

CV Dr. Selman DJEFFAL

Name: Selman DJEFFAL

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Educational Profile:

- PhD in Mechanical Construction, Larbi Ben M'hidi University, Algeria
- Master in Applied Mechanics, Larbi Ben M'hidi University, Algeria
- Bachelor in System Mechanics, Larbi Ben M'hidi University, Algeria

Scientific Activities & Membership of Scientific Societies

- **Reviewer:** Journal of Systems and Control Engineering, IEEE Transactions on Industrial Informatics.
- **Research:** Development of continuum bionic robots and drones using advanced control methods, 3D printing technologies, and Artificial Intelligence (AI).

List of Journal Publications

1. Djeffal S, Ghoul A, Saadi A, Izri Z, Morakchi MR, Wang H, 2024, Design optimization and simulation of a 3d printed cable-driven continuum robot using ikm-ann and ntop software, Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering, Pages: 09596518241276233.
2. Djeffal S, Mahfoudi C, 2024, Solving the non-linear equation of motion of a single section continuum robot using rungekutta method and matlab environment, Journal of applied non-linear dynamics, Vol: 13, Pages: 13-26.
3. Djeffal S, Morakchi MR, Ghoul A, Kargin TC, 2024, Ddpq-based reinforcement learning for controlling a spatial three-section continuum robot, Franklin Open, Vol: 12, Pages: 100077.
4. Djeffal S, Ghoul A, 2023, Experimental and theoretical verification of tlbo and pso for solving the inverse kinematic model of continuum robots, Journal of Engineering Research.

5. Djeflal S, Ghouli A, Morakchi MR, Mahfoudi C, Belkedari M, 2023, Optimized computer torque control and dynamic model of a spatial single section continuum robot, Results in Control and Optimization, Vol: 12, Pages: 100264.
6. Djeflal S, Mahfoudi C, 2023, Inverse kinematic model of multi-section continuum robots using particle swarm optimization and comparison to four meta-heuristic approaches, Transactions of the society for modeling and simulation international: Simulation.
7. Zakarya C, Said A, Selman D, 2023, Enhanced stiffness analysis of a redundant co-axial spherical parallel manipulator using matrix structural analysis, Iranian Journal of Science and Technology, Transactions of Mechanical Engineering.
8. Ghouli A, Kara K, Djeflal S, Benrabah M, Hadjili ML, 2022, Artificial neural network for solving the inverse kinematic model of a spatial and planar variable curvature continuum robot, Archive of Mechanical Engineering, Vol: 69.
9. Merrad A, Amouri A, Cherfia A, Djeflal S, 2022, A reliable algorithm for obtaining all-inclusive inverse kinematics' solutions and redundancy resolution of continuum robots, Arabian Journal for Science and Engineering, Pages: 1-16.
10. Razi M, Zine G, Mohaed D, Selman D, 2022, A novel technique based on iot accelerometer for transmitting circular chart recorder to electrical data, UPB Scientific Bulletin, Series D: Electrical Engineering, Vol: 83, Pages: 28-42.
11. Djeflal S, Amouri A, Mahfoudi C, 2021, Kinematics modeling and simulation analysis of variable curvature kinematics continuum robots, UPB Scientific Bulletin, Series D: Mechanical Engineering, Vol: 83, Pages: 28-42.

List of Conference Papers

1. Razi MM, Zine G, Mabrouk D, Selman D, 2022, The ideal capacitive accelerometer damping rate choice to minimize the measurement error, 2022 2nd International Conference on Advanced Electrical Engineering (ICAEE), Publisher: IEEE, Pages: 1-5.
2. Razi MM, Zine G, Mabrouk D, Selman D, 2022, Prototype of an affordable continuum robot-based iotacceleromter and its kinematic modeling, ICATEEE2022.
3. Djeflal S, Mahfoudi C, Amouri A, 2021, Comparison of three meta-heuristic algorithms for solving inverse kinematics problems of variable curvature continuum robots, 2021 European Conference on Mobile Robots (ECMR), Publisher: IEEE, Pages: 1-6.
4. Djeflal S, Mahfoudi C, Amouri A, 2021, A path optimization technique with obstacle avoidance for multi-section continuum robot using teaching learning based optimization, International Conference on Mechanical Sciences, Vol: 12, Pages: 1-13.
5. Amouri A, Mahfoudi C, Djeflal S, 2019, Kinematic and dynamic modeling and simulation analysis of a cable-driven continuum robot, Computational Methods and Experimental Testing In Mechanical Engineering: Selected Papers from the 6th Algerian Congress on Mechanics (CAM 2017), Publisher: Springer, Constantine, Algeria, Pages: 27-37.