

Faculty C.V.

1. **Name and date of birth**

Aaron Rasheed Rababaah - May 10, 1972.

2. **Academic Rank**

Fulltime associate professor of computer science.

3. **Degrees**

08.2005 – 05.2009: Tennessee State University, Nashville, TN, USA, Ph.D., Computer Information Systems Engineering.

08.2002 – 05.2005: Indiana University, South Bend, IN, USA, M.Sc., Applied Computer Science.

08.1990 – 08.1995: University of Jordan, Amman, Jordan, B.Sc., Industrial Engineering.

4. **Service at this Institution**

Jan 2016 – present: associate professor of computer science

5. **Professional Experience**

06.2014 – 01.2016: Associate Professor of Computer Science, Department of Math and Computer Science, University of Maryland, Eastern Shore, Princess Anne, MD, USA.

11.2015 – Present: Graduate Faculty Member (Regular Status), Department of Math and Computer Science, University of Maryland, Eastern Shore, Princess Anne, MD, USA.

08.2012 – 11.2015: Associate Graduate Faculty Member (Associate Status), Department of Math and Computer Science, University of Maryland, Eastern Shore, Princess Anne, MD, USA.

08.2010 – 06.2014: Assistant Professor of Computer Science, Department of Math and Computer Science, University of Maryland, Eastern Shore, Princess Anne, MD, USA.

06.2009 – 08.2010: Instructor and Post-Doctoral Researcher, College of Engineering, Technology and Computer Science, Tennessee State University, Nashville, TN, USA.

08.2005 – 05.2009: Instructor and Research Assistant, College of Engineering, Technology and Computer Science, Tennessee State University, Nashville, TN, USA.

08.2002 – 06.2005: Instructor and Research Assistant, Department of Computer and Information Sciences, Indiana University, South Bend, IN, USA.

01.2004 – 05.2005: Adjunct Faculty, Department of Computer and Information Sciences, Indiana University, South Bend, IN, USA.

6. **Consulting Experience**

None.

7. **Professional Registration**

1. Aug. 1995 – Present: Member of Jordan Engineers Association, Amman, Jordan.

2. **Publications** *Principal publication of last five years (give titles and references)*

a. Refereed Journals.

- i. Rababaah, A. (2022). Intelligent Classification Model for Holy Quran Recitation Maqams. International Journal of Computational Vision and Robotics. [Scopus-Elsevier, ACM, Clarivate, ProQuest] [Accepted: IJCVR-119507. <https://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=ijcvr>].
- ii. Rababaah, A. (2022). A Comparative Study between Convolution Neural Networks and Multi-Layer Perceptron Networks for Hand-written Digits Recognition. International Journal of Computational Vision and Robotics. [Scopus-Elsevier, ACM, Clarivate, ProQuest] [Accepted: IJCVR-107429 <https://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=ijcvr>].
- iii. Rababaah, A. (2022). Intelligent Machine Vision Model for Building Architectural Style Classification based on Deep Learning. International Journal of Computer Applications in Technology. [Scopus-Elsevier, ACM, Compendex, Clarivate, ProQuest] [Accepted: <https://www.inderscience.com/jhome.php?jcode=ijcat>].
- iv. Rababaah, A. (2021). Wind Turbine Signal Fault Diagnosis using Deep Neural Networks-Inspired Model. International Journal of Computer Applications in Technology. [Scopus-Elsevier, ACM, Compendex, Clarivate, ProQuest] [Accepted: <https://www.inderscience.com/jhome.php?jcode=ijcat>].
- v. Rababaah, A. (2021). Simulated Study of the Influence of Node Density on the Performance of Wireless Sensor Networks. International Journal of Sensor Networks, [Scopus-Elsevier, ACM, Clarivate] [Accepted: IJSN-327238: <https://www.inderscience.com/jhome.php?jcode=ijsn>].
- vi. Rababaah, A. (2021). Machine Learning Comparative Study for Human Posture Classification using Wearable Sensors" for the International Journal of Computing Science and Mathematics. [Scopus-Elsevier, ACM, Compendex, Clarivate, ProQuest] [Accepted: IJCSM-314901 <https://www.inderscience.com/jhome.php?jcode=ijcsm>].
- vii. Rababaah, A. & Wolfer, J. (August.29.2022). Convolution Neural Network Model for an Intelligent Solution to Crack Detection in Pavement Images. International Journal of Computer Applications in Technology, Vol. 68, No. 4, pp. 389-396. DOI: 10.1504/IJCAT.2022.10050313. [Scopus-Elsevier, ACM, Compendex, Clarivate, ProQuest] <https://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=IJCAT>].
- viii. Rababaah, A. (July.22.2022). Deep Learning of Human Posture Image Classification using Convolutional Neural Networks. for the International Journal of Computing Science and Mathematics.

- Vol. 15, No. 3, pp. 273-288. [Scopus-Elsevier, ACM, Compendex, Clarivate, ProQuest].
<https://www.inderscience.com/jhome.php?jcode=ijcsm>].
- ix. Rababaah, A. (JUN.20.2022). A Novel Skin-Inspired Model for Intelligent Object Recognition in Sensor Networks. *International Journal of Sensor Networks*, Vol. 39, No. 2, pp. 93-105. [Scopus-Elsevier, ACM, Compendex, Clarivate]
<https://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=ijsnnet>].
 - x. Rababaah, A. (APR.22.2022). Deep Learning Solution for Machine Vision Problem of Vehicle Body Damage Classification. *International Journal of Computational Vision and Robotics*. Vol. 12, No. 4, pp.426-442. [Scopus-Elsevier, ACM, Clarivate, ProQuest]
<https://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=ijcvr>].
 - xi. Rababaah, A. (SEP.28.2021). 'Sensor networks simulation framework for target tracking applications: SN-SiF'TTA', *International Journal Web Engineering and Technology - IJWET*, Vol. 16, No. 2, pp.113-138. DOI: 10.1504/IJWET.2021.117767. [Scopus-Elsevier, ACM, Compendex, Clarivate, ProQuest]
 - xii. <https://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=ijwet>.
 - xiii. Rababaah, A. (SEP.09.2021). Enhancing Software Engineering Learning Environment with Computer Games: A Case Study. *Journal of Engineering Education Transformation - JEET*, Volume 35, Issue 1, pp. 126-143. [Scopus-Elsevier]
<http://journaleet.in/index.php/jeet/issue/view/9514>.
 - xiv. H.S. Hota, Dinesh K. Sharma and Rababaah, A. (AUG.07.2021). Forecasting US Stock Price Using Hybrid of Wavelet Transforms and Adaptive Neuro Fuzzy Inference System. *International Journal of System Assurance Engineering and Management*. DOI: <https://doi.org/10.1007/s13198-021-01217-5>. [Q2 - Springer, EI-Compendex Elsevier, ESCI (WoS)-Clarivate, ProQuest] <https://www.springer.com/journal/13198>.
 - xv. Rababaah, A. et al. (JAN.01.2021). Development of Robotic Model to Support Intelligent Vehicles Behaviors. *Global Journal of Modeling and Computational Intelligence - GJMCI*, Vol. 1, No. 1, pp. 50-59. Jan 2021.
 - xvi. Rababaah, A. and Rabaa'i, A.A. (2020) 'The need for a new master's program of applied computer science to cope with future demands of the industry: the case of State of Kuwait', *International Journal Higher Education and Sustainability*, Vol. 3, No. 2, pp.132-164.
 - xvii.
 - xviii. Aaron R. Rababaah (AUG 12, 2020). Simple Imperative Model Programming Language for Education – SIMPLE. *STM Journals*:

Journal of Recent Trends in Programming Languages - RTPL, ISSN: 2455-1821, Volume 7, Issue 2, pp. 18-39.

- xix. Ahmad Rabaa'i, Aaron R. Rababaah, (JUL.20.2020). Aligning Information Systems Program with the New ABET-CAC Criteria: The Case of the American University of Kuwait. International Journal of Curriculum Development and Learning Measurement - IJCDLM: Volume 1, Issue 2, Article 6. pp. 79-107, DOI: 10.4018/IJCDLM.2020070106.
- xx. Aaron R. Rababaah, (MAY.04.2020) Angle Histogram of Hough Transform as Shape Signature for Visual Object Classification – (AHOC). Int. J. Computational Vision and Robotics, Vol. 10, No. 4, pp.312–336.
- xxi. Aaron R. Rababaah, Aya Kandil, Yossif Gharib & Ahmed Helwa, (2019). Visual Gesture Recognition for Drawing Applications, Journal of Global Information Technology, Vol. 14, No. 1 & 2, 2019, pp. 1-9.
- xxii. Aaron R. Rababaah & Ahmad A. Rabaa'I, (2018) “Student engagement integration to the assessment process: a proposed framework by the Computer Science Program at the American University of Kuwait”, Int. J. Higher Education and Sustainability - IJHES, Vol. 2, No. 2, pp.132–149.
- xxiii. Aaron R. Rababaah, (2018), Software Agent Based on Finite State Machine for Intelligent Surveillance Systems, Journal of Global Information Technology, Vol. 13, No. 1 & 2, 2018, pp. 14-25.
- xxiv. Aaron R. Rababaah & Ahmad A. Rabaa'I, (2018) Enhancing Programming Learning Environment with Physical Computing and Robotics: A Case Study of the American University of Kuwait, Int. J. Teaching and Case Studies, Vol. 9, No. 4, 2018. Pp. 323-346.
- xxv. Aaron R. Rababaah & Ahmad A. Rabaa'i, “Object Shape-Based Characterization in Intelligent Security Systems – A Comparative Study Of Three Techniques”, Journal of Global Information Technology, Vol. 12, No. 1 & 2, Dec 2017, pp. 35-45.
- xxvi. Ahmad Rabaa'i, Aaron R. Rababaah & Shereef A. Maati. Comprehensive Guidelines for ABET Accreditation of a Computer Science Program: The Case of the American University of Kuwait, International Journal of Teaching and Case Studies (IJTCS), Vol. 8, Nos. 2/3, 2017. Pp. 151-191.

b. Conferences

- i. Rababaah A. (2022). A Deep Learning based Process Model for Crack Detection in Pavement Structures. In 2022 9th International Conference on Computing for Sustainable Global Development (INDIACom); IEEE Conference ID: 51348, (pp. 1-6). doi: 10.23919/INDIACom54597.2022.9763286. [IEEE].
- ii. Rababaah, A. et al. (2021). Store Management Automated System for Covid-19 Pandemic. American Institute of Management and

- Technology Proceedings (AIMTP) June 20-21, 2021, Volume 1, Number 1, pp. 78-82.
- iii. Rababaah, A. et al. (2021). Online Health Assessment Service for Covid-19 Pandemic - OHAS. American Institute of Management and Technology Proceedings (AIMTP) June 20-21, 2021, Volume 1, Number 1, pp. 83-88.
 - iv. Rababaah, A. (2021). New Simulation Testbed for Large-Scale wireless Sensor Networks in Surveillance Applications. In 2021 8th International Conference on Computing for Sustainable Global Development (IEEE-INDIACom, March 17-19, 2021), (pp. 752-756). doi: 10.1109/INDIACom51348.2021.00134. [IEEE].
 - v. Aaron R. Rababaah, Anwar M As'ad, Khaled K Al-Arouj, Abrar T Al-Failakawi and Ahmed A Sultan (SEP.11.2020). Intelligent Navigator Vehicle for Effective Transportation – INVENT, The Annual International Conference of Modern Technology and Management Institute – MTMI, Online conference, Maryland, USA. Review of Business and Technology Research, Vol. 17, No. 2, ISSN: 1941-9406 (Print), 1941-9414 (CD) Vol. 17, No. 3, pp. 43-47.
 - vi. Aaron R. Rababaah (AUG 20, 2020). A New Simple Programming Language for Education. IEEE.ICCSE Conference on Computing Education, pp. 145-149. 10.1109/ICCSE49874.2020.9201755.
 - vii. H.S. Hota, Dinesh K. Sharma and Aaron R. Rababaah (JUL 24, 2020). A Novel Hybrid Approach for Stock Prediction Using Wavelet Transform and ANFIS. International Conference on Advancement in Interdisciplinary Research – ICAIR, Forum of Interdisciplinary Research in Mathematical Sciences and BM, Jaipur – Rajasthan University.
 - viii. Aaron R. Rababaah, Aya Kandil, Yossif Gharib and Ahmed Helwa. (2019) Machine Vision-based Virtual Intelligent Drawing Software System. The Annual International Conference of Modern Technology and Management Institute – MTMI, Orlando, Florida, USA, September 21-22, 2019. Review of Business and Technology Research, Vol. 16, No. 1, pp. 11-15.
 - ix. Aaron R. Rababaah & Ahmad Rabaa'i, "Geometric 2D Shapes Recognition with Polar Signature Characterization and Template Matching", MTMI Annual International conference on Emerging Issues in Business, Technology and Applied Sciences, December 16-17, 2017. Dubai, UAE. (pp. 7-12).
 - x. Rababaah, Aaron, R. and Rabaa'i, Ahmad A. Utilization of Robotics as Contemporary Technology and an Effective Tool in Teaching Computer Programming. MTMI Annual International conference on Globalization and Competitiveness in Business & Technology. 22-23 September 2017, Virginia, USA. (pp. 8-13).

c. Books

- i. Object-Oriented Programming in Java: Concepts and Practical Projects. Aaron R. Rababaah, Leanpub August 03, 2020, ISBN: 9781491049150.
https://leanpub.com/object_oriented_programming_in_java_concepts_and_practical_projects_9781491049150.
- ii. A Practical Introduction to MatLab® Programming with Applications, Aaron R. Rababaah, GRIN publishing, Nymphenburger Str. 86 80636 Munich, Germany, May 2, 2018, ISBN: 9783668696150.
<https://www.grin.com/document/420539>
- iii. A Novel Image-based Model for Data Fusion in Intelligent Surveillance Systems, Aaron R. Rababaah, Scholar's Press, Saarbrücken, Germany, April 25, 2017, ISBN: 9783330651531.
<https://www.amazon.com/Novel-Image-based-Fusion-Surveillance-Systems/dp/3330651539#ace-g6572008997>

9. **Membership in Professional Societies**

None.

10. **Patents, Honors and awards**

None.

11. **Courses taught**

a) Academic Courses

1. Computer Skills and Emerging Technologies, 3 hrs/week, day time class.
2. Foundations of Information Systems, 3 hrs/week, day time class.
3. Computer Programming I in Java, 5 hrs/week, includes 2-hr labs, day time class.
4. Computer Programming II in Java, 5 hrs/week, includes 2-hr labs, day time class.
5. Data Structures, 3 hrs/week, day time class.
6. Assembly language, 3 hrs/week, day time class.
7. Computer Architecture, 3 hrs/week, day time class.
8. Theory of Languages and Implementation, 3 hrs/week, day time class.
9. Software Engineering, 3 hrs/week, day time class.
10. Mobile Robotics Programming, 3 hrs/week, day time class.
11. Compiler Construction, 3 hrs/week, day time class.
12. Computer Science Capstone, 3 hrs/week, day time class.
13. Practicum in Computing (internship).

b) Intensive professional short courses

None.

c) Community Service courses

None.

12. **Other Duties**

a) College

1. Chair of CRG Committee
2. ABET accreditation committee
3. Faculty recruitment committee

4. Internal promotion committee
 5. Grade appeal committee
 6. Curriculum and Assessment committee
 7. Accreditation steering committee
- b) Institution level
1. Study abroad committee
 2. Professional development committee
 3. Faculty advisor of robotics club SPARC.
- c) Outside the institution
1. 06.2009 - present: provide review service for the following journals and conferences: Springer - International Journal of System Assurance Engineering and Management (IJSA), EI Compendex, Elsevier. Global Journal of Computer and Engineering Technology (GJCET). American Society of Mechanical Engineers ASME. Open Industrial & Manufacturing Engineering Journal TOIMEJ. International Journal of Computer and Telecommunications Networking ELSEVIER - COMNET. International Journal of Computer Science and Mathematics - IJCSM, Scopus & ACM. Walailak Journal of Science and Technology and International Conference on Computer Technology Applications (ICCTA), Scopus. TamKang Journal of Science and Engineering (TKJSE). International Conference on Advancement in Interdisciplinary Research - ICAIR. International Conference on Computing Sciences and Engineering (ICCSE). Florida Artificial Intelligence Research Society Conference (FLAIRS).
 2. Keynote speaker, International Conference on Humanities, Science and Technology (ICHST 2022), 21, 22, 23 September 2022, <https://ichst.in/keynote-speaker>
 3. Conference Co-chair, Innovations in Management, Science and Technology, AIMT-GKF, August 5-6, 2022. <https://usmt-aimt2022.gkfusa.org/>
 4. Member of the organizing committee, 2022 AIMT-GBU International Conference, May 26-27, 2022, Online.
 5. Chair of "Industrial Applications of Machine Learning", International Conference on Innovative Research in Science, Management and technology (ICIRSMT 2021), 27-28 DEC, 2021.
 6. Chair of "Advanced Computing", Interdisciplinary Research in Applied Mathematics, Management and Technology (IRAMMT), 20-21 June, 2021, Virtual.
 7. Member of organizing committee, Interdisciplinary Research in Applied Mathematics, Management and Technology (IRAMMT), 20-21 June, 2021, Virtual.
 8. Member of the technical committee, Technology and International Conference on Computer Technology Applications (ICCTA), 01.15.2021.
 9. Editor, Global Journal of Computer and Engineering Technology, 10.2020 - present. <https://gjcet.gkfusa.org/editorial-board/>
 10. Editor, Review of Business and Technology Research, published by Modern Technology and Management Institute, Inc, USA. 09.2020. <http://mtmi.us/iac/editorial-board/>.

11. Chair of the Intelligent Systems & Quantitative Techniques session, Modern Technology and Management Institute conference - MTMI, September 11-12, 2020.
12. Member of Advisory Board of the Global Knowledge Foundation Inc. USA, <https://gkfusa.org/>. AUG 10, 2020 - Present.
13. Chair of the Emerging Issues in Information Systems session, Modern Technology and Management Institute conference, December 16-17, 2017.
14. Member of the organizing committee, Modern Technology and Management Institute conference, December 16-17, 2017.
15. Chaired the business and technology session at the Annual Conference of MTMI, 09.12.2015
16. Member of Editorial Board, Review of Business and Technology Research, published by Modern Technology and Management Institute, Inc, USA. 09.2014 - Present.
17. Chaired the computing session at the Annual Conference of MTMI, 09.21.2014
18. Program coordinator for the annual MTMI conference, Sep. 19-21, 2014.
19. Chaired the internet session at the Annual Conference of MTMI, 09.21.2013
20. Chaired the session of Computer and Decision Sciences at the Annual Conference of MTMI, 10.12.2012
21. Chaired the session of Technology and Decision Science at the Annual Conference of MTMI, 10.21.2011
22. Conference Advisor, MTMI, 11.2010 - present
23. Keynote Speaker, International Conference on Humanities, Science and Technology (ICHST 2022), 21, 22, 23 September 2022, <https://ichst.in/keynote-speaker>
24. Invited Distinguished Speaker, International Conference on Mobile and Embedded Technology, IEEE - MECON-2022 on 10-11 March 2022.
25. Invited Guest of honor, International Conference on Innovative Research in Science, Management and technology (ICIRSMT 2021), 27-28 DEC, 2021.
26. Invited speaker, IEEE ICRITO Conference FDP Online, Innovation in Computing and Information Technology, 31 August 2021 in AIIT, Amity University Campus.
27. Invited speaker, International virtual Conference on Advancement in Interdisciplinary Research - ICAIR, JUL 24, 2020.
28. Invited Expert speaker, The International Conference on Innovative Research in Science, Management and Technology (ICIRSMT 2020), Atal Bihari Vajpayee University, Bilaspur, C.G., India, Jan 04, 2020.
29. Invited speaker, Physical Computing and IoT, Golf Conference and Exhibit, Jumairah Hotel and Resort, Masilah, Kuwait, April 17-18, 2019.
30. Image-based Multi-Source Data Fusion via Non-linear Image Convolution, Invited guest speaker for the annual STEM seminar series at Fayetteville State University, Fayetteville, NC, USA. 04.2012.

31. Official assignment by ABET, evaluated the Computer Science Program, Bachelor of Science in Computer Science, AMA International University, Bahrain. OCT 24-26, 2021.

13. Research

No grants.

14. Participation in Specific Programs

1. Certificate of E-Learning course on Microsoft TEAMS, HR, American University of Kuwait, 14.NOV.2021.
2. Certificate of E-Learning course on Time Management & Effective Meeting, HR, American University of Kuwait, 11.NOV.2021.
3. Certified ABET Program Evaluator - PEV, MAR 19-21, 2021.
4. Data Science workshop by the ICFAI University, Jaipur, SEP 08, 2020.
5. Smart Public Speaking Certificate, Workshop by Center for Continuous Education (CCE), American University of Kuwait, July 4, 2020.
6. On-line Teaching using Webex/zoom & Moodle, IT, American University of Kuwait, MAR 2020.
7. ABET Program Evaluator - PEV, Online intensive training workshop, FEB 18, 2020 - FEB 28, 2020.
8. Accomplished ABET IDEAL Scholar Certificate, ABET headquarters, Baltimore, Maryland, USA, Aug. 09, 2018.
9. Attended a workshop on Assessment of Student Learning, by Prof. Petros Pashiardis, University of Kuwait - Khaldiya, Nov. 30, 2016.
10. Attended a workshop on instructional models and strategies for peer observation, by Prof. Petros Pashiardis, University of Kuwait - Khaldiya, Nov. 30, 2016.
11. Cyber Security Awareness Certificate, Cyber Security Awareness Training Program, University of Maryland Eastern Shore, 09.24.2015.
12. Attended the Offshore Wind Power Conference, USA, Boston, 24-25.02.2015.