific activities and collaborations

2022 - : Leader of Project *Collaborative framework for COVID-19 screening*. Federated learning approaches to detect COVID-19 disease from X-ray images.

2024 - : Member of Project AI4Observability : , with the industrial partner IP-Label.

Topic : automatic web navigation, LLMs, generative AI.

2022 - 2024: Leader of Project *Home Sensor* : Humain activity recognition based on multivariate time series data, with the industrial partner Sofrecom Tunisia.

Topic : Multivariate time series classification, activity recognition

2023 – 2024 : Member of Project OOPredict: Olive Oil Price Prediction, with the industrial partner CHO Group.

Topic : Olive Oil price prediction.

2020-2021: Member of Projet *READ: Reconnaissance et Extraction d'information d'imAges de Documents*, with the industrial partner STUDIA Afrique.

Topic : Text recognition, information extraction from documents

2020-2021: Member of Projet *DocPRESERV: Preserving & Processing Historical Document Images with Artificial Intelligence*, with the Blekinge Institute of Technology, Sweden.

2018-2019 : Collaboration with the industrial partner SOGIMEL, Sfax, Tunisia

Topic : Face recognition, person re-identification, age and gender estimation

March 2018: Participation in Deep Learning Spring School: Theory and Applications, Sousse, Tunisia

August 2017: Participation in the First BioDialog Summer School on Biodiversity Informatics, Hurghada, Egypt

2007-2010: Participation in ANR PLACID Project (Probabilistic graphical models and Logics for Alarm Correlation in Intrusion Detection) as Research and Development engineer, INSA of Rouen, France.

Student Supervision Activities

Co-supervision of POSTDOC

- Nabila Mansouri (1 July 2018 – 31 December 2019), Suspect object retrieval using multi-stream deep learning.

Co-supervision of thesis

- Mahmoud Ghorbel (2018-2022): Visual person re-identification using deep learning, mobidoc funding.
- Ines Feki (since October 2020): Decentralized medical data processing through federated learning.

Supervision of master

- 2024-2025 : (MR2) Explicabilité des modèles d'apprentissage pour la détection précoce des tentatives de suicide : Analyse et compréhension des facteurs prédictifs.
- 2024-2025 : (MR2) Une approche auto-supervisée pour la détection de tumeurs cérébrales à partir des radiographies : vers une approche explicable en intelligence artificielle médicale.
- 2024-2025 : (MR2) Amélioration de la qualité des images historiques dégradées via un modèle de diffusion.
- 2015-2016 : (MP2) Conception et développement d'une application Mobile (Android) d'un réseau social Évènementiel
- 2014-2015 : (MP2) Conception et réalisation d'une application desktop de gestion de la maintenance assistée par ordinateur.
- 2014-2015 : (MP2) Conception et développement d'une plateforme d'éducation en ligne.

Reviewing Activities

Reviewer in International Journals (*PRL, ESWA, MTAA, NCAA, SSTA, IEEE Access*)

PC member in ICDHT'2019, MedPRAI'2020, MedPRAI'2021, ISPR'2022, ISPR'2023, MedPRAI'2022, CW'2023 conferences,

Reviewer in CRISIS'2019, MedPRAI'2019, ICDHT'2019, MedPRAI'2020, MedPRAI'2021, ISPR'2022, ISPR'2023, MedPRAI'2022, CW'2023, ICDAR'2023 conferences

Mentor and Judge in AI Hack Tunisia (AI/ML Hackathon), 2019.

Publications

International Journals

I. Ben Slima, **S. Ammar**, M. Turki, W. Bouattour, J. Aloulou. COVID-19 Pandemic's Effect on the Mental Health among the Tunisian General Population: Associated Factors Mining via Machine Learning. Scientific African Journal (SciAf), Vol 21, pages e01804, 2023. <https://doi.org/10.1016/j.sciaf.2023.e01804>. (IF : 2.9)

M. Ghorbel, **S. Ammar**, Y. Kessentini, M. Jmaiel. Masking for Better Discovery: Weakly Supervised Complementary Body Regions Mining for Person Re-identification. Expert Systems with Applications, Volume 197, pages 116636, 2022. (IF : 8.5)

I. Ben Slima, **S. Ammar** & M. Ghorbel. Possibilistic rank-level fusion method for person re-identification. Neural Computing & Applications, 2021. Volume 34, Issue 17, pages 14151–14168. <https://doi.org/10.1007/s00521-021-06502-9>. (IF : 6)

S. Khemakhem Jemni, **S. Ammar**, Yousri Kessentini. Domain and writer adaptation of offline Arabic handwriting recognition using deep neural networks. Neural Computing & Applications, 2021, volume 34, pages 2055–2071. <https://doi.org/10.1007/s00521-021-06520-7>. (IF : 6)

I. Feki, **S. Ammar**, Y. Kessentini & K. Muhammad. Federated learning for COVID-19 screening from Chest X-ray images, Applied Soft Computing, Volume 106, pages 107330, 2021, ISSN 1568-4946, <https://doi.org/10.1016/j.asoc.2021.107330>. (IF: 8.263)

N. Mansouri, **S. Ammar**, Y. Kessentini, Re-ranking Person Re-identification using Attributes learning, Neural Computing and Applications journal (NCAA), Vol 33, pages 12827–12843, Avril 2021. <https://doi.org/10.1007/s00521-021-05936-5>. (IF: 5.102)

Y. Kessentini, M. D. Besbes, **S. Ammar** & A. Chabbouh, A Two-Stage Deep Neural Network for Multi-norm License Plate Detection and Recognition, Expert Systems with Applications, Volume 136, pages 159-170, 2019, <https://doi.org/10.1016/j.eswa.2019.06.036>. (IF: 5.45)

Languages

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- Arabic (Native)
 - English (Fluent)
 - French (Fluent)