

PROMOTION RECOMMENDATION
The University of Michigan – Flint
College of Arts and Sciences
Department of Computer Science, Engineering, and Physics

Zahid Syed, assistant professor of computer science, Department of Computer Science, Engineering, and Physics, College of Arts and Sciences, is recommended for promotion to associate professor of computer science, with tenure, Department of Computer Science, Engineering, and Physics, College of Arts and Sciences.

Academic Degrees:

Ph.D.	2014	West Virginia University, Computer Engineering, Morgantown, WV
M.S.	2008	West Virginia University, Electrical Engineering, Morgantown, WV
B.S.	2005	Osmania University, Electronics and Communications, India

Professional Record:

2014-Present	Assistant Professor of Computer Science, University of Michigan-Flint, Michigan
2008-2009	Software Engineer, HCL Global Systems Inc., Michigan

Summary of Evaluation:

Teaching: Since his arrival in the fall of 2014, Professor Syed has taught nine different courses ranging from introductory programming classes to upper division classes in Information Technology, Computer Networks, Computer Architecture, as well as graduate courses in Embedded Systems, Computer System Architecture, and Advanced Computer Networking. Of these nine courses, Professor Syed added one new course to the curriculum and redesigned five. Regarding his student evaluations of teaching, the averages for the questions “Overall, this was an excellent course,” “Overall, the instructor was an excellent teacher,” and “I learned a great deal in this course,” were 4.18, 4.37 and 4.37, respectively. His peer evaluations of teaching also noted his command of the subject matter and clarity of his presentations, as well as his rapport with his students and his ability to engage students to enhance their learning. During his six years at the University of Michigan-Flint, Professor Syed was part of an effort to integrate applied science and math concepts into the curriculum to strengthen students’ “math readiness.” He has engaged in academic advising, as well as offering professional support to over a dozen students by copy editing a manuscript, writing letters of recommendations and providing career counselling.

Research: Professor Syed is a computer scientist specializing in the areas of touch dynamics, and the analysis of large datasets with the goal of automating the recording of software errors. More specifically, touch dynamics is a behavioral biometric that is used to secure portable touch screen devices that capitalizes on the user’s touch gestures as a means of authenticating an identity. In his second area of scholarly activity, Professor Syed analyzed the results from the pre-processing of software error reports, designed empirical experiments to test the pre-processing algorithms, and served as a second author for a manuscript on this area of research. Both of these broad areas of scholarly activity reflect Professor Syed’s fascination with statistics, machine learning, and automating tasks. Since his arrival at the University of Michigan-Flint, Professor Syed has published two peer reviewed journal articles, five peer reviewed conference papers (three with UM-Flint students), and a peer reviewed poster presentation (also with UM-Flint students).

Recent and Significant Scholarly Activity:

Syed, Z.; Helmick, J.; Banerjee, S.; Cukic, B., “Touch Gesture-based Authentication on Mobile Devices: The Effects of User Posture, Device Size, Configuration, and Inter-session Variability,” *Journal of Systems and Software*, Volume 149, 2019, Pages 158-173, ISSN 0164-1212

Banerjee, S; Syed, Z; Helmick, J.; Culp, M.; Ryan, K.; Cukic, B., “Automated triaging of very large bug repositories,” *Information and Software Technology*, Volume 89, 2017, Pages 1-13, ISSN 0950-5849

Palaskar, N.; Syed, Z.; Banerjee, S.; Tang, C., “Empirical Techniques to Detect and Mitigate the Effects of Irrevocably Evolving User Profiles in Touch-based Authentication Systems,” *IEEE Int’l Symposium on High Assurance Systems Engineering (HASE)*, 2016

Turner, S.W.; Allison, M.; Syed, Z.; Farmer, M., “Towards a flipped cyber classroom to facilitate active learning strategies,” in *Frontiers in Education Conference (FIE)*, vol., no., pp.1-4, 2015

Service: Professor Syed has developed a strong record of service to his program, the Department of Computer Science, Engineering, and Physics, and his professional and local communities. For his program, Professor Syed has served on the numerous scholarship committees including the Freeman, Chancellor, Shanti and the RADRAJ. As a member of the Computer Science program, Professor Syed has also served on the Math Readiness Course Committee and a search committee for a tenure-track position in Computer Science. Professor Syed has also given of his time and effort to his department by serving on the following committees: Strategic Planning, Bylaws, Professional Development, and an ad hoc Faculty Handbook committee. Professor Syed has also provided service to his departmental colleagues by being a peer evaluator for teaching and for his organization of the CSEP Colloquium. For the college, Professor Syed is continuing his service on the college’s Advising and Retention Implementation Committee and he has served one term on the Summer Interim Committee. For his profession, Professor Syed has been a member of the Program Committees for the following IEEE (Institute of Electrical and Electronics Engineers) international conferences – Information Society and Smart Cities, and the Big Data and Advanced Wireless Technologies (both in 2017). Professor Syed has also served as a program committee member for the IEEE HASE (High-Assurance Systems Engineering) conferences in 2014, 2016, and 2018. Professor Syed was also a session chair for the IEEE HASE conference in 2015. In addition to his conference work, Professor Syed has also served as a peer reviewer for eight different journals or conferences, including the MDPI’s (Multidisciplinary Digital Publishing Institute) *Cryptography Journal* and its *Applied Science Journal*, as well as numerous conferences, many sponsored by the IEEE. Professor Syed has also served his local community through his membership on the Grand Blanc High School Technology Advisory Board.

External Reviewers:

Reviewer (A): “From his research, he published three journal papers where he is the first author in two of them... Also, he published 9 conference papers. The quality of the papers is good to very-good in my evaluation and based on my reviews.”

Reviewer (B): “As mentioned, the recent work in the Journal of Systems and Software is strong [and] has the possibility of high international impact.”

Reviewer (C): “...Dr. Syed has made impressive progress in his research work in the area of software quality management and authentication technology: three journal papers published by three high-impact-index journals..., eight conference papers in peer-reviewed international conference.”

Reviewer (D): “I am impressed by the article... ‘Leveraging variations in event sequences in keystroke-dynamics authentication systems’ published in 2014, ‘Effect of user posture and device size on the performance of touch-based authentication systems’ published in 2015. These work focused on behavior-based authentication methods, I think they are good jobs, and it puts forward some new ideas and ideas in this field.”

Reviewer (E): “After reviewing his publications, I’m very impressed with the quality and quantity of his scholarly work... He has published three journal papers. All of the journals have high impact factors.”

Summary of Recommendation:

Professor Syed is a computer scientist specializing in the areas of touch dynamics and the analysis of large datasets with the goal of automating the recording of software errors. He has published two peer reviewed journal articles, five peer reviewed conference papers, and a peer reviewed poster presentation, several with UM-Flint students. Professor Syed's record of teaching excellence includes advancing the curriculum within his program and effectively engaging students to enhance their learning as evidenced by strong student and peer evaluations of his teaching. Professor Syed has served his department, college, and his professional and local community. I recommend Zahid Syed for promotion to associate professor of computer science, with tenure, Department of Computer Science, Engineering, and Physics, College of Arts and Sciences.

Recommended by:



Susan Gano-Phillips, Dean
College of Arts and Sciences

Recommendation endorsed by:



Keith Moreland, Interim Provost and
Vice Chancellor for Academic Affairs



Debasish Dutta, Chancellor
University of Michigan-Flint

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