PROMOTION RECOMMENDATION
The University of Michigan-Dearborn
College of Engineering and Computer Science

Hafiz Malik, associate professor of electrical and computer engineering, with tenure, Department of Electrical and Computer Engineering, College of Engineering and Computer Science, is recommended for promotion to professor of electrical and computer engineering, with tenure, Department of Electrical and Computer Engineering, College of Engineering and Computer Science.

Academic Degrees:

Ph.D.	2006	Electrical and Computer Engineering, University of Illinois at Chicago, Chicago, IL
B.S.	1999	Electrical and Communication Engineering, University of Engineering and Technology, Lahore, Pakistan

Professional Record:

2014 – present	Associate Professor, Department of Electrical and Computer Engineering University of Michigan-Dearborn
2007 – 2014	Assistant Professor, Department of Electrical and Computer Engineering University of Michigan-Dearborn, Dearborn, Michigan

Summary of Evaluation:

Teaching: Professor Malik has a very broad teaching range due to his wide foundational knowledge. He is rated 4.3 out of 5 in instructor evaluations while teaching nine new courses since his last promotion (seven undergraduate and two graduate courses). He has also developed four new courses and one laboratory since his last promotion. He currently is primary advisor for six Ph.D. students. One of Professor Malik's outstanding contributions is that he has pioneered curriculum development in the areas of digital forensics and cyber security.

Research: Professor Malik has built up a laboratory for his sponsored research in digital forensics and security in cyber- physical systems. Professor Malik has published 17 journal papers since his last promotion, many of them top ranked journals. He has published with many of his students as first author. A partial listing of his recent publications is given below (Ph.D. students underlined). He has been very successful in obtaining competitive federal funding. He has obtained 10 external grants totaling over $1.4M since his last promotion. His grants include two NSF SaTC grants and he currently has five proposals under sponsor review. Based on his publications, number of students advised, current grant awards, and pending proposals, there is every reason to believe that Professor Malik's research will continue to grow in the future.

Recent and Significant Publications:

Changalvala, R., and Malik, H. (2019). "LiDAR Data Integrity Verification for Autonomous Vehicle," *IEEE Access*, DOI: 10.1109/ACCESS.2019.2943207, Impact factor 4.098.

Avatefipour, O., Papari, B., Kavousi-Fard, A., and Malik, H. (2019). "An Intelligent Secured Framework for Cyberattack Detection in Electric Vehicles CAN Bus Using Machine Learning," *IEEE Access*. DOI: 10.1109/ACCESS.2019.2937576, Impact factor 4.098.

Javed, A., Irtaza, A., Khaliq, Y., Malik, H., and, Mahmood, M.T. (2019). "Replay and key-events detection for sports video summarization using confined elliptical local ternary patterns and extreme learning machine," *Applied Intelligence*. DOI: https://doi.org/10.1007/s10489-019-01410-x, Impact factor 2.882.

Javed, A., Irtaza, A., Bajwa, K.B., Malik, H., and Mahmood M.T. (2018). "Decision tree analysis of cricket videos: a multimedia approach for video summarization," *IET Image Processing*. Impact factor 2.074.

Malik, K.M., Anjum, M.S., Malik, H., Malik, G.M., Soltanian-Zadeh, H. (2018). "ISADAQ: A novel framework for intracranial saccular aneurysm detection and quantification using morphological analysis of cerebral angiograms," *IEEE Access*. DOI: 10.1109/ACCESS.2018.2799307, Impact factor 4.098.

Javed, A., Bajwa, K., Malik, H., and Irtaza, A. (2016). "An Efficient framework for automatic highlights generation from sports videos," *IEEE Signal Processing Letters*, vol. 23(7), pp. 954–958, Impact factor 2.813.

Zhao, H., Chen, Y., Wang, R., and Malik, H. (2016). "Anti-Forensics of Environmental-Signature-Based Audio Splicing Detection and Its Countermeasure via Rich-features Classification," *IEEE Transactions on Information Forensics and Security*, vol. 11(7), pp. 1603-1617, Impact factor 4.332.

Service: Professor Malik has been active on committees within the university at all levels and he has made significant contributions to professional societies. Professor Malik has served on 17 university committees since last promotion, to include five university-level committees, three college-level committees, and nine department-level committers. He has also mentored numerous high school students through STEM mentoring programs. One of the high school teams he mentored was awarded 1st prize in the U.S. Army's 10th Cyber-mission competition. Professor Malik has served on multiple NSF review panels. He is also active in several professional societies to include IEEE Standards Committee for Privacy and Security Architecture for Consumer Wireless Devices; IEEE society for Signal Processing, IEEE society for Communications, and Computational Intelligence. He is also on numerous technical committees, including the technical committees for IEEE Information Forensics and Security, IEEE Multimedia Communication, AES Technical Committee on Audio Forensics. He is an active editor in several publications, to include: editorial board member in *Springer International Journal on Applied Intelligence*; associate editor in *IEEE Transactions on Information Forensics and Security* (TIFS); associate editor in *Springer Journal of Signal, Image, and Video Processing* (SIVP); guest editor in *IEEE Access – Special Section on Latest Advances and Emerging Applications of Data Hiding*, IEEE Publishing; guest editor in *The Scientific World Journal*, Special Issue on "Security of Information and Networks."

External Reviewers:

Reviewer A: "Dr. Hafiz is among the rising stars in cybersecurity field. His recent NSF grant 'NSF, SaTC, Collaborative: Forensic Examiner: Testbed for Benchmarking Digital Audio Forensic Algorithms, 09/15/2018 – 08/31/2021,' is an indicator of this."

Reviewer B: "As a result of his excellent research, Dr. Malik has impressive publications, including eighteen journal articles, one book chapter, and twenty-six referred conference proceedings papers, after he was promoted to Associate Professor."
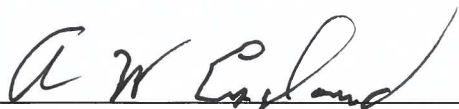
Reviewer C: "In addition to his novel research contributions in sensor data integrity, he had significant contributions to multimedia forensics. In this domain, I read one of his recent papers (i.e., AntiForensics of Environmental-Signature-Based Audio Splicing Detection and Its Countermeasure via Rich-Features Classification) that appeared in a top journal (i.e., IEEE Transactions on Information Forensics and Security)."

Reviewer D: "Along with his grant funding record, his appearance in program committees of many conferences and also editorships in journals (for example being an AE at the top journal in media forensics, namely, the IEEE Transactions on Information Forensics and Security speaks volumes of the recognition he has in the community), it can be clearly seen that he has demonstrated himself to be an active researcher who will continue his work and maintain leadership positions in the field."

Reviewer E: "This scholarly record is amazing. According to Google Scholar search, Dr. Malik's publications have registered 802 citations with a high H index of 14. His masterpiece article titled 'Audio Forensics from Acoustic Reverberation' has accumulated a very high citation number 70."

Summary of Recommendation:

Professor Malik is an excellent faculty member in all aspects of teaching, research, and service. He is a mentor and example to younger faculty and is a leader amongst senior faculty. We are very pleased to recommend, with strong support of the College of Engineering and Computer Science Executive Committee, Hafiz Malik for promotion to professor of electrical and computer engineering, with tenure, Department of Electrical and Computer Engineering, College of Engineering and Computer Science.

Anthony W. England, Dean
College of Engineering and Computer Science

Domenico Grasso, Chancellor
University of Michigan-Dearborn

May 2020