

CV

Personal data	<p>Name: Mahmoud First name: Khaled Rabie Megahed Date of birth: 16.10.1970 Status: married Place of birth: El-Minia / Egypt Tel: +201009723085</p> <p>Email: k.r.mahmoud@mu.edu.eg drkm2005@gmail.com</p> 
Certificate	<p>1988– 1993 B. Sc. Mechanical Eng. Dept. - Faculty of Engineering – Minia University 30.10.1997 M. Sc. Mechanical Eng. Dept. - Faculty of Engineering – Minia University 18.07.2005 Ph. D. Mechanical Engineering, Heinz Nixdorf Institute, University of Paderborn, Germany Nov, 2005 ICDL certificate ,</p>
Job History	<p>From 15.01.1994 to 23.12.1997 Teaching assistant at the Department of Mechanical Engineering - Faculty of Engineering, Minia University From 23.12.1997 to 26.12.2005 Assistant Lecturer of Mechanical Engineering - Faculty of Engineering, Minia University From 30.11.1999 to 28.07.2005 Member of the foreign mission and doctoral student at the Department of Mechatronics and Dynamics - Heinz Nixdorf Institute, University of Paderborn - Federal Germany From 27.12.2005 until now -Assistant Professor, Department of Mechanical Engineering, Faculty of Engineering, Minia University -Assistant Professor, Department of Mechanical and Materials Engineering, University of Jeddah, Kingdom of Saudi Arabia, from 09-19-2012 to 12-30-2016 -Associate Professor, Department of Mechanical and Materials Engineering, University of Jeddah, Kingdom of Saudi Arabia, from 12-31-2016 to 01-23-2022 - Professor (scientific title) at the Department of Mechanical and Materials Engineering, University of Jeddah, Kingdom of Saudi Arabia, from Jan-2022 -Oct 2023 - 2022 to Present: Professor and Head of Automotive and Tractors Eng. Dept, Faculty of Engineering, Minia University</p>
Activities	<p>From 01.10.1994 Member of Egyptian Engineering Syndicate</p>
	<p>Professional Activities</p> <ol style="list-style-type: none"> 1. Industry Collaborations: <ul style="list-style-type: none"> ○ Collaborate with automotive companies to develop advanced vehicle systems. ○ Partner with technology firms to create innovative mechatronic solutions for industrial automation. 2. Research and Development:

- Lead R&D projects focusing on the integration of mechanical and electronic systems.
- Conduct research on the development of smart embedded systems for industrial applications.

3. Consulting:

- Offer consulting services for industries looking to implement mechatronic and embedded systems.
- Provide expert advice on optimizing electronic control systems in various applications.

Academic Activities

1. Curriculum Development:

- Develop new courses and curriculum related to robotics, mechatronics, and embedded systems.
- Create hands-on lab modules that provide practical experience with electronic and mechatronic systems.

2. Workshops and Seminars:

- Organize and conduct workshops on advanced topics in robotics and mechatronics.
- Host seminars on the latest trends and technologies in embedded systems and their applications.

3. Student Supervision:

- Supervise undergraduate and graduate student projects in the areas of electronic and mechatronic systems.
- Mentor students participating in robotics competitions and engineering expos.

Community and Outreach Activities

1. STEM Outreach Programs:

- Develop and lead outreach programs to promote STEM education among high school students.
- Conduct interactive sessions to introduce young students to the basics of robotics and mechatronics.

2. Public Speaking:

- Deliver talks and presentations at conferences, symposiums, and public forums on the impact of mechatronics and embedded systems in modern engineering.
- Engage with community groups to discuss the importance of sustainable engineering practices.

Professional Development

1. Continuing Education:

- Attending and presenting at international conferences and workshops on mechanical engineering, electronics, and mechatronics.
- Participate in professional courses and certifications to stay updated with the latest industry standards and technologies.

2. Publications:

- Publish research papers in reputed journals and conferences on topics related to mechanical systems, mechatronics, and embedded systems.
- Write articles and technical reports on the advancements and

	<p>challenges in the integration of mechanical and electronic systems.</p> <p>Organizational Activities</p> <ol style="list-style-type: none"> 1. Technical Committees: <ul style="list-style-type: none"> ○ Serve on technical committees and review boards for academic journals and conferences. ○ Contribute to the development of industry standards and guidelines for electronic and mechatronic systems. 2. Professional Societies: <ul style="list-style-type: none"> ○ Be an active member of professional societies such as IEEE, ASME, and SAE, participating in their activities and initiatives. ○ Take leadership roles in organizing local and international conferences related to mechanical and electronic engineering.
<p>Academic activities</p>	<ul style="list-style-type: none"> - 2006-2008 Principal Coordinator of the Mechatronics Engineering Program (special program with special expenses) - Faculty of Engineering, Minia University. - 2016-2018 Participation in the preparation of the master's Program in Mechatronics Engineering at the University of Jeddah (under accreditation) - 2013-2022 Member of the Quality and Accreditation Committee, Department of Mechanical and Materials Engineering
<p>Teaching Professional</p>	<p>I am teaching at the Mechanical Eng. Dept – Faculty of Engineering – Minia University for the following courses:</p> <ul style="list-style-type: none"> • Vehicle Design 1 • Fuel Injection Systems • Vehicle Design 2 • Vehicle Dynamics • Transportation Economics • Automatic Control • Theory of Machines • Engineering Drawing • Vehicle Electronic Circuits • Mechatronics Systems • Robotics
<p>Consulting Activities</p>	<ul style="list-style-type: none"> • Consultant for a lot of governmental and private companies to evaluate, design, inspect fault diagnosis, and prepare official reports: <ul style="list-style-type: none"> ○ Evaluating engineering systems and equipment for major projects. ○ Designing innovative solutions to improve performance and efficiency. ○ Inspecting faults, identifying root causes, and developing repair plans. ○ Preparing professional technical reports to document findings and recommendations.

List of Publication

1. S. M. Mostafa, A. T. A. Osman, A. A. Hassan, K. R. M. Mahmoud” parameters affecting automotive engine cooling system noise” Bulletin of the faculty of Eng., Minia University, Minia-Egypt, July 1997
2. S. M. Mostafa, A. T. A. Osman, K. R. M. Mahmoud “Energy savings in automotive cooling fan” 1st Minia Engineering International conference, Faculty of Eng., Minia University, Minia –Egypt, MICATE, March 1998
3. S. M. Mostafa, A. T. A. Osman, K. R. M. Mahmoud “Energy savings in automotive cooling radiator and grill” Bulletin of the faculty of Eng., Minia University, Minia-Egypt, Dec. 1999
4. K. R. M. Mahmoud and Joerg Wallaschek.”Adaptive duo servo drum brake with high and constant brake shoe factor” 1st international conference of investment in technology, Faculty of Eng., Minia University, Minia –Egypt, 2007
5. M. Mourad, K. R. M. Mahmoud et al “A Theoretical and Experimental Investigation into Conventional Vehicle Performance” 1st international conference of investment in technology, Faculty of Eng., Minia University, Minia –Egypt, 2007
6. M.A. Mourad and K.R.M. Mahmoud “LPG as an alternative clean burning fuel for engine” 1st international conference on environmental studies and research, Minufiya University, Egypt 07.04.2008
7. Soliman, A. M. A., Kaldas, M. M. S. and Mahmoud, K. R. M. “An Investigation of Combined Twin Accumulator Suspension and Anti-Lock Braking System for Passenger Cars” 4th international conference on advances in mechanical engineering and mechanics, ICAMEM, Tunisia, 2008
8. Soliman, A. M. A., Kaldas, M. M. S. and Mahmoud, K. R. M. “Active Suspension and Anti-lock Braking Systems for Passenger Cars” SAE, International, 2009
9. Mostafa M. Makrahy, Nouby M. Ghazaly, k. A. Abd El-Gwwad, K. R. M. Mahmoud and Ali M. Abd-El-Tawwab “Optimization of Operation Parameters on a Novel Wedge Disc Brake by Taguchi Method” American Journal of Vehicle Design, 2013, Vol. 1, No. 2, 21-24, 2013
10. Mostafa M. Makrahy, Nouby M. Ghazaly, K. A. Abd El-Gwwad, K. R. M. Mahmoud and Ali M. Abd-El-Tawwab ” A Preliminary Experimental Investigation of a New Wedge Disc Brake” Int. Journal of Engineering Research and Application, Vol. 3, Issue 6, Nov-Dec 2013, pp.01-05
11. Mostafa M. Makrahy, Nouby M. Ghazaly, K. A. Abd El-Gwwad, K. R. M. Mahmoud and Ali M. Abd-El-Tawwab “Optimization of a New Wedge Disc Brake Using Taguchi Approach” International Journal of Modern Engineering Research (IJMER), Vol. 3, Issue. 6, Nov - Dec. 2013 pp-3461-3465
12. Mostafa M. Makrahy, Nouby M. Ghazaly, K. A. Abd El-Gwwad, K. R. M. Mahmoud and Ali M. Abd-El-Tawwab “Optimization of Geometric Parameters of a New Wedge Brake Using Taguchi Approach” International Journal of Mechanical Engineering, Volume 3 Issue 11 (November 2013)
13. K. R. M. Mahmoud “Vehicle dynamic behaviours crossing cat-eye reflectors” Int. J. Vehicle Noise and Vibration, Vol. 10, No. 3, 2014
14. Nouby M. Ghazaly, Mostafa M. Makrahy, k. A. Abd El-Gwwad, K. R. M. Mahmoud and Ali M. Abd-El-Tawwab “Experimental Evaluation of an Empirical Model for Wedge Disc Brake using Box-Behnken Design” Int. J. Vehicle Structures & Systems, 6(3), 58-63, 2014
15. K.R.M. Mahmoud and M.A. Mourad “Influence of Water, Oil and Dust on the Performance of Conventional and Wedge Disc Brakes” Int. J. Vehicle Structures & Systems, 6(3), 71-75 2014
16. Nouby M. Ghazaly, Mostafa M. Makrahy, k. A. Abd El-Gwwad, K. R. M. Mahmoud and Ali M. Abd-El-Tawwab “Optimization of Geometric Parameters

- for Adaptive Wedge Brake Performance Using Central Composite Design” International Journal of Mechanical & Mechatronics Engineering IJMME-IJENS Vol:14 No:06, Dec 2014
17. Mahmoud, K.R.M. and Mourad, M. (2014) ‘Parameters affecting wedge disc brake performance,’ Int. J. Vehicle Performance, Vol. 1, Nos. 3/4, pp.254–263.
 18. N.M. Ghazaly, M.M. Makrahy , K.A.A.E. Gwwad , K.R. Mahmoud and A.M.A.E. Tawwab (2014) “Experimental Evaluation of an Empirical Model for Wedge Disc Brake using Box-Behnken Design” International Journal of Vehicle Structures & Systems, 6(3), 58-63.
 19. Mostafa M. Makrahy, K.R.M. Mahmoud, Nouby M. Ghazaly, K.A. Abd El-Gwwad and Ali M. Abd-El-Tawwab (2015) “Experimental Investigation of Water Spray and Inclination Angle Influence on Wedge Disc Braking Force” Int. J. Vehicle Structures & Systems, 7(2), 81-84
 20. Mahmoud, K.R.M., Makrahy, M.M., Abd El-Gwwad, K.A., Ghazaly, N.M. and Abd-El-Tawwab, A.M. (2016) ‘Effect of wedge inclination angle on self-amplification action of a new adaptive wedge disc brake’, Int. J. Vehicle Performance, Vol. 2, No. 2, pp.166–177.
 21. Mahmoud, K.R.M (2016) “Dynamic Analysis of a Wedge Disc Brake According to the Variations of Friction Coefficient” ATAVI, international conference on acoustics and vibration, March 21-23, Hammamet – Tunisia.
 22. Khaled R.M. Mahmoud, M. Mourad, A. Bin Mahfouz 2017 “Dynamic behaviors of a wedge disc brake” Applied Acoustics, pp 32-39
 23. M. Mourad and Khaled R. M. Mahmoud, 2018 “Performance investigation of passenger vehicle fueled by propanol/ gasoline blend according to a city driving cycle” Energy, vol. 149(c) pp. 741-749.
 24. A Bin-Mahfouz, K Mahmoud, M Mourad, 2018 “Influence of Biodiesel Inlet Temperature on the Performance of a Small DI Diesel Engine” American Journal of Science and Technology 5 (3), 42-4
 25. M Mourad, K Mahmoud “Investigation into SI engine performance characteristics and emissions fuelled with ethanol/butanol-gasoline blends” Renewable energy 143, 762-771, 2019.
 26. M Mourad, KRM Mahmoud, ESH NourEldeen “Improving diesel engine performance and emissions characteristics fuelled with biodiesel” Fuel 302, 121097, 2021
 27. Khaled R M Mahmoud. "Evaluation of the Hybrid Pneumatic Vehicles According to a Standard Driving Cycle." American Journal of Engineering Research (AJER), vol. 10(6), 2021, pp. 77-84
 28. SM Ghania, KRM Mahmoud, AM Hashmi "A Reliability Study of Renewable Energy Resources and their Integration with Utility Grids" Engineering, Technology & Applied Science Research 12 (5), 9078-9086,11-2022.