

Fatma Abdelhedi**Assistant Professor**, Department of Electrical and Computer Engineering, King Abdulaziz University**Education**

| <i>Degree</i> | <i>Field of Study</i> | <i>Institution</i> | <i>Year</i> |
|---------------|------------------------|-------------------------------------|-------------|
| PhD | Electrical Engineering | National Engineering School of Sfax | 2016 |
| MS | Electrical Engineering | National Engineering School of Sfax | 2012 |
| BS | Electrical Engineering | National Engineering School of Sfax | 2011 |

Academic Experience

| <i>From To</i> | <i>Institution</i> | <i>Rank</i> | <i>Title</i> | <i>Full or Part Time</i> |
|----------------|--------------------|-------------|--------------|--------------------------|
| 2018–2019 | KAU | Lecturer | Doctor | Full Time |
| 2016-2018 | ISGIS, Tunisia. | Lecturer | Doctor | Full Time |
| 2014-2016 | ISGIS, Tunisia. | T.A. | Engineer | Part time |

Non-Academic Experience (*Including Consultations*)**Co-supervision of PhD students****2014 – 2017:** National Engineering School of Sfax, Tunisia.1st subject: Control and synchronization of surveillance camera systems. This dissertation topic led by Prof. Nabil Derbel was completed in December **2018**.**2013 – 2016:** National Engineering School of Sfax, Tunisia.2nd subject: Control and synchronization of medical robotic systems for teleechography in the presence of communication delays. This dissertation topic was completed in October **2016**.***Funded Research Projects and Patents From The Last Five Years***

Socio-economic Post-doctoral Project (Mobidoc), in the field of robotics. A scientific cooperation has been created with the Maghrebien Equipments technology company (Met), Tunisia.

Certifications and Professional Registrations

- “Problem Based Learning” Tutor Training Workshop: King Abdulaziz University, Jeddah, Saudi Arabia.
- ABET IDEAL Certificate.

Institutional and Professional Services

- Member of the organizing committee of the IEEE international conference: Systems, Signals and Devices SSD’2013, SSD’2015 and SSD’2018.
- Member of scientific committees (reviewer) in:

- The 11th and 13th IEEE International Conference on Systems, Signals and Devices: SSD'2014 et SSD'2016.
- The 54th and 55th IEEE International Conference on Decision and Control: CDC'2015 and CDC'2016.
- The 57th and 59th International American Control Conferences: ACC'2016 and ACC'2018.
- The Asian Journal of Control.

Principal Publications/Presentations from the Past Five Years

[P1]F. Abdelhedi, A. Jribi, Y. Bouteraa and N. Derbel, Adaptive Sliding Mode Control of a SCARA robot Manipulator system under parametric variations, Journal of Engineering Science and Technology Review (JESTR), December, **2015**.

[P2]F. Abdelhedi and N. Derbel, Adaptive Second order sliding mode control based cross coupling concept for synchronization of robotic systems, accepted in Advances in Systems, Signals and Devices (ASSD), July, **2016**.

[P3]F. Abdelhedi and N. Derbel, Adaptive Second Order Sliding Mode Control Under Parametric Uncertainties: Application to a Robotic System, accepted in the International Journal of Modeling, Identification and Control (IJMIC), April, **2016**.

[P4] A. Jribi, F. Abdelhedi, Y. Bouteraa and N. Derbel, Second order sliding mode control of a 5DOF serial robot for tele-echography, accepted in Advances in Systems, Signals and Devices (ASSD), July, **2016**.

[P5] A. Jribi, F. Abdelhedi and N. Derbel, Third order sliding mode control of a medical robot for tele-echography, accepted in the International Journal of Digital Signals and Smart Systems (IJDSS), July, **2016**.

[P6]F. Abdelhedi and N. Derbel, A delay-dependent distributed SMC for stabilization of a networked robotic system exposed to external disturbances, accepted in the Advances in Science, Technology and Engineering Systems Journal (ASTES), Mars, **2017**.

[P7] M. Fathallah F. Abdelhedi, and N. Derbel, A synchronizing second order sliding mode control applied to decentralized time delayed multi-agent robotic systems:Stability Proof, accepted in the Advances in Science, Technology and Engineering Systems Journal (ASTESJ), April, **2017**.

[P8]F. Abdelhedi and N. Derbel, On the Renovation and Analysis of High Order Sliding Mode Approaches with Application to Robotic Systems, accepted in the International Journal of Modeling, Identification and Control (IJMIC), **2018**.

Scientific Book chapters

[CH1]F. Abdelhedi, Y. Bouteraa and N. Derbel, Second order sliding mode based synchronization control for cooperative robot manipulators, Accepted in Springer book: Advances and Applications in Sliding Mode Control Systems: Studies in Computational Intelligence (SCI) , October, **2015**.

[CH2] A. Jribi, F. Abdelhedi, Y. Bouteraa and N. Derbel, Kinematics and comparison of two control strategies for a 5DOF serial robot for a tele-echography system, accepted in Springer book: Applications of Sliding Mode Control, May, **2016**.

[CH3] A.S. Nouri, F. Abdelhedi and N. Derbel, On the sliding control, accepted in Springer book: Applications of Sliding Mode Control, May, **2016**.

[CH4] M. Fathallah, F. Abdelhedi and N. Derbel, Analysis of measurement noise: Application to a 3 DOF robot manipulator surveillance camera based on second order sliding mode control, accepted in Springer SCI book: Applications of Sliding Mode Control in Science and Engineering, May, **2016**.