Curriculum Vitae (CV)

- **Personal Information:**

- **Name:** Dr. Mohammad Al-Sammak
- **E-mail:** MhdAlsammak@au.edu.sy
  MhdAlsammak@gmail.com
- **Mobile:** (+963) 966600066
  (+963) 999862142
- **Website**: Homepage | Google Scholar Profile

- **Languages:** English, Arabic

- **Education and Academic Background:**

  - Ph.D. in Technical Engineering, Industrial Automation specialization, Tartus University, Syria (2024)
    (Thesis: "Design and Implementation of an Autonomous Robotic Vehicle Capable of Obstacle Avoidance and Optimal Path Navigation")
  - Master's Degree in Technical Engineering, Industrial Automation specialization, Tishreen University, Syria (2016)
    (Thesis: "Design of a Sensorless Vector Control System for Speed and Torque Control of a Three-Phase Squirrel-Cage Induction Motor")
  - Bachelor's Degree in Industrial Automation Engineering, Tishreen University, Syria (2009)

- **Principal Positions:**

- Faculty Member in Biomedical Engineering at Al-Andalus University for Medical Sciences -AU (2024 - Now)
- Lecturer and Researcher (Ph.D. Phase), University: Tartus University, October 2019 – June 2024

  Responsibilities:
  - Taught advanced courses in Industrial Automation, Robotics, and Intelligent Control Systems.
  - Supervised graduation projects for bachelor's and master's students.
  - Prepared and presented scientific research at international and local conferences.
  - Developed new curricula to meet labor market demands.
- Research Assistant (Master's Phase), University: Tishreen University, June 2012 – October 2019

  Responsibilities:
  - Taught courses in Mechatronics, Control Systems, and Industrial Automation.
  - Supervised bachelor’s graduation projects.
  - Published 3 papers in peer-reviewed journals.
  - Participated in workshops and training courses to enhance teaching skills.

- **Publications and Scientific Work:**

- **Publications**

  - Ph. D. thesis, Design and implementation of Autonomous Robotic Vehicle capable of obstacles avoiding and choosing the optimal path for mobility, Industrial Automation Engineering Faculty, Tishreen University, Tartus, Syria, 2024.
  - Design and Implementation of an Autonomous Robotic Vehicle Capable of Avoiding Obstacles and Choosing the Shortest Path in Navigation, Tartous University Journal for Research and Scientific Studies, Tartus, SYRIA,2023.
  - Motion performance evaluation of Mecanum wheeled robots without PID controllers in control loops, Tartous University Journal for Research and Scientific Studies, Tartus, SYRIA, 2023.
  - A Novel Topology for a Single Phase HyperLevel Inverter using a Single DC Power Source, International Research Journal of Engineering and Technology (IRJET), 2018, 2395-0056, 2395-0072.
  - Maintaining a Constant Charging Duration Independent of Battery Capacity for Battery Pack by Designing a Fast DC Charger, International Journal of Energy Optimization and Engineering (IJEOE), 2018, 240218-023831.
  - Master thesis, Design sensorless vector control system to control torque and speed of three-phase squirrel-cage induction motor, Industrial Automation Engineering Faculty, Tishreen University, Tartus, Syria, 2016.
  - Development electrical drive Vector control system for three phase induction motor Crane Wire, according to the principle indirect rotor field orientation, Tishreen University Journal for Research and Scientific Studies, Lattakia, SYRIA, 2016, 2079-3081.

- **Conferences**

  - Research and applications of engineering in the service of reconstruction, Tartus University, 2024.
  - The Artificial Intelligence and Digital Transformation Conference, Wadi International University, 2024.
  - Renewable energies and reconstruction, Tartus University, 2018.

- **Vision:**

I aspire to become an academic leader in smart automation, digital transformation, and medical applications by:

1- Developing an integrated educational and research system combining automation with modern medical technologies.
2- Leading innovative research programs in medical robotics and smart diagnostic/therapeutic systems.
3- Building strategic partnerships between academic, medical, and industrial sectors.
4- Designing applied curricula addressing Fourth Industrial Revolution requirements in healthcare.
5- Developing smart technological solutions to advance the regional health and industrial sectors.

سـيرة ذاتيـة (CV)

- **المعلومـات الشـخصية:**
  - الاسـم: الدكتور محمد فؤاد السّماك
  - البـريد الالكتـروني: MhdAlsammak@au.edu.sy
    MhdAlsammak@gmail.com
  - الهـاتف المحمـول: (+963) 966600066
    (+963) 999862142
  - المـوقع الإلكـتروني: Google Scholar Profile | Homepage
  - اللغـات: الإنجليزية، العربية.

- **المؤهلات والشهادات العلمية:**
  - دكتوراه في الهندسة التقنية، تخصص الأتمتة الصناعية (جامعة طرطوس، سوريا، 2024).
  - ماجستير في الهندسة التقنية، تخصص الأتمتة الصناعية (جامعة تشرين، سوريا، 2016).
  - بكالوريوس في هندسة الأتمتة الصناعية (جامعة تشرين، سوريا، 2009).

- **المناصب الرئيسة:**
  - **عضو هيئة تدريس في جامعة الأندلس الخاصة للعلوم الطبية (AU)، الهندسة الطبية الحيوية، 2024- حتى الآن.**
  - **محاضر وباحث (مرحلة الدكتوراه)، جامعة طرطوس، أكتوبر 2019 – يونيو 2024**

    المهام والمسؤوليات:
    - تدريس مقررات متقدمة في الأتمتة الصناعية، الروبوتات، وأنظمة التحكم الذكية.
    - الإشراف على مشاريع تخرج لطلبة البكالوريوس والماجستير.
    - إعداد وتقديم أبحاث علمية في مؤتمرات دولية ومحلية.
    - تطوير مناهج دراسية جديدة لتلبية احتياجات سوق العمل.

  - **مساعد باحث (مرحلة الماجستير)، جامعة تشرين، يونيو 2012 – أكتوبر 2019**

    المهام والمسؤوليات:
    - تدريس مقررات في الميكاترونكس، أنظمة التحكم، والأتمتة الصناعية.
    - الإشراف على مشاريع تخرج لطلبة البكالوريوس.
    - نشر أبحاث في مجلات علمية محكمة.
    - المشاركة في ورش عمل ودورات تدريبية لتحسين المهارات التعليمية.

- **النّشـــر والأعمال العلميّـة:**

- النّشـــــــــــر:

- Ph. D. thesis, Design and implementation of Autonomous Robotic Vehicle capable of obstacles avoiding and choosing the optimal path for mobility, Industrial Automation Engineering Faculty, Tishreen University, Tartus, Syria, 2024.
- Design and Implementation of an Autonomous Robotic Vehicle Capable of Avoiding Obstacles and Choosing the Shortest Path in Navigation, Tartous University Journal for Research and Scientific Studies, Tartus, SYRIA,2023.
- Motion performance evaluation of Mecanum wheeled robots without PID controllers in control loops, Tartous University Journal for Research and Scientific Studies, Tartus, SYRIA, 2023.
- A Novel Topology for a Single Phase HyperLevel Inverter using a Single DC Power Source, International Research Journal of Engineering and Technology (IRJET), 2018, 2395-0056, 2395-0072.
- Maintaining a Constant Charging Duration Independent of Battery Capacity for Battery Pack by Designing a Fast DC Charger, International Journal of Energy Optimization and Engineering (IJEOE), 2018, 240218-023831.
- Master thesis, Design sensorless vector control system to control torque and speed of three-phase squirrel-cage induction motor, Industrial Automation Engineering Faculty, Tishreen University, Tartus, Syria, 2016.
- Development electrical drive Vector control system for three phase induction motor Crane Wire, according to the principle indirect rotor field orientation, Tishreen University Journal for Research and Scientific Studies, Lattakia, SYRIA, 2016, 2079-3081.

- المؤتمرات

- Research and applications of engineering in the service of reconstruction, Tartus University, 2024.
- The Artificial Intelligence and Digital Transformation Conference, Wadi International University, 2024.
- Renewable energies and reconstruction, Tartus University, 2018.

- **الرّؤيـــة:**

أسعى إلى أن أصبح رائدًا أكاديميًا في مجال الأتمتة الذكية والتحول الرقمي والتطبيقات الطبية، من خلال:

1- تطوير منظومة تعليمية وبحثية متكاملة تدمج بين هندسة الأتمتة والتقنيات الطبية الحديثة.

2- قيادة برامج بحثية مبتكرة في مجال الروبوتات الطبية والأنظمة الذكية للتشخيص والعلاج.

3- بناء شراكات استراتيجية بين القطاعات الأكاديمية والطبية والصناعية.

4- تصميم مناهج دراسية تطبيقية تلبي متطلبات الثورة الصناعية الرابعة في المجال الطبي.

5- تطوير حلول تكنولوجية ذكية تساهم في تطوير القطاع الصحي والصناعي في المنطقة.