

Publications of the Institute for New Media Art Technology

2026

Scientific journals/Article

- Jabari, N., SEYEDI, S. A., Mahmoodi, R., & Akhlaghian Tab, F. (August 2026). Contrastive calibration on consensus and complementary multi-view representations. "Pattern Recognition, 176", 113291. doi:10.1016/j.patcog.2026.113291
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- Rahmani, T. A., Belalem, G., MAHMOUDI, S., & Merad-Boudia, O. R. (August 2026). Real-time AI-powered monitoring for energy-efficient scheduling in multi-node heterogeneous systems. "Future Generation Computer Systems, 181", 108428. doi:10.1016/j.future.2026.108428
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- Moradi, S., SEYEDI, S. A., Barkhoda, W., & Akhlaghian Tab, F. (14 July 2026). Robust asymmetric encoder-decoder nonnegative matrix factorization for hyperspectral anomaly detection. "Neurocomputing, 686", 133709. doi:10.1016/j.neucom.2026.133709
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- HANI, M., Mahmoudi, S., & Benjelloun, M. (2026). Decoding Parkinson's progression: A multi-modal SuStain ensemble approach validated on real-world PPMI data. "Neurobiology of Disease", 107435. doi:10.1016/j.nbd.2026.107435
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- Faraji, M., SEYEDI, S. A., & Tab, F. A. (2026). Robust log-based multi-label feature selection with dynamic label correlation and relevance-redundancy optimization. "Knowledge-Based Systems", 115825. doi:10.1016/j.knosys.2026.115825
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- Barkhoda, W., Seyedi, S. A., Gillis, N., & Akhlaghian Tab, F. (February 2026). Distributionally robust nonnegative matrix factorization with self-paced adaptive multi-loss fusion. "Information Sciences, 728", 122823. doi:10.1016/j.ins.2025.122823
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- Sohrabi, H., Seyedi, S. A., Esmaeili, S., & Moradi, P. (February 2026). Community detection via deep motif-regularized asymmetric nonnegative matrix factorization. "Engineering Applications of Artificial Intelligence, 165", 113505. doi:10.1016/j.engappai.2025.113505
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- Cools, A., Stassin, S., & Mahmoudi, S. (2026). The Threshold Paradox: Why Calibrating on the Test Set Introduces Bias in Anomaly Detection. "Proceedings of the 21st International Conference on Computer Vision Theory and Applications - Volume 1: VISAPP", 475-482. doi:10.5220/0014392600004084
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- Equeter, L., Bertieaux, D., Aro, R., Maes, J.-F., Lucassen, L., Museur, V., Wells, M., Troughton, F., Rika, G., Leclef, A., Coen, C., Invernizzi, S., Gonzalez Vargas, E., Beuset, R., Chachia, H., Djeddou, N., Meurisse, M., Mincheva, R., Dupont, S., & Mégret, A. (Eds.). (2026). "Abstract book of the 13th edition of Researchers' Tuesday in Mons". Mons, Belgium: Éditions universitaires de l'UMONS.
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Scientific congresses and symposiums/Unpublished conference/Abstract

- Van Holm, T. (21 May 2026). "Protocole de récolte des informations de conception architecturale" [Paper presentation]. Modact 26', Paris, France.
Full Text : [26PT06-Thomas VAN HOLM.pdf](#) (Open Access)
- Depretre, A., & Koutra, S. (18 March 2026). "THE ROLE OF DIGITAL TWIN ON INTEGRATED CIRCULAR STRATEGIES OF BROWNFIELD RENOVATION: Unveiling the challenges and opportunities" [Paper presentation]. Belgian Science for Climate Action Conference 2026, Bruxelles, Belgium.
Full Text : [ID116_1803_2026.pdf](#) (Open Access)
- Vanderplaetse, B., Siebert, X., & Dupont, S. (06 January 2026). "Automated Semantic Rules Detection (ASRD) for Emergent Communication Interpretation" [Paper presentation]. 7th International Workshop on EXplainable, Trustworthy, and Responsible AI and Multi-Agent Systems (EXTRAAMAS), 2025, Detroit, United States - Michigan.
Full Text : [2601.03254v1.pdf](#) (Open Access)

Scientific congresses and symposiums/Paper published in a book

- Urbano Pintos, N., Trabes, E., Valderrama, C. A., Ajouj, A., & Lacomí Hector. (2026). Edge-Accelerated Monocular Depth Estimation: A Quantized U-Net on Kria KV260 for Real-Time Interior Scenarios. In "Lascas 2026". IEEE Conference Proceedings.
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- Trabes, E., Dellel, K., Valderrama, C. A., & Taleb-Ahmed Abdelmalik. (2026). Single-Path Precision: Differentiable Bit-Width & Numeric-Format Learning for FPGA-Efficient Neural Networks. In "Image Analysis and Processing – ICIAP 2025". Springer. doi:10.1007/978-3-032-10192-1_35
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- Fotsing Metegam, I. F., Depretre, A., & Koutra, S. (18 March 2026). "From stock to flow: Historical evolution, typologies, and strategies of plastics in the Walloon building sector for a circular and low-carbon economy" [Poster presentation]. Belgian Science for Climate Action conference 2026, Bruxelles, Belgium.
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- Van Holm, T. (17 March 2026). "Recherche en conception architecturale. Une approche instrumentée" [Poster presentation]. Researcher's Tuesday.
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- Vandembulcke, V., Renard, G., Bernard, B., & Castiau, A. (16 January 2026). "The Impact of the Eco-score on Consumer Behavior in Retail: A Case Study of Colruyt" [Poster presentation]. IMTC - International Marketing Trends Conference.
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- Seyedi, S. A., & Gillis, N. (03 May 2026). "Encoder-Decoder Symmetric Nonnegative Matrix Tri-Factorization for Graph Clustering" [Paper presentation]. International Conference on Acoustics, Speech, and Signal Processing, Barcelona, Spain. doi:10.1109/icassp55912.2026.11460800
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- Trabes, E., Dellel, K., & Valderrama, C. A. (2026). "Monocular Dense Visual Odometry Based on Direct Mesh Optimization" [Paper presentation]. International Conference on Electrical, Computer and Energy Technologies (ICECET 2025), Paris, France. doi:10.1109/ICECET63943.2025.11471895
Full Text : [mesh_vo-5.pdf](#) (Open Access)

Dissertations and theses/Doctoral thesis

- Teoule, F. (2026). "Community Gardens in Transitioning Cities: Co-creating Spatio-Temporal Practices of Commoning in Brussels and Kraków" [Doctoral thesis, Jagiellonian University - Krakow]. ORBi UMONS-University of Mons. <https://orbi.umons.ac.be/handle/20.500.12907/56125>
Full Text : [FTPdthesis_compressed.pdf](#) (Open Access)
- Kolomvakis, C. (2026). "Binary and Boolean matrix factorizations" [Doctoral thesis, UMONS - University of Mons]. ORBi UMONS-University of Mons. <https://orbi.umons.ac.be/handle/20.500.12907/55526>
Full Text : [Binary and Boolean matrix factorizations.pdf](#) (Open Access)
- Benkedadra, M. (2026). "Towards Reliable Edge Vision AI: Addressing Data, Adaptation, and Deployment Constraints" [Doctoral thesis, UMONS - Université de Mons]. ORBi UMONS-University of Mons. <https://orbi.umons.ac.be/handle/20.500.12907/55487>

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- Dache, A., Vandaele, A., & Gillis, N. (2026). "Matrix Factorization Framework for Community Detection under the Degree-Corrected Block Model". ORBi UMONS-University of Mons. <https://orbi.umons.ac.be/handle/20.500.12907/55491>.
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- Gallas, M.-A. (21 May 2026). "Transition numérique et Gestion de la circularité, du réemploi des matériaux et la déconstruction des bâtiments" [Paper presentation]. ICAMSEE 2026-International Conference on Advanced Materials for Sustainable Energy and Engineering, Meknes, Morocco.
Full Text : [Réemploi_Matériaux_Circularité_BIM_ICAMSEE26.pdf](#) (Open Access)

2025

Parts of books/Contribution to collective works

- Mancas, M., & Vincent Ferrera. (2025). What is Attention ? In "From Human Attention to Computational Attention - A Multidisciplinary Approach". Springer Nature. doi:10.1007/978-3-031-84300-6_2
Full Text : [978-3-031-84300-6_2.pdf](#) (Open Access)
- Najem, R., & Benjelloun, M. (2025). Achieving Zero False Negatives: Optimizing Anomaly Detection with Genetic Neural Architecture Search. In "Deep Learning Theory and Applications". Cham, Germany: Springer. doi:10.1007/978-3-032-04339-9_18

- Cools, A., Belarbi, M. A., & MAHMOUDI, S. (2025). CARENet: A Promising AI Architecture for Low Data Regime Mixing Convolutions and Attention. In "Lecture Notes in Networks and Systems". Springer Nature Switzerland. doi:10.1007/978-3-031-78698-3_3
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- Mancas, M., Vincent P. Ferrera, & Antoine Couterot. (2025). Why Do Computers Need Attention? In M. Mancas, "From Human Attention to Computation Attention". United States: Springer Nature. doi:10.1007/978-3-031-84300-6_1
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- GILLIS, N., & Sicilia, S. (01 November 2025). Minimum-norm solutions of the non-symmetric semidefinite Procrustes problem. "Linear Algebra and its Applications, 724", 21-48. doi:10.1016/j.laa.2025.06.005
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- Gregoire, J.-M., Gilon, C., Marelli, F., Bersini, H., Groben, L., Nguyen, T., Deruyter, B., Godart, P., & Carlier, S. (2025). Short-term atrial fibrillation onset prediction using machine learning. "European heart journal. Digital health". doi:10.1093/ehjdh/ztaf104
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- Teoule, F. (16 August 2025). Governance models and the socio-ecological role of community gardens in post-socialist Krakow. "Regional Science Policy & Practice, 17" (10), 100243. doi:10.1016/j.rssp.2025.100243
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- Barbarino, G., Ekström, S.-E., Garoni, C., Meadon, D., Serra-Capizzano, S., & Vassalos, P. (15 August 2025). Spectral properties of flipped Toeplitz matrices and computational applications. "Applied Mathematics and Computation, 499", 129408. doi:10.1016/j.amc.2025.129408
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- Zayed, A., Trabes, E., Tarrillo, J., Ben Khalifa, K., & Valderrama, C. (February 2025). Efficient Embedded System for Drowsiness Detection Based on EEG Signals: Features Extraction and Hardware Acceleration. "Electronics, 14" (3), 404. doi:10.3390/electronics14030404
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- Mazzocconi, C., O'brien, B., El Haddad, K., Goldwater, I., Anggoro, F., Hayes, B., & Ong, D. (2025). Differences between Mimicking and Non-Mimicking laughter in Child-Caregiver Conversation: A Distributional and Acoustic Analysis. "Proceedings of the Annual Meeting of the Cognitive Science Society".
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- Vandenbulcke, V., Cristini Hélène, & Hobeika, J. (2025). The consumer-actor in the anthropocene era: proposing the concept of eco-lucidity through the practice of meaningful actions. "Academy of Marketing Studies Journal, 29" (3).
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- Mancas, M., Ferrera, V. P., & Coutrot, A. (Eds.). (2025). "From Human Attention to Computational Attention: A Multidisciplinary Approach". Springer Science+Business Media. doi:10.1007/978-3-031-84300-6
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- Mahmoudi, S., Benkedadra, M., Mancas, M., & Jean Philippe Draye. (11 December 2025). "INFRASECURE : AI for securing Railway stations" [Paper presentation]. FestIA.
- D'onofrio, L., Astorino, L., Ferauge, P., & Vandenbulcke, V. (05 June 2025). "Entreprendre Durablement à la suite d'une reconversion professionnelle : Analyse du récit d'entrepreneurs belges" [Paper presentation]. Colloque Aderse 2025 : "Exploration des liens entre performance globale et performance RSE/RSO", Paris, France.
- Najem, R., & Benjelloun, M. (20 May 2025). "Minimizing False Negatives: Optimizing Anomaly Detection with Genetic Neural Architecture Search" [Paper presentation]. International Conference on Artificial Intelligence and Applied Mathematics (JIAMA'25), Hoceima, Morocco.
- Stassin, S. (16 May 2025). "AI, Explainability and Bias: Understanding and Trusting Model Predictions" [Paper presentation]. SensAIFood Training School 2025, Gembloux, Belgium.
Full Text : [SensAIfood - XAI.pptx](#) (Open Access)
- Astorino, L., D'onofrio, L., Ferauge, P., & Vandenbulcke, V. (15 May 2025). "Entrepreneuriat durable, un choix de reconversion professionnelle ?" [Paper presentation]. Colloque ARES 2025, Amiens, France.
- Djedidi, A., & Vandenbulcke, V. (24 January 2025). "How Digitally Experts are Digital Natives? About Online Experiential Learning of Digital Marketing Students" [Paper presentation]. International Marketing Trends Conference, Venice, Italy.

Scientific congresses and symposiums/Paper published in a book

- Trabes, E., Dellel, K., & Valderrama, C. A. (2025). A Hardware-Aware DNAS Approach with On-Device Sampling for FPGA Resource Estimation. In "A Hardware-Aware DNAS Approach with On-Device Sampling for FPGA Resource Estimation". ICCAD. doi:10.1109/iccad64771.2025.11099189
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