

DR. ALI MUHAMMAD RUSHDI

Professor, Department of Electrical and Computer Engineering, King Abdulaziz University

Education

Degree	Field of Study	Institution	Year
PhD	Electrical Engineering (With an extra minor in Mathematics)	University of Illinois at Urbana-Champaign (UIUC), U. S. A.	1980
MS	Electrical Engineering	University of Illinois at Urbana-Champaign (UIUC), U. S. A.	1977
BS	Electrical Engineering	Cairo University, Giza, Egypt	1974

Academic Experience

From	To	Institution	Rank	Title	Full or Part Time
		King Abdulaziz Univ.			
1980	1984		Assist Prof.		Full Time
1984	1989	King Abdulaziz Univ.	Assoc. Prof.		Full Time
1989	Date	King Abdulaziz Univ.	Professor		Full Time

Non-Academic Experience (Including Consultations)

From	To	Company/Entity	Title	Position	Full/Pt Time
1972	1972	United Austrian Iron and Steel	Trainee		Full Time
1974	1975	Egyptian Army, the Signal Corps	Officer		Full Time

Funded Research Projects and Patents From The Last Five Years

Certifications and Professional Registrations

Registered Professional Engineer in the Arab Republic of Egypt.

Current Membership in Professional Societies and Organizations

Society/Organization	Rank	Since
<i>Institute of Electrical and Electronics Engineers (IEEE)</i>	Life Senior Member	1973
<i>Syndicate of Engineering Professions in Egypt</i>	Senior Member	1974
<i>Club of Faculty Members of Cairo University</i>	Member	1974
<i>Club of Employees of King Abdulaziz University</i>	Member	1980
<i>Egyptian Engineers Association (EEA), Riyadh</i>	Consultant	2009
<i>National Centre for Assessment in Higher Education , KSA</i>		

Honors and Awards

1. Top position in the 1974 class of the College of Engineering of Cairo University (rank = **1 / 1135**)
2. Initiated member of the Honorary Societies of *Eta Kappa Nu* and *Phi kappa Phi*.
3. Member of the Editorial Boards of the *IEEE Transactions on Instrumentation and Measurements* (1986-1994), the *IEEE Transactions on Reliability* (1983-1998), and *Journal of King Abdulaziz University: Engineering Sciences* (2009-now), *International Magazine on Advances in Computer Science and Telecommunications* (2009-2014), *International Journal of Mathematical, Engineering and Management Sciences (IJMEMS)* (2017-now), and Member of the Advisory Board of the *Journal of Qassim University: Engineering and Computer Sciences* (2008-now).
4. Praised by the official ABET report of 2003 as a **capable and dedicated individual** while referring to his role as a director of the Computer Engineering Program.
5. His proposal for a Scientific Chair on "Reverse Engineering" won the **RACI Best Proposal Award** in the track of basic, engineering, and technical sciences in March 2008, and one of his papers won the **Best Paper Award** of the First Conference of the Egyptian Engineers Association (EEA), held in Riyadh in May 2009.
6. Included in the 10th Anniversary Edition of **Marquis Who's Who in Science and Engineering**, published in December 2007.

Institutional and Professional Services

- Reviewer, referee, or examiner for many papers, reports, books, programs, master or Ph.D. theses, proposals, and promotion or sabbatical-leave requests for several local and international entities.
- Member or past member of several committees at the Faculty of Engineering level including: the Library Committee, the Educational Technology Committee, the Graduate Studies

Committee and the Faculty Catalogue Committee.

- Member or past member of several committees at the department level including: the Executive Committee, the Graduate Studies Committee and the ABET (Accreditation Board for Engineering and Technology) Committee. He was the **ABET champion** of the Computer Engineering Program, and was instrumental in achieving ABET Substantial Equivalency Recognition for the four programs of the ECE Department in 2003.
- Member of the Panel of External Reviewers for the Merit Scholarship Program of the **Islamic Development Bank (IDB)** in May 2008 and May 2009.

Principal Publications/Presentations from the Past Five Years

1. Rushdi, R. A., & Rushdi, A. M.. (2018). Karnaugh-map utility in medical studies: The case of Fetal Malnutrition. *International Journal of Mathematical, Engineering and Management Sciences*, 3(3), 220-244.
2. Rushdi, A. M. A. (2018). Utilization of Karnaugh maps in multi-value qualitative comparative analysis. *International Journal of Mathematical, Engineering and Management Sciences*, 3(1), 28-46.
3. Rushdi, A. M. A. (2018). Handling generalized type-2 problems of digital circuit design via the variable-entered Karnaugh map. *Int. Journal of Mathematical, Engineering and Management Sciences (IJMEMS)*, 3(4), 392-403.
4. Rushdi, A. M. A., & Ahmad, W. (2017). A novel method for compact listing of all particular solutions of a system of Boolean equations. *Journal of Advances in Mathematics and Computer Science*, 22(6), 1-18.
5. Rushdi, A. M. A., & Ahmad, W. (2018). Digital circuit design utilizing equation solving over 'big' Boolean algebras. *International Journal of Mathematical, Engineering and Management Sciences (IJMEMS)*, 3(4), 404-428.
6. Rushdi, A. M., Zarouan, M., Alshehri, T. M., & Rushdi, M. A. (2015). A modern syllogistic method in intuitionistic fuzzy logic with realistic tautology. *The Scientific World Journal*, 2015, , Article ID 327390, 12 pages.
7. Rushdi, A. M., & Alturki, A. M. (2018). Unification of mathematical concepts and algorithms of k-out-of-n system reliability: A perspective of improved disjoint products. *Journal of Engineering Research*, 6(4), 1-31.
8. Rushdi, A. M. A. (2019). Utilization of symmetric switching functions in the symbolic reliability analysis of multi-state k-out-of-n systems. *International Journal of Mathematical, Engineering and Management Sciences (IJMEMS)*, 4(2), 306-326.
9. Rushdi, A. M. A., & Zagzoog, S. S. (2018). Design of a digital circuit for integer factorization via solving the inverse problem of logic. *Journal of Advances in Mathematics and Computer Science*, 26(3), 1-14.
10. Rushdi, A. M. A., & Talmees, F. A. (2018). An exposition of the eight basic measures in diagnostic testing using several pedagogical tools. *Journal of Advances in Mathematics and Computer Science*, 26(3), 1-17.
11. Rushdi, R. A., Rushdi, A. M., & Talmees, F. A. (2018). Novel pedagogical methods for conditional-probability computations in medical disciplines. *Journal of Advances in Medicine and Medical Research*, 25(10), 1-15.
12. Rushdi, A. M., & Zagzoog, S. S. (2018). Derivation of all particular solutions of a 'big' Boolean equation with applications in digital design. *Current Journal of Applied Science and Technology*, 27(3), 1-16.
13. Rushdi, A. M., Zagzoog, S. S., & Balamesh, A. S. (2019). Derivation of a scalable solution for the problem of factoring an n-bit integer. *Journal of Advances in Mathematics and Computer Science*, 30(1), 1-22.
14. Rushdi, A. M. A., & Al-Amoudi, M. A. (2018). Recursively-defined combinatorial functions: the case of binomial and multinomial coefficients and probabilities. *Journal of Advances in Mathematics and Computer Science*, 27(4), 1-16.
15. Rushdi, A. M. A., & Al-Amoudi, M. A. (2018). Switching-algebraic analysis of multi-state system reliability. *Journal of Engineering Research and Reports*, 3(3), 1-22.
16. Rushdi, A. M. A., & Ba-Rukab, O. M. (2017). Calculation of Banzhaf voting indices utilizing variable-entered Karnaugh maps. *Journal of Advances in Mathematics and Computer Science*, 20(4), 1-17.
17. Rushdi, R. A., & Rushdi, A. M. (2018). Common fallacies of probability in medical context: A simple mathematical exposition. *Journal of Advances in Medicine and Medical Research*, 26(1), 1-21.
18. Rushdi, A. M. A., & Ahmad, W. (2018). A Comparison of the Methods of Boolean-Equation Solving and Input-Domain Constraining for Handling Type-2 Problems of Digital Circuit Design. *Current Journal of Applied Science and Technology*, 20(2), 1-15.
19. Rushdi, A. M. A., Hassan, A. K., & Moinuddin, M. (2020). System reliability analysis of small-cell deployment in heterogeneous cellular networks. *Telecommunication Systems*, 1-11.
20. Rushdi, A. M. A., & Balamesh, A. S. (2019). Boolean Curve Fitting with the Aid of Variable-Entered Karnaugh Maps. *International Journal of Mathematical, Engineering and Management Sciences (IJMEMS)*, 4(6), 1287-1306.
21. Rushdi, A. M., & Bjaili, H. A. (2017). Characterization of Time to Failure in Prognostics: Brief Tutorial Guide to Prognostics Professionals. *Journal of Advances in Mathematics and Computer Science*, 25(4), 1-15.
22. Rushdi, A. M. A., & Zagzoog, S. S. (2019). Logical Design of n-bit Comparators: Pedagogical Insight from Eight-Variable Karnaugh Maps. *Journal of Advances in Mathematics and Computer Science*, 32(3), 1-20.

Recent Professional Development Activities (Workshops, Trainings etc.)