Dr. Jawhar **GHOMMAM**

Robotics | Guidance/Navigation/ Control

linkedin.com/in/jawhar-ghommam-7270a91b
+968 79 398 200 @ jawher@squ.edu.om
Sultan Quaboos University, Al Khoudh,Muscat 123
Tunisian, born July 22, 1979

Jawhar Ghommam was born in Tunis in 1979. He's got the BSc degree in Computer and Control Engineering from the National Institute and Applied Sciences and Technology (INSAT) in 2003 in Tunis. He's got the DEA (MSc) degree form the university of Montpelier at the Laboratoire d'Informatique, Robotique et Micro-électronique (LIRMM, France) in 2004 and later on in 2008 a Ph.D in Control Engineering degree jointly from the National Engineering School of Sfax and the university of Orleans . From 2008 to 2017 he was with the National Institute of Applied Sciences and Technology, where he held a tenured Associate Professor at the Department of Physics and Instrumentation. In Jannuary 2018 he joined the Departement of Electrical and Computer Engineering at Sultan Quaboos University in Oman. He is a member of the Control and Energy Management Lab and also an Associate Researcher at the GREPCI-Lab, Ecole de Technologie Superieure, Montreal,QC, Canada. His Research interests include fundamental motion control concepts for nonholonomic/underactuated vehicle systems, nonlinear and adaptive control; intelligent and autonomous control of networked unmanned systems, team cooperation, consensus achievement,and sensor networks. He serves as a regular referee and associate editors for many international journals in the filed of Control and Robotics.

Resume

Present position
Associate Professor at the college of Engineering, SQU, since 2018

Previous Position

- Associate Professor, National Institute of Applied Science and Technology (INSAT); (2015 – 2018); tenure position ;
- Assistant Professor, National Institute of Applied Science and Technology (INSAT); (2008 – 2015); tenure position ;

Education
PhD (ENIS, Univ. Orleans/2008) ; MSc in Robotics (LIRMM, Montpellier/2004), BSc in Computer and Control engineering (INSAT/2003).

Fields of expertise
Motion control concepts for nonholonomic/underactuated vehicle systems, Navigation and guidance control, nonlinear and adaptive control; intelligent and autonomous control of networked unmanned systems, team cooperation, consensus achievement,and sensor networks

Publications
35 journal papers, 3 book chapters, 3 text books, 52 conference papers.

Supervision of students
1 postdoc, 7 PhD students (3 defended), 3 MSc students.

Editorship and membership

- Associate editor, 2018, International Journal of Advanced Robotic Systems.
- Associate editor, (2017-2018) International Journal of Digital Signals and Smart Systems (IJDSSS).
- Track chair at 14th IEEE, International Multi-Conference on Systems, Signals and Devices, March 28 - 31, 2017 - Marrakech, Morocco.
- Track chair at 13th IEEE, International Multi-Conference on Systems, Signals and Devices, March 21 – 24, 2016 in Leipzig, Germany.
- General chair at 12th IEEE, International Multi-Conference on Systems, Signals and Devices, March 16 - 19, 2017 - Mahdia, Tunisia.
- Track chair at 11th IEEE, International Multi-Conference on Systems, Signals and Devices, March 16 - 19, 2017 - Mahdia, Tunisia.

Research projects and grants

- Fullbright Research Grant for the year 2015.
- Collaboration project between the Soltan Qaboos University at Oman and the university of Carthage (INSAT), Grant Ref: IG/ENG/ECED/13/03.
- Collaboration project between The Research Unit ICOS-Tunisia and the university of the Illes Balears-Spain.
- DCOP project Spain collaboration project Illes Balears-Spain.
- CMCU project with the university of Orleans France.

Expert evaluator

- Expert consultant for the EPPM, Tunisia (2008-2014).
- Expert consultant for the Integration Object, Tunisia (2012-2014)

Work experience

Present position – Junuary 2018
Associate Professor | College of engineering, ECE, Sultan Qaboos University
- Teaching and Reserch activities
- Studnets' Projects supervision
- Chair of the IEEE Student Scociety and Social Activities
- Member of the PAAU committee

Cir. Anal II | Indus. Cont | Meast Inst | Real Time Cont

September 2015 – January 2018
Associate Professor | National Institute of Applied Science and Technology , INSAT, Carthage University
- Teaching and Reserch activities
- Tenure position.
- ENIS, Sfax,Control and Energy Management Laboratory

Mechat sys model | Data Acqui | Contl Inter | Disc Sys. and Desi | Contl and diag

spetember 2014 – September 2008
Assistant Professor | National Institute of Applied Science and Technology , INSAT, Carthage University
- Teaching and Reserch activities
- Tenure position.
- ENIS, Sfax,Control and Energy Management Laboratory

Int.Embedded Sys | Eng Sys Anal | Data Acqui | Robotics | Elec Circuit I

October 2008 – September 2009
Visiting Professor, Universitat de les Illes Balears, Palma (Illes Balears), Spain
Control design specialist for formation control of a group of underwater vehicles
Control architecture integrating distributed sensing, realtime image processing and autonomous, fault-tolerant navigation techniques. The cooperation of the underwater vehicles was essential to achieve maximum functionality, autonomy whilst keeping the operational overhead at a minimum..
- Path following control design
- Cooperative path following desing
- Fault-tolerant navigation diagnosis and control design

Path following | Coop. path. foll. des | Fault tolerant analysis

July 2009 – August 2010
Post-doctoral fellow, Ecole de Technologie Supérieure ETS,University of Quebec, Canada
Control desing specialist for Cooperative path following control of nonholonomic mobile robots
Swarms of Homogeneous Autonomous mobile Vehicles: formation control maintenance of mobile robots

Robust control of mobile robots | Cooperative control | Coordination control

July 2011 – September 2011
Visiting Professor, Ecole de Technologie Supérieure ETS,University of Quebec, Canada
Control desing specialist for Advanced Control for the 3D motion of Quadrotor type UAV
Controlling the UAV in a restriceted space with constraints at the inputs/outpus.

Robust control of mobile robots | Barrier Functions | Supertwisting algorithim

Jully 2012 – Spetember 2012
Visiting Professor, Ecole de Technologie Supérieure ETS,University of Quebec, Canada
Research Activities for Distributed control over a swarm of drones
Control desing of robust distributed consensus algorithm
- Design of a generalized Distributed second order nonlinear dynamics
- Applications to a fleet of drone UAV-type systems.

Robust control | RISE technique | Laplacian graph | Connected graph | Cooperative control | Formation pattern

Jully 2013 – September 2013
Visiting Professor, Ecole de Technologie Supérieure ETS,University of Quebec, Canada
Research Activities for On the cooperative control of heterogenious Autonomous Vehicles: Following than landing on a Mobile vehicle
- Estimate of the vehicle's velocity
- Using Camera to determine the Landing site on the Vehicle
- New maneuver technique for landing preparation
- Robust control of the quadrotor to overcome external perturbations
- Selecting mode depending on the choice of the mission, whether it is landing or cirumnavigation

Velcoity estimator | backstepping technique | Camera detection | Target vision following | Path following | Landing procedure | circumnavigation

July 2014 – September 2014 | **Visiting Professor, Ecole de Technologie Supérieure ETS,University of Quebec, Canada**

Implementation of navigation algorithm for underactuated surface vessel boat. From path following to formation of a fleet of USVs

- Path following control design wich takes into account the constraints in the inputs/outputs
- Adaptive Leader-follower approch for the formation pattern of a fleet of underactuated vehicles

Navigation | Guidance control | Leader-follower approach | tan-barrier function

Education

2008 **PhD in Computer and Control Engineering**

- The thesis is conducted in joint collaboration of the National Engineering School of Sfax, Tunisia and the University of Orléans, France
- Thesis Title : Control and Navigation of Underactuated marine vehicles.
- Advisors: Prof. Gerard Poisson, Mnif Faisal and Nabil Derbel.
- Committee: Ridha Abedelnnour, Mohamed M'Saad, Nabil Derbel, Abderraouf BenAli, Gerard Poisson, Faisal Mnif.
- Qualification : Cum Laudae.

2004 **Master of Engineering in Robotics**

- The University of Montpellier II, LIRMM.
- Thesis Title: Dynamic parameters identification of a parallel robot I4R.
- Advisor:Francoit Pierrot

2003 **BSc in Computerand Control engineering**

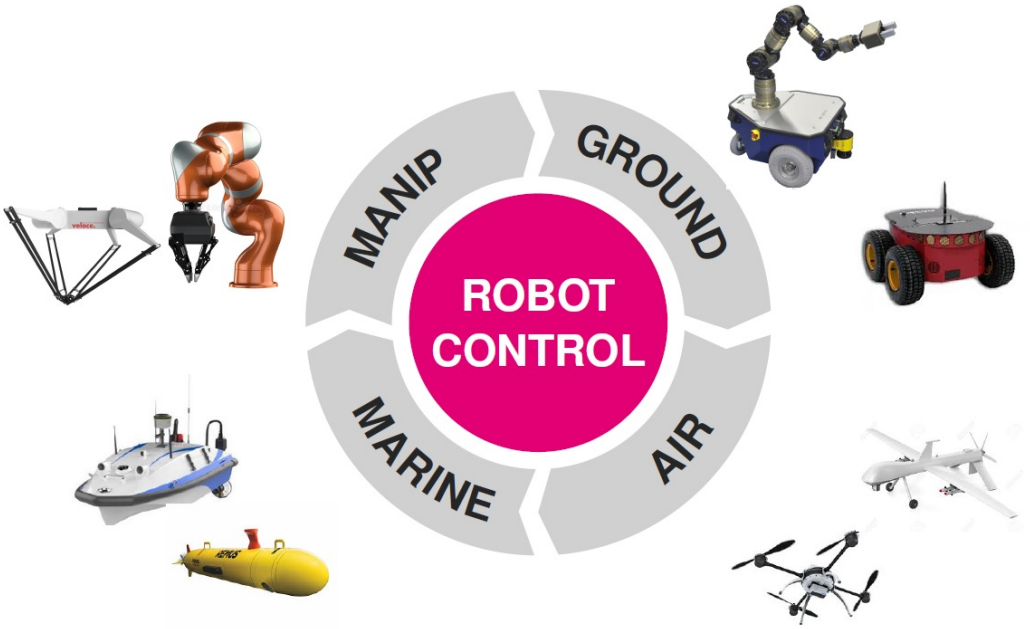
- National Institut of Applied Science and Technology.
- Departement of Physics and Instrumentations.
- Final year project : Path planning for an industrial tricycle-mobile robot

Field of Expertises

Research interest and Applications

My research interests in a broad sense are directed toward exploring fundamental motion control concepts for non-holonomic/underactuated vehi- cle systems, such as watercraft, landcraft, aircraft, and spacecraft. Cur- rent results entail controlling both fully actuated and underactuated ves- sels. Main goals include advanced features such as collision avoid-ance, formation control, and synchronization capabilities.

Robot Manipulators | Mobile Robotics | Drones | Marine Vehicles | C++ Programming | Matlab/Simulink | Python



Projects and Grants

Fullbright Research Grant 2015 - 2016

This research invests advanced control algorithm and navigation for underactuated mechanical systems. In particular, emphasis was given to Unmanned Aerial Vehicles.

Road congestion | Monitoring | Drone-type AUV | Optic flow

Collaborative proposal SQU/ INSAT June 2014 - September 20114

The key focus of this proposed research work is to do fundamental and experimental research involving a class of underactuated system like the inverted pendulum. The main objective consists in the development of predictor-based control to compensate the effect of time delay in the control input.

Inverted pendulum | Time delay | Predictive time delay compensator | Backstepping

Illes Balears-Spain, Internal Grant. 2010 - 2011

The research project has been a successful project funded by Illes Balears-Spain. The project aims at designing new cooperative controllers for the path following of a fleet of autonomous marine craft. The key concept of the cooperative controllers relies on bringing intelligence to the behavior of the agents in the group so they can manage their positions to circumvent restricted passages through narrow tunnel or avoiding obstructing objects.

Underwater vehicles | Distributed Control | Cooperative path following control | DCOP

Spain council grant 2008 - 2010

The research project has been a successful project funded by the cooperation program of the Spain council. The project generated a new control architecture integrating distributed sensing, realtime image processing and autonomous, fault-tolerant navigation techniques. The cooperation of the underwater vehicles was essential to achieve maximum functionality, autonomy whilst keeping the op erational overhead at a minimum.

Underwater vehicles | Distributed Control | Cooperative path following control

CMCU grant 2008 - 2011

The project proposes different schemes for coordination motion of a group of mechanical systems, particularly Robot manipulators in order to increase the product quality, production rate and total system cost.

Robot manipulators | Distributed Control | Synchronization | Adaptive control | Time delay compensation

Tuniso-Canadian grant 2009 - 2011

The main goal of the project was to achieve a first level of distributed ”intelligence” through dependable embedded systems that are interconnected and cooperate towards the coordinated execution of tasks. In this research project we examined the potential for multiple robot to accomplish certain tasks more quickly and robustly than single robots. As a result, the team of mobile robots cooperated in challenging scenarios in the execution of missions where all data were processed online. In doing so, the team was robust with respect to failures and environmental changes. The key features were being tested in real world scenarios.

Multiple mobile robot | Cooperative Control | Robust adaptive control | Time delay compensation

Students's supervision & commitees participation

Psotdoctoral students

2015 - 20116

1. Sanjoy Mondal: 'Homogeneous finite-time consensus control for higher-order multi-agent systems', ETS Fellowship program, Dec 2015 (1 year), ETS, GREPCI, Montreal, Canada.

PhD students

1. Mehran Rahmani:'Fractional control of 7-DoF Upper Limb Exoskeleton Robot', *Supervisor: Mohammad Habibur Rahman, University of Wisconsin-Milwaukee, USA. Co-Supervisor: Jawhar Ghommam, University of Sultan Qaboos, Oman*, Started 2018 .
2. Kawther Osman:'Road Following Control and Automatic Lane Keep- ing for Automated Guided Vehicles,', *Supervisor: Jawhar Ghommam, University of Sultan Qaboos, Oman*, On going.
3. Rihab Jredi:'Design and control of an articulated vest as an assistance tool for blind people,', *Supervisor: Jawhar Ghommam, University of Sultan Qaboos, Oman*, On going.
4. Nuradeen Fethalla, "Navigation and control of Hexarotor vehicle with fault detection", *Supervisor: Maarouf Saad, GREPCI-Groupe de recherche en Electronique de puissance et commande industrielle ,ETS-Canada.. Co-Supervisor: Jawhar Ghommam, University of Sultan Qaboos, Oman*, On going.
5. Walid Alqaisi, 'Smart UAV Quadrotor Path Detection and Control System', *Supervisor: Maarouf Saad, GREPCI-Groupe de recherche en Electronique de puissance et commande industrielle ,ETS-Canada.. Co-Supervisor: Jawhar Ghommam, University of Sultan Qaboos, Oman*, On going.
6. Yosra Rkhissi, 'Robust control design and diagnosis for induction motor drives',*Supervisor: Jawhar Ghommam, University of Sultan Qaboos, Oman*, Defended, 2018.
7. Manel Taktak, 'Neural network robust control of Hard drive discs', *Supervisor: Jawhar Ghommam, University of Carthage, INSAT, Tunisia*, Defended, 2014.
8. Yassine Bouterra, 'Synchronization Control of multiple manipulators agent systems', *Supervisor: Jawhar Ghommam, University of Carthage, INSAT, Tunisia*, Defended, 2011.
9. Hasan Mehrjerdi, 'Motion coordination of a team of mobile robots', *Supervisor: Maarouf Saad, GREPCI-Groupe de recherche en Electronique de puissance et commande industrielle ,ETS-Canada.. Co-Supervisor: Jawhar Ghommam, University of Carthage, INSAT, Tunisia*, Defended, 2010.

Master students

1. Asma Ben Mansour:'MPC-based synchronization control of multiple Lagrangian systems', *Supervisor: Jawhar Ghommam, University of Carthage, INSAT, Tunisia*, Defended, June 2011.
2. Manel Taktak:'Manoeuvring control of a second order Nomoto ship through a modified line of sight (LOS)', *Supervisor: Jawhar Ghommam, University of Carthage, INSAT, Tunisia*, Defended, June 2009.
3. Abdessatar Feki:'On the Localization of an experimental marine craft', *Supervisor: Jawhar Ghommam, University of Carthage, INSAT, Tunisia*, Defended, June 2007

Jury member in doctoral and habilitation committes

- Examiner:Yassine Bouteraa, 'Control and robotics for assistive and rehabilitation applications', University of Sfax, Tunisia, 2017.
- Examiner: Hanéne Mkaouar, 'Chaos synchronization for master slave piecewise linear systems', University of Carthage, INSAT, Tunisia, 2017.
- Examiner: Ines Belaid, 'Modélisation cybernétique et commande des robots anthropomorphes en vue d'une analyse quantifiée de la marche',University of Carthage, INSAT, Tunisia, 2017.
- Examiner: Haifa Souilem,'Maitrise du comportement dynamique du mouvement d'un véhicule soumis a des perturbations externes', University of Sfax, Tunisia, 2015.

Professional Activities

I am actively involved in the organization of the IEEE SSD conference organized by the university of Tunisia-Sfax of which I am a member of the scientific committees. I served as the chairman of the IEEE SSD-conference. I also serve as a referee for several journals in the area of robotics and control.

International Conferences

- General Chair Conference on Systems, Analysis & Automatic Control (SAC) '12th IEEE International Conference on Signals, Systems and Devices, Sousse, Tunisia.
- Program Chair Conference on Systems, Analysis & Automatic Control (SAC) '10th IEEE International Conference on Signals, Systems and Devices, Sousse, Tunisia.
- Program Chair Conference on Systems, Analysis & Automatic Con trol (SAC) '8th IEEE International Conference on Signals, Systems and Devices, Sousse, Tunisia.
- Program Chair Conference on Systems, Analysis & Automatic Con- trol (SAC) '7th IEEE International Conference on Signals, Systems and Devices, Jordan, Aman.
- Program Chair Conference on Systems, Analysis & Automatic Con- trol (SAC) '6th IEEE International Conference on Signals, Systems and Devices, Djerba, Tunis.
- Program Co-chair Conference on Cooperative Control, IEEE Euro- pean Control Conference, ECC'2009, Budapest, Hungary.

Referee for International Journals

- IEEE Transactions on Control Systems Technology
- IEEE Transactions on Industrial Electronics
- IEEE Transactions on Robotics and Automation
- IEEE Transactions on Ocean Engineering
- IEEE Transactions on Mechatronics
- Automatica
- IET Control Theory and Applications
- Robotics & Autonomous Systems, Elsevier
- Control Engineering Practice, Elsevier
- Oceans Engineering, Elsevier
- Communications in Nonlinear Science and Numerical Simulations, Elsevier
- Mechatronics, an International Journal, Elsevier
- Asian Journal of Control, Wiley
- International Journal of Control, Wiely
- International of Robust and nonlinear control

International collaborations

References

These persons are familiar with my professional qualifications and my character:

Professor Maarouf Saad
Dept. de génie électrique, ETS, Canada,
@ maarouf.saad@etsmtl.ca
(514)-396-8686

Professor Faisal Mnif
Dept. Electrical and Computer Engineering, SQU, Oman,
@ mnif@squ.edu.om
(968)-2414-2534

Peer-Reviewed Selected Journals

- Raouf Fareh, Mohammad Al-Shabi, Maamar Bettayeb, and Jawhar Ghommam, Robust Active Disturbance Rejection Control For Flexible Link Manipulator, Robotica, 1-18. doi:10.1017/S026357471900050X.
- Jawhar Ghommam, Lamia Iftekhar, Maarouf Saad, Adaptive Finite Time Path-Following Control of Underactuated Surface Vehicle With Collision Avoidance, J. Dyn. Sys., Meas., Control. Dec 2019, 141(12): 121008.
- Sami El-Ferik, Siddig M. Elkhider, Jawhar Ghommam , (2019), Adaptive containment control of multi-leader fleet of underwater vehicle-manipulator autonomous systems carrying a load, International Journal of Systems Science, 50:8, 1501-1516.
- Mehran Rahmani, Mohamed H. Rahman, Jawhar Ghommam . Int. J. Control Autom. Syst. (2019) 17: 986. https://doi.org/10.1007/s12555-018-0410-5.
- Kawther Osman, Jawhar Ghommam , Hasan Mehrjerdi, Maarouf Saad: Vision-based curved lane keeping control for intelligent vehicle highway system, Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering, https://doi.org/10.1177/0959651818810621
- Nuradeen Fethalla, Maarouf Saad, Hannah Michalska, Jawhar Ghommam : Robust Observer-Based Dynamic Sliding Mode Controller for a Quadrotor UAV. IEEE Access 6: 45846-45859 (2018)
- Yassine Bouteraa, Ismail Ben Abdallah, Jawhar Ghommam : Task-space region-reaching control for medical robot manipulator. Computers & Electrical Engineering 67: 629-645 (2018)
- Yosra Rkhissi-Kammoun, Jawhar Ghommam , Moussa Boukhnifer, Faisal Mnif: Two current sensor fault detection and isolation schemes for induction motor drives using algebraic estimation approach. Mathematics and Computers in Simulation, 0378-4754 (2018).
- Jawhar Ghommam , Ahmed Chemori, Faisal Mnif: Adaptive RBFNN finite-time control of normal forms for underactuated mechanical systems, Nonlonlinear Dynamics, 91(2), 1413-1413, (2018)
- Jawhar Ghommam , Sami El-Ferik, Maarouf Saad: Robust adaptive path-following control of underactuated marine vessel with off-track error constraint. Int. J. Systems Science 49(7): 1540-1558 (2018)
- Sanjoy Mondal, Jawhar Ghommam , Maarouf Saad: Homogeneous Finite-Time Consensus Control for Higher-Order Multi-Agent Systems by Full Order Sliding Mode. J. Systems Science & Complexity 31(5): 1186-1205 (2018)
- Jawhar Ghommam , Maarouf Saad: Adaptive Leader-Follower Formation Control of Underactuated Surface Vessels Under Asymmetric Range and Bearing Constraints. IEEE Trans. Vehicular Technology 67(2): 852-865 (2018)
- Jawhar Ghommam , Maarouf Saad: Autonomous Landing of a Quadrotor on a Moving Platform. IEEE Trans. Aerospace and Electronic Systems 53(3): 1504-1519 (2017)
- Abdelkrim Brahmi, Maarouf Saad, Guy Gauthier, Wen-Hong Zhu, Jawhar Ghommam : Adaptive control of multiple mobile manipulators transporting a rigid object, International Journal of Control, Automation and Systems 15 (4), 1779-1789, (2017)
- Yosra Rkhissi-Kammoun, Jawhar Ghommam , Moussa Boukhnifer, Faisal Mnif: RISE-backstepping-based robust control design for induction motor drives. COMPEL-The international journal for computation and mathematics in electrical and electronic engineering, 36(4), 906-937, (2017)
- Jawhar Ghommam , Faisal Mnif: Predictor-based control for an inverted pendulum subject to networked time delay, ISA transactions 67, 306-316, (2017).
- Jawhar Ghommam , Luis F. Luque-Vega, Bernardino Castillo-Toledo, Maarouf Saad: Three-dimensional distributed tracking control for multiple quadrotor helicopters. J. Franklin Institute 353(10): 2344-2372 (2016)
- Jawhar Ghommam , Maarouf Saad: Backstepping-based cooperative and adaptive tracking control design for a group of underactuated AUVs in horizontal plan. Int. J. Control 87(5): 1076-1093 (2014)
- Jawhar Ghommam , Magdi S. Mahmoud, Maarouf Saad: Robust cooperative control for a group of mobile robots with quantized information exchange. J. Franklin Institute 350(8): 2291-2321 (2013)
- Jawhar Ghommam , Faïçal Mnif, Oscar Calvo: Formation control of multiple marine vehicles with velocity reference estimation-based passivity-control design. IJMIC 15(2): 97-107 (2012)
- Jawhar Ghommam , Hasan Mehrjerdi, Faïçal Mnif, Maarouf Saad: Cascade design for formation control of nonholonomic systems in chained form. J. Franklin Institute 348(6): 973-998 (2011)
- Jawhar Ghommam , Hasan Mehrjerdi, Maarouf Saad, Faïçal Mnif: Formation path following control of unicycle-type mobile robots. Robotics and Autonomous Systems 58(5): 727-736 (2010)

Book chapters

- Jawhar Ghommam , Luis F. Luque-Vega, and Maarouf Saad: Backstepping-Based Nonlinear RISE Feedback Control for an Underactuated Quadrotor UAVWithout Linear Velocity Measurements, in New Developments and Advances in Robot Control, Springer (2018).
- Jawhar Ghommam , A. Chemori, F. Mnif, "Finite time stabilization of underactuacted mechanical systems in the presence of uncertainties: Application to the cart pole inverted pendulum", in Inverted Pendulum: From Theory to New Innovations in Control and Robotics, IET, ISBN: 978-1-78561-320-3, 2017.
- Jawhar Ghommam , Faisal Mnif:Robust Adaptive Manoeuvering Control of an Autonomous Surface Vessel in the Presence of Ocean Currents and Parametric Model Uncertainty, in Applications of Sliding Mode Control, Studies in Systems, Decision and Control book series (SSDC, volume 79), Springer, ISBN 978-981-10-2373-6, (2017).

- W Alqaisi, B Brahmi, Jawhar Ghommam , M Saad, V Nerguizian,"Multivariable super-twisting control in a vision-based quadrotor utilized in agricultural application", In Proc. IEEE International Conference (CIVEMSA), 1-6, (2018)

List of Selected Publications

- W Alqaisi, B Brahmi, Jawhar Ghommam , M Saad, V Nerguizian,"Multivariable super-twisting control in a vision-based quadrotor utilized in agricultural application", In Proc. IEEE International Conference (CIVEMSA), 1-6, (2018)

- Yosra Rkhissi-Kammoun, Jawhar Ghommam , Moussa Boukhnifer, Faisal Mnif,"Current sensor fault-tolerant control scheme for induction machine in electric vehicle applications using RISE-algebraic estimation approach", In Proc. IEEE International Conference on Industrial Technology (ICIT), 358-363, (2018).
- N Fethalla, M Saad, H Michalska, Jawhar Ghommam ,"Robust tracking control for a quadrotor UAV", In Proc. 25th Mediterranean Conference on Control and Automation (MED), 1269-1274, (2017).
- K Osman, Jawhar Ghommam , M Saad, "Vision based lane reference detection and tracking control of an automated guided vehicle", In Proc. 25th Mediterranean Conference on Control and Automation (MED), 595-600, (2017).
- Manel taktak, Ahmed Chemori, Jawhar Ghommam & Nabil Derbel, "A Prediction-Based Optimal Gain Selection in RISE Feedback Control for Hard Disk Drive", to appear in the Proc. 2014 IEEE Multi-conference on Systems and Control.
- A. Chabir, M. Boukhnifer, Y. Bouterraa & Jawhar Ghommam , "Fixed Order Robust H_∞ Controller for 3-DOF Helicopter", In Proc of the 11th Int. conf. on Modeling and Simulation of electric Machines, Converters and Systems, Valencia, Spain (2014).
- M. T. Meziou, A. Chemori, Jawhar Ghommam , & N. Derbel, "RISE Feedback Control for a R/W Head Track Following in Hard Disc Drives", In Proc of the 12th Int. Multi-conf on Systems, Signals and Devices (SSD),Castelldefels-Barcelona : Spain (2014).
- M. T. Meziou, A. Chemori, Jawhar Ghommam , & N. Derbel, "Model Predictive Tracking Control for a Head-Positioning in a Hard-Disk-Drive", In Proc of the 21st Mediterranean Conference on Control and Automation, 25-28 June 2013, Greece.
- M. T. Meziou, Jawhar Ghommam , & N. Derbel, "Track following problem of a VCM actuator servo system for hard disc drives using predictive control", In Proc. of the 9th Int. Multi-conf on Systems, Signals and Devices (SSD), pp. 1–7, 22–23 March 2012. Germany.
- H. Mehrjerdi & M.Saad, Jawhar Ghommam , "Multi mobile robots formation in presence of obstacles", IEEE International Conference on Mechatronics (ICM), pp. 510–515, 13-15 April 2011, USA.
- M. Taktak, Jawhar Ghommam , & N. Derbel, "Adaptive Backstepping Neural Network approach to ship course control", In Proc. of the 8th Int. Multi-conf on Systems, Signals and Devices (SSD), pp. 1–6, 22–25 March 2011. Tunisia.
- Y. Bouterra, G. Poisson,Jawhar Ghommam & N. Derbel, "On the trajectory tracking and coordination of multi-robot systems with communication delay", In Proc. of the 8th Int. Multi-conf on Systems, Signals and Devices (SSD), pp. 1–6, 22–25 March 2011. Tunisia.
- Jawhar Ghommam , H. Mehrjerdi & M.Saad, "Leader-Follower Based Formation Control of Nonholonomic Robots Using the Virtual Vehicle Approach", In proc of IEEE International Conference on Mechatronics, 13-15 April, 2011, Istanbul, Turkey.
- Y. Bouterra, Jawhar Ghommam & G. Poisson, "Distributed backstepping control for synchronization of networked class of underactuated systems: A passivity approach", in Proc. of the 19th Med. conference on Control & Automation (MED), pp. 7–12, 20-23 june 2011, Greece
- Y. Bouterra, Jawhar Ghommam & G. Poisson, "Adaptive Synchronization Control of Multi-Robot Teams: Cooperative and Coordinated Schemes", In. Proc. of the 18th Mediterranean Conference on Control and Automation, 23-25, 2010, Marrakech, Morocco.
- Y. Bouterra & Jawhar Ghommam , "Mutual and external synchronization control of multi-robot systems", In. Proc. of the 7th Internatioanl multi-conference on system, signal & devices, SSD'10, 28–30, 2010, Jordan.
- M. Taktak, Jawhar Ghommam , & N. Derbel, "Robust adaptive path following for a nonlinear third order Nomoto's ship model", In. Proc. of the 7th Internatioanl multi-conference on system, signal & devices, SSD'10, 28–30, 2010, Jordan.
- Jawhar Ghommam , M.Saad, & F. Mnif, "Robust Adaptive Formation Control of Fully Actuated Ocean Vessels Using Local Potential Functions", In. Proc. of the IEEE International Conference on Robotics and Automation, May 3-8, 2010, Anchorage, Alaska, USA.
- H. Mehrjerdi, M.Saad, Jawhar Ghommam , A.Zerigui, "Cooperation Control for a Team of Mobile Robots Based on Fuzzy Logic," IEEE/ASME International Conference on Advanced Intelligent Mechatronics, July 6–9, 2010 Montreal, Canada.
- H. Mehrjerdi, M.Saad, Jawhar Ghommam ,"Formation and path following for multiple mobile robots," IEEE International Symposium on Industrial Electronics 4–7 July, 2010, Bari, Italy.

- H. Mehrjerdi, M.Saad, Jawhar Ghommam "Fuzzy Crash Avoidance and Coordination between Mobile Robots," 18th Mediterranean Conference on Control and Automation , pp. 592–597, 2010, Marrakech, Morocco.
- Jawhar Ghommam , F. Mnif & O. Calvo, "Formation Control of Multiple Marine Vehicles Based Passivity-Control Design", In. Proc. of the 6th IEEE conference on SSD'09, Mars, 2009, Djerba, Tunisia .
- Jawhar Ghommam & M. Saad, "Coordinated 3D path following control for a team of UAVs with reference velocity recovery", In. Proc of the European Control Conference, August 23–26, 2009, Budapest, Hungary.
- Jawhar Ghommam , O. Calvo, & A. Rozenfeld ,"Synchronization path following control of multiple underactuated marine crafts", in Proc. IEEE/MTS Ocean 2008, Quebec, Canada.

Jawhar Ghommam , O.Calvo, & A. Rozenfeld, "Coordinated path following for multiple underactuated AUVs", in Proc. IEEE/MTS Ocean 2008, Kope, Japan.

- Jawhar Ghommam , M.Saad, F.Mnif "Formation path following control of unicycle-type mobile robots", in Proc. Of the IEEE International Conference on Robotics and Automation, ICRA'08, May 2008, USA.
- Jawhar Ghommam , F. Mnif, & N. Derbel, "Backstepping Technique for tracking control of an underactuated surface vessel with unmeasured thruster dynamic". in Proc. IFAC World Congress 2008, Seoul, South Korea.
- Jawhar Ghommam & G. Poisson, "Motion coordination control of multiple marine crafts", in Proc. of the IEEE International Workshop on Advanced Motion Control, Trento (Italy), March, 2008.
- Jawhar Ghommam , F.Mnif, A.Benal & G.Poisson, "Observer design for Euler Lagrange system: Application to path following control of an underactuated surface vessel", in Proceeding, IEEE/RSJ International conference on intelligent robots and systems, IROS'07, October 2007, USA.
- Jawhar Ghommam , F.Mnif, A.Benali & G.Poisson, "Guidance based path following control for an underactuated ship", in Proceedings of IEEE International Multi-Conference on Systems, Signals & Devices. 2007, Hammamet, Tunisia.
- Jawhar Ghommam , F.Mnif & N.Derbel, "Robust path following control of underactuated ship", in Proceedings of IEEE International Multi-Conference on Systems, Signals & Devices. 2007, Hammamet, Tunisia.

Jawhar Ghommam , F.Mnif & N.Derbel, "Formation Control based Path Following: Application to a Double Integrator", in Proceedings of IEEE International Multi-Conference on Systems, Signals & Devices. 2007, Hammamet, Tunisia.

- Jawhar Ghommam , F.Mnif, N.Derbel, G.Poisson & A.BenAli, "Backstepping Technique for the tracking control of an underactuated surface vessel", in Proceedings of the 7th International Conference on Marine Control of Marine Craft, IFAC 2006, Lisbon, Portugal.
- Jawhar Ghommam , A.Benali & G.Poisson, "Stabilisation par la méthode du backstepping d'un navire sous-actionné", in Proceedings of the Conférence Internationale Francophone d'Automatique CIFA 2006, Bordeaux, France.
- Jawhar Ghommem , F. Mnif, & N.Derbel, "Path following for underactuated marine craft using Line Of Sight algorithm", in the proceeding of the International Conference on Machine Intelligence, Touzer-Tunisia, November 5-7, 2005.
- Jawhar Ghommam , F. Mnif, A.Benali & N.Derbel, "Asymptotic Backstepping Stabilization of an Underactuated Surface Vessel", in the proceedings of IEEE International Multi-Conference on Systems, Signals & Devices. 2005, Sousse, Tunisia.
- F.Mnif, Jawhar Ghommem "Stabilization for a class of underactuated mechanical systems", IEEE SMC'2002.

Text Books