

# LIS

## Laboratoire d'ingénierie des systèmes de Vers

### REVUES INTERNATIONALES 2020 - 2025

#### 2023

F Khaled, S Guillou, Y Méar, F Hadri., Numerical investigation of the local impact of hydrokinetic turbine on sediment transport—Comparison between two actuator models, European Journal of Mechanics-B/Fluids 102, 31-45 (2023). Impact Factor : 2.6

I. A. Oumghar, A. Barkaoui, T. Merzouki, D. Guenoun, P. Chabrand, Chemotherapy and adjuvant therapies' impact on the internal remodeling process of bone and its mechanical behavior for breast cancer patients, International Journal for Numerical Methods in Biomedical Engineering (2023).

Alexandre Lambert, Aakash Soni, Assia Soukane, Amar Ramdane-Cherif, Arnaud Rabat, Artificial intelligence modelling human mental fatigue: A comprehensive survey, in Neurocomputing journal, November 2023(SJR Q1)

A. Ait Saadi, A., Soukane, A., Meraihi, Y., Benmessaoud Gabis, A., & Ramdane-Cherif,

A., An enhanced African Vulture Optimization Algorithm for solving the Unmanned Aerial Vehicles path planning problem, Computers & Electrical Engineering 110(12):108802, September 2023 (SJR Q1)

L. Shi, B. Béchadergue, L. Chassagne, and H. Guan, Joint Visible Light Sensing and Communication Using m-CAP Modulation”, IEEE Transactions on Broadcasting, vol. 69, no. 1, pp. 276-288, March 2023.

W. Ting, E. Monacelli, O. Rabreau, et al. How does the dedicated software PLEIA provide computer access assessment for people with physical disabilities?. Universal Access in the Information Society, 2023, p. 1-16.

A. Belkacem, M. Ladmek, A. A. Daikh, A. Bessaim, M. S. A. Houari, M. O. Belarbi, T. Merzouki, A. Tounsi, Bending Responses of Bi-Directional Advanced Composite Nanobeams Using Higher Order Nonlocal Strain Gradient Theory, Journal of Nano Research, 1(88) (2023).

M. S. A. Houari, A. Bessaim, T. Merzouki, A. A. Daikh, A. Garg, A. Tounsi, M. A. Eltaher, M. O. Belarbi, Shear correction factors of a new exponential functionally graded porous beams, Structural engineering and mechanics, 105130 (2023).

A. Yaich, F. Abid, T. Merzouki, A. El Hami, L. Walha, M. Haddar, A robust method for the reliability based design optimization of shape memory alloy actuator. Mechanics Based Design of Structures and Machines, (2023).

L. Fortas, H. E. Khiouani, A. Messai, L. Belounar, T. Merzouki, Development and Implementation of New Triangular Finite Element in ABAQUS for Linear, Nonlinear and Free Vibration Problems, Tobacco Regulatory Science, 1(9) (2023)

Fadila Maroteaux, Ezio Mancaruso, Bianca-Maria Vaglieco. Optical and Numerical Investigations on Combustion and OH Radical Behavior Inside an Optical Engine Operating in LTC Combustion Mode. Energies 2023, 16(8), 3459, <https://doi.org/10.3390/en16083459>.

Ezio Mancaruso, Salvatore Rossetti, Bianca Maria Vaglieco, Roberta De Robbio, Fadila Maroteaux. UV and IR Digital Imaging to Analyze Hydrogen/Diesel Combustion with EGR in a Single Cylinder Research Engine. SAE Technical paper 2023-24-0070; 2023, doi: 10.4271/2023-24-0070.

Fadila Maroteaux, Ezio Mancaruso, Pierre-Lin Pommier, Bianca Maria Vaglieco, Theoretical Analysis of Multi-zone and Transported Probability Density Function Approaches Applied to Low Temperature Combustion Process, SAE Technical paper 2023-24-0060; 2023, doi:10.4271/2023-24-0060.

Ait Saadi, A., Soukane, A., Meraihi, Y., Benmessaoud Gabis, A., & Ramdane-Cherif, A. (2023). A hybrid Improved Manta Ray Foraging Optimization with Tabu Search Algorithm for solving the UAV placement problem in smart cities. IEEE Access volume 11 , Mars 2023 (SJR Q1).

Selma Yahia, Yassine Meraihi, Amar Ramdane-Cherif, Tu Dac Ho, Hossien B. Eldeeb, Enhancement of Vehicular Visible Light Communication Using Spherical Detector and Custom Lens Combinations. IEEE Access 11 : 21600-21611, February 2023 (SJR Q1).

Sylia Mekhmoukh Taleb, Yassine Meraihi, Asma Benmessaoud Gabis, Seyedali Mirjalili, Amar Ramdane-Cherif and Dalila Acheli, Mesh Router Nodes Placement for Wireless Mesh Networks Based on an Enhanced Moth–Flame Optimization Algorithm. Mobile Networks and Applications Journal, January 2023, (SJR Q2).

B. Pratim Bhuyan, R. Tomar and A. Ramdane-Cherif, Formal concept analysis and its validity in power reliability engineering, *Electrica*, 23(2), 250-261, DOI: 10.5152/electrica.2022.22057, 2023.

Bhuyan, B. P., Tomar, R., Singh, T. P. and Ramdane-Cherif A., Crop Type Prediction: A Statistical and Machine Learning Approach. International journal Environment, Development and Sustainability, 15(1), 481. 2023 (Q1)

E. Plascencia, H. Guan, L. Chassagne, A-M Cailean, O. Barrois, O. Shagdar; Addressing multi-user Interference in vehicular Visible Light Communications Applications: a brief survey and evaluation of Optical CDMA, *Sensors* 2023, 23, 3821, <https://doi.org/10.3390/s23083831> (2023).

E. Plascencia, H. Guan, L. Chassagne, O. Barrois, O. Shagdar; A-M Cailean, A comprehensive Investigation on Multi-User Interferences Effects in Vehicular Visible Light Communications, *Sensors* 2023, 23, 2553, <https://doi.org/10.3390/s23052553>

2022

L. Fortas, A. Messai, T. Merzouki, M. S. A. Houari, Elastic stability of functionally graded graphene reinforced porous nanocomposite beams using two variables shear deformation, Steel and Composite Structures, 43(1) (2022).

Amylia Ait Saadi, Assia Soukane, Yassine Meraihi, Asma Benmessaoud Gabis and Amar Ramdane-Cherif, A Novel Hybrid Chaotic Aquila Optimization algorithm with Simulated Annealing for Unmanned Aerial Vehicles Path Planning, in Computers and Electrical Engineering journal, November 2022 (SJR Q1).

Mokrane, A.; Benallegue, A.; Choukchou-Braham, A.; El Hadri, A.; Cherki, B.; Guidance, "Navigation and Control for Autonomous Quadrotor Flight in an Agricultural Field: The Case of Vineyards", Sensors 2022, 22, 8865. <https://doi.org/10.3390/s22228865>

M. Benallegue, A. Benallegue, R. Cisneros, Y. Chitour, "Velocity-aided IMU-based Attitude Estimation", IEEE Transactions on Automatic Control, 2022, DOI: 10.1109/TAC.2022.3225758.

M. J. Hasan, M. A. Khalighi, V. Jungnickel, L. N. Alvès, and B. Béchadergue, "An Energy-Efficient Optical Wireless OFDMA Scheme for Medical Body-Area Networks", IEEE Transactions on Green Communications and Networking, vol. 6, no. 3, pp. 1806-1818, March 2022.

Amylia Ait Saadi, Assia Soukane, Yassine Meraihi, Asma Benmessaoud Gabis and Amar Ramdane-Cherif, UAV Path Planning using Optimization Approaches: A survey, Archives of Computational Methods in Engineering , 29(3), Mars 2022 (SJR Q1).

Abderraouf Khezaz, Manolo Dulva Hina, and Amar Ramdane-Cherif, Perception Enhancement and Improving Driving Context Recognition of an Autonomous Vehicle Using UAVs, Journal of Sensor and Actuator Networks 11(4):56, 2022 (Q1).

Bikram Pratim Bhuyan, Ravi Tomar, Amar Ramdane Cherif, Knowledge Representation in Smart Agriculture (Urban): A Survey , Special Issue "Sustainable Smart Cities and Societies Using Emerging Technologies", International journal Environment, Development and Sustainability, 2022 (Q1).

Sylia Mekhmoukh Taleb, Yassine Meraihi, Asma Benmessaoud Gabis, Seyedali Mirjalili, Atef Zagaria and Amar Ramdane-Cherif, Solving the mesh router nodes placement in wireless mesh networks using coyote optimization algorithm, accepted in Journal IEEE

Sylia Mekhmoukh Taleb, Yassine Meraihi, Asma Benmessaoud Gabis, Seyedali Mirjalili, and Amar Ramdane-Cherif, Nodes Placement in Wireless Mesh Networks using Optimization Approaches: A survey, Neural Computing and Applications, 34(7): 5283-5319, January 2022 (SJR Q1).

Selma Yahia, Yassine Meraihi, Amar Ramdane-Cherif, Asma Benmessaoud Gabis, Hossien B. Eldeeb, Performance evaluation of vehicular Visible Light Communication based on angle-oriented receiver. Computer Communications journal, 191, 500-509, 2022 (Q1).

Selma Yahia, Yassine Meraihi, Souad Ikram Refas, Asma Benmessaoud Gabis, Amar Ramdane-Cherif and Hossien B. Eldeeb, Performance study and analysis of MIMO visible light communication-based V2V systems, Optical and Quantum Electronics 54(9), 2022 (Q2).

Yassine Meraihi, Asma Benmessaoud Gabis, Seyedali Mirjalili, Amar Ramdane-Cherif, Fawaz E. Alsaadi: Machine Learning-Based Research for COVID-19 Detection, Diagnosis, and Prediction: A Survey. SN Computer Science 3(4): 286, 2022 (Q2).

A.A.H. Ibrahim, A. Ammounah, S. Alfayad, S. Tliba, F. Ben Ouezdou, S. Delaplace, Hydraulic Robotic Leg for HYDROïD Robot: Modeling and Control, Journal of Robotics and Mechatronics, 34(3):576-587, DOI:10.20965/jrm.2022.p0576, (2022).

C. Beguni, A.-M. Cilean, S.-A. Avtmniei, E. Zadobrischi, R. Stoler, M. Dimian, V. Popa, B. Béchadergue, and L. Chassagne, “In-Vehicle Visible Light Communications Data Transmission System Using Optical Fiber Distributed Light: Implementation and Experimental Evaluation”, Sensors, vol. 22, no. 18, p. 6738, Sept. 2022.

E. Plascencia, O. Shagdar, H. Guan, O. Barrois, L. Chassagne, Optical CDMA MAC Evaluation in Vehicle-to-Vehicle Visible Light Communications, Electronics 2022, 11, 1454, DOI : 103390.electronics.11091454 (2022).

M. El Mouss, T. Merzouki, A. Rekik, R. Hamblin, Multiscale approach incorporating tropocollagen scale to assess the effect of molecular age-related modifications on elastic constants of cortical bone based on finite element and homogenization methods, Journal of the Mechanical Behavior of Biomedical Materials, 105130 (2022).

A. Messai, L. Fortas, T. Merzouki, M. S. A. Houari, Vibration analysis of FG reinforced porous nanobeams using two variables trigonometric shear deformation theory, Engineering Solid Mechanics, 81(4) (2022).

T. Merzouki, M. S. A. Houari, A. Bessaim, M. Haboussi, R. Dimitri, F. Tornabene, Bending analysis of functionally graded porous nanocomposite beams based on a non-local strain gradient theory, Mathematics and Mechanics of Solids, 27(1):66-92 (2022).

## 2021

F Khaled, S Guillou, Y Méar, F Hadri., Impact of the blockage ratio on the transport of sediment in the presence of a hydrokinetic turbine: Numerical modeling of the interaction sediment and turbine, International Journal of Sediment Research 36 (6), 696-710 (2021). Impact Factor : 3.6

Manolo Dulva Hina, Hongyu Guan, Assia Soukane and Amar Ramdane-Cherif, CASA: An Alternative Smartphone-Based ADAS, In International Journal of Information Technology & Decision Making, Vol. 20, 21(1): 273-313, September 2021, (SJR Q2).

Abderraouf Khezaz, Manolo Dulva Hina, Hongyu Guan, Amar Ramdane-Cherif, Knowledge-Based Approach for the Perception Enhancement of a Vehicle, In International Journal of Sensor and Actuator Networks, volume 10, issue 4, January 2021 (SJR Q1).

Yassine Meraihi, Asma Benmessaoud Gabis, Seyedali Mirjalili, Amar Ramdane-Cherif, « Grasshopper Optimization Algorithm: Theory, Variants and Applications », in Journal IEEE Access, volume 9, 2021. (SJR Q1).

Quentin Cabanes, Benaoumeur Senouci, Amar Ramdane-Cherif, « Embedded Deep Learning Prototyping approach for Cyber-Physical Systems: Smart LIDAR case study », in Journal of Sensor and Actuator Networks, 2021, (SJR Q2).

Yassine Meraihi, Amar Ramdane-Cherif, Dalila Acheli and Mohammed Mahseur. Dragonfly algorithm: a comprehensive review and applications, in Neural Computing and Applications, 32, 16625-16646, 2020, (SJR Q1).

Ikram Nedjai-Merrouche, Nadia Saadia, Amar Ramdane-Cherif and Amina Makhlof. Outdoor multimodal system based on smartphone for health monitoring and incident

detection. In Journal of Ambient Intelligence and Humanized Computing, January 2021. (SJR Q1).

Asma Benmessaoud Gabis, Yassine Meraihi, Amar Ramdane-Cherif and Dalila Acheli, A comprehensive survey of Crow Search Algorithm and its applications, in Artificial Intelligence Review, 54(7): 5469-5540, 2021. (SJR Q1).

Selma Yahia, Yassine Meraihi, Amar Ramdane-Cherif, Asma Benmessaoud Gabis, Dalila Acheli, Hongyu Guan, A Survey of Channel Modeling Techniques for Visible Light Communications. Journal of Network and Computer Applications, 194: 103206 , 2021

M. Hina, H. Guan, A. Soukane and A. Ramdane-Cherif, CASA: An Alternative Smartphone-Based ADAS, International Journal of Information Technology & Decision Making (2021). ISSN (print): 0219-6220 | ISSN (online): 1793-6845, <https://doi.org/10.1142/S0219622021500541>

C.J Peng, L. Seurre, E. Cattan, T T-M. N'Guyen, C. Plesse, L. Chassagne, B. Cagneau, Towards an electroactive polymer-based soft microgripper, IEEE Access, Vol 9, pp 32188-32195, DOI:10.1109/ACCESS.2021.3059926 (2021).

L. Derradji, T. Maalem , T. Merzouki, A. Messai, Solid strain based finite element implemented in ABAQUS for static and dynamic plate analysis, Engineering Solid Mechanics, (2021).

M. O. Belarbi, M. S. A. Houari, A. A. Daikh, A. G, T. Merzouki, H.D. Chalak, H. Hirane, Nonlocal finite element model for the bending and buckling analysis of functionally graded nanobeams using a novel shear deformation theory. Composite Structures, (2021).

A. Yaich, F. Abid, T. Merzouki, A. El Hami, L. Walha, M. Haddar, A robust method for the reliability based design optimization of shape memory alloy actuator. Mechanics Based Design of Structures and Machines, (2021).

F. Abid, A. El Hami, T. Merzouki, H. Trabelsi, L. Walha, M. Haddar, An approach for the reliability based design optimization of a shape memory alloy structure, Mechanics Based Design Of Structures And Machine, (2021) 1-17

Khaled F., Guillou S., Méar Y., Hadri F. (2021), Impact of blockage ratio on the transport

of sediments in the presence of a hydrokinetic turbine: numerical modelling of the interaction sediments-turbine, International Journal of Sediment Research (2021), <https://www.sciencedirect.com/science/article/abs/pii/S1001627921000056> .

M. Hina, H. Guan, A. Soukane and A. Ramdane-Cherif, CASA: An Alternative Smartphone-Based ADAS, International Journal of Information Technology & Decision Making (2021). ISSN (print): 0219-6220 | ISSN (online): 1793-6845, <https://doi.org/10.1142/S0219622021500541> .

Tagnithammou, T., Monacelli, É., Ferszterowski, A., & Trénoras, L. (2021). Emotional state detection on mobility vehicle using camera: Feasibility and evaluation study. Biomedical Signal Processing and Control, 66, 102419. April 2021.

## 2020

S.I. Benchabane, N. Saadia, A. Ramdane-Cherif, Novel algorithm for conventional myocontrol of upper limbs prosthetics, in Journal of Biomedical Signal Processing and Control, Elsevier. 56, 2020 (SJR Q2).

Isma Boudouane, Amina Makhlof, Mohamed Aures Harkat et Mohamed Zakaria Hammouche Nadia Saadia and Amar Ramdane Cherif, Fall detection system with portable camera, in Journal of Ambient Intelligence and Humanized Computing, Springer, 11(7): 2647-2659, 2020, (SJR Q1).

Beddar, S., Millet, J. B., & Alayli, Y. (2020). Pixelated-LEDs Car Headlight Design for Smart Driving and CO<sub>2</sub> Reduced Emissions (No. 2020-37-0018). SAE Technical Paper.

X. Wang, L. Benabou, First-principles investigation of intergranular fracture in copper by grain boundary segregation of sulfur, Journal of Engineering Materials and Technology (2018), 140 (1), 011008. <https://doi.org/10.1115/1.4037274>

X. Wang, H. Sato, K. Adachi, Low friction in self-mated silicon carbide tribosystem using nanodiamond as lubricating additive in water, Friction (2020), <https://doi.org/10.1007/s40544-020-0423-y>

X. Wang, L. Benabou, Numerical modeling of low-temperature and low-pressure sintering of silver microparticles based on surface and grain boundary diffusion mechanisms, Mechanics of Advanced Materials and Structures (2020). <https://doi.org/10.1080/15376494.2020.1831659>

L. Benabou, X. Wang, Simulation of silver nanoparticles sintering at high temperatures based on theoretical evaluations of surface and grain boundary mobilities, International Journal for Computational Methods in Engineering Science & Mechanics (2020), 21(6), p331-342. <https://doi.org/10.1080/15502287.2020.1841334>

L. Benabou, Q. B. Tao, T. A. Nguyen-Van, X. D. Wang, L. Chassagne, Mechanical and Microstructural Analysis of an Ultra-Flexible Nano-Silver Paste Sintered Joint, Key Engineering Materials (2020), 865, p.25-30. <https://doi.org/10.4028/www.scientific.net/KEM.865.25>

M. Tahoun, A. Tayba, A. Wahdan, L. Chassagne, Force localized interaction sensing system for HYDROID humanoid robot, IEEE Sensors, vol 20, n°8, pp4112-4119 (2020).

H. Zhi, Y. Zheng, Y. Zhou, W. Kun, L. Qidong, S. Pengfei, Y. Hong, S. Honggun, L. Chao, H. Guan, L. Chassagne, Corrosion behavior characterization of as extruded Mg-8Li-3Al alloy with minor alloying elements (Gd, Sn and Cu) by scanning Kelvin probe force microscopy, Corrosion Science, 176, 108923 (2020).

Y. Zheng, H. Renhua, C. Yang, Y. Zhou, Y. Kun, W. Kun, S. Honggun, Y. Chengxin, H. Guan, L. Chao, H. Zhi, L. Chassagne, Effects of surface micro-galvanic corrosion and corrosive film on the corrosion resistance of AZ91-xNd alloys, Applied Surface Science, <https://doi.org/10.1016/j.apsusc.2020.147761> (2020).

Z. Yu, Q. Huang, W. Zhang, L. Luo, H. Guan, Y. Chen, H. Song, Z. Hu, L. Chassagne, Effects of Sn contents on the mechanical properties and corrosion behavior of Mg-3Al-xSn alloys, Materials Research Express (2020)

T. Kraiem, A. Barkaoui, T. Merzouki, M. Chafra, Computational Approach of the Cortical Bone Mechanical Behavior Based on an Elastic Viscoplastic Damageable Constitutive Model. International Journal of Applied Mechanics, (2020).

A. A. Daikh, I. Bensaid, A. Bachiri, M. S. A. Houari, A. Tounsi, T. Merzouki, On static bending of multilayered carbon nanotube-reinforced composite plates. Computers and Concrete 26(2):137-150. (2020).

T. Merzouki, M. S A. Houari, M. Haboussi, A. Bessaim, M. Ganapathi, Nonlocal strain gradient finite element analysis of nanobeams using two-variable trigonometric shear

deformation theory. *Engineering with Computers*, (2020).

M. El Mouss, A. Rekik, S. Zellagui, T. Merzouki, R. Hamblin, Numerical modeling of the effects of hydration and number of hydrogen bonds on the mechanical properties of the tropocollagen molecule. *Journal of Engineering in Medicine*, (2020).

F. Abid, Kh. Dammak, A. El Hami, T. Merzouki, H. Trabelsi, L. Walha, M. Haddar, Surrogate models for uncertainty analysis of micro-actuator, *Microsystem Technologies*, 26, 2589–2600 (2020).

Chevallier, S., Kalunga, E. K., Barthélemy, Q., & Monacelli, E. (2020). Review of Riemannian distances and divergences, applied to SSVEP-based BCI. *Neuroinformatics*, 1-14.

Azabou, E., Bao, G., Heming, N., Bounab, R., Moine, P., Chevallier, S., ylvie Chevret4, 5,6, Matthieu Resche-Rigon4,5,6, Shidaps Siami7, Tarek Sharshar8,9, Frederic Lofaso & Lofaso, F. (2020). Randomized controlled study evaluating efficiency of low intensity Transcranial Direct Current Stimulation (tDCS) for dyspnea relief in mechanically ventilated COVID-19 patients in ICU: the tDCS-DYSP-COVID protocol. *Frontiers in medicine*, 7.

Marlats, F., Bao, G., Chevallier, S., Boubaya, M., Djabelkhir-Jemmi, L., Wu, Y. H., ... & Azabou, E. (2020). SMR/Theta Neurofeedback Training Improves Cognitive Performance and EEG Activity in Elderly With Mild Cognitive Impairment: A Pilot Study. *Frontiers in Aging Neuroscience*, 12.

S Ghali, A Benallegue, S Elloumi, A decentralized observer-based optimal control for inter-connected systems using the block pulse functions, *Transactions of the Institute of Measurement and Control*, 2020, DOI: doi.org/10.1177/0142331220940205.

M. Benallegue, R. Cisneros, A. Benallegue, Y. Chitour, M. Morisawa, F. Kanehiro, Lyapunov-Stable Orientation Estimator for Humanoid Robots, *IEEE Robotics and Automation Letters*, Volume : 5, Issue : 4, Oct. 2020.

A. Jebri, T. Madani, K. Djouani, A. Benallegue, Robust Adaptive Neuronal Controller for Exoskeletons with Sliding-Mode Neurcomputing (2020), Volume 399, 25 July 2020, Pages 317-330.

M. Tahoun, A. Tayba, S. Alfayad, A. Wahdan, L. Chassagne, Force localized interaction

sensing system for HYDROID humanoid robot, IEEE Sensors, vol 20, n°8, pp4112-4119 (2020).