

# Yujian Fu

Professor

## Contact Information

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## Academic Appointment

<b>Assistant Professor</b> 2007 – 2012	Alabama A&M University, Normal, AL, USA
<b>Associate Professor</b> 2012 – 2019	Alabama A&M University, Normal, AL, USA
<b>Professor</b> 2019 – Present	Alabama A&M University, Normal, AL, USA

## Research Interests

Formal Modeling and Intelligent Analysis of Cyber Physical Systems, Programming Analysis, Software engineering. Specialized areas of interest: formal specification, verification and validation, optimization, reinforcement learning, mobile security, behavior based malware detection, specification based intrusion detection, formal specification & verification of cyber physical systems, real time embedded software design and quality assurance, software testing, runtime verification, software architecture, service oriented architecture (SOA), software evolution.

## Journal (partial list)

- [1] **Yujian Fu** and X. He and Z. Dong. An Agent Oriented Framework for Multiple Robotics Systems. International Journal of Robotics Applications and Technologies (IJRAT). Vol. 6, Issue 1. June 2018.
- [2] X. He, Z. Dong, H. Yin, **Yujian Fu**. A Framework for Developing Cyber-Physical Systems. International Journal of Software Engineering and Knowledge Engineering 27(9-10): 1361-1386 (2017)
- [3] **Yujian Fu** and W. Choosilp. Specification-based Testing on Android System. International Journal of Wireless & Mobile Networks (IJWMN) Vol. 9, No. 5, Oct 2017.
- [4] **Yujian Fu** and S. Drager. Reconfiguration of Autonomous Robotics. Special Issue on architectural Design of Advanced Swarm Robotics Systems, Part 2, International Journal of Robotics Applications and Technologies (IJRAT). Vol 3, No 1. pp 41 – 58. 2015.
- [5] Z. Dong and **Yujian Fu**. Runtime Verification Robotics. Special Issue on architectural Design of Advanced Swarm Robotics Systems, Part 2, International Journal of Robotics Applications and Technologies (IJRAT). Vol 3, No 1. pp 41 – 58. 2015.
- [6] H. Ayala and **Yujian Fu**. Design and Implementation of BIOLOID Humanoid Robot. Special Issue on architectural Design of Advanced Swarm Robotics Systems, Part 2, International Journal of Robotics Applications and Technologies (IJRAT). Vol 2, No 2. pp 78 – 93. 2014.
- [7] W. Choosilp, **Yujian Fu**. A Case Study Of Malware Detection and Removal in Android Apps. International Journal of Mobile Network Communications & Telematics, Vol. 4, No. 4, April 2014.
- [8] **Yujian Fu**, L. Yan, J. Kulick, S. Drager. *Formal Modeling and Verification of Security Properties of Handel C Programs*. Vol. 3. Issue 3. International Journal of Secure Software Engineering, pp. 50-65 July 2012
- [9] **Yujian Fu**, S. Li, X. He, Z. Dong and P. Bording. *A Model Driven Approach for Runtime Assurance of Software Architectures*. International Journal of Computer and Network Security, Vol 2, No. 5, 2010
- [10] **Yujian Fu**, S. Li. *A Hierarchical Graph-based Testing of UML2 Sequence Diagram*. International Journal of Computer and Network Security, Vol 2, No. 9, September 2010

## Conferences/Workshops (partial list)

- [1] A. Gilder, W. Choosilp, M. Allen, Q. Dean, and Y. Fu. Supporting Object-oriented Design Learning Outcome Using an Android Development Project. The 125th ASEE Annual Conference & Exposition - Computers in Education Division, June 2019. Paper ID: 26280.
- [2] X. He, Z. Dong, **Yujian Fu**. A Systematic Approach For Developing Cyber Physical Systems. In Proceedings of The 30<sup>th</sup> International Conference On Software Engineering and Knowledge Engineering, July, 2018.
- [3] **Yujian Fu**, W. Choosilp, and Z. Dong. Model-based Test-driven Cyber Physical System Development. IEEE Southeast Regional Conference, April, 2018.
- [4] X. He, Z. Dong, H. Yin, **Yujian Fu**. A Framework for Developing Cyber-Physical Systems. In Proceedings of International Conference of Software Engineering and Knowledge Engineering 2017: 236-241.
- [5] X. He, **Yujian Fu**. Modeling and Analyzing Security Patterns Using High Level Petri Nets. In Proceedings of International Conference of Software Engineering and Knowledge Engineering 2016: 623-627.
- [6] Peter J. Clarke, Debra L. Davis, Raymond Chang-Lau, James Kiper, Yujian Fu, and Gursimran S. Walia. Using WReSTT Cyberlearning Environment in the Classroom. The 124th ASEE Annual Conference & Exposition - Computers in Education Division, June 2017. Paper ID: 20158.
- [7] **Yujian Fu** and Peter J. Clarke. Gamification based Cyber Enabled Learning Environment of Software Testing. The 123rd ASEE Annual Conference & Exposition. - Computing and Information Technologies (CIT) , June 2016. Paper ID: 15359.
- [8] **Yujian Fu** and D. Ma. Mobile Computing and Security Laboratories and Curriculum Integration. The 123rd ASEE Annual Conference & Exposition. – Information and Network Security, June 2016. Paper Id: 15364.
- [9] **Yujian Fu** and M. Shuvo. Android-Based Remote Robot Control System. The 123rd ASEE Annual Conference & Exposition. – Information and Network Security, June 2016. Paper Id: 15901.
- [10] **Yujian Fu** and M. Shuvo. An Approach to Analyzing Adaptive Intelligent Vehicle System Using SMT Solver. In Proceedings of 2016 International Conference on Control, Decision and Information Technologies (CoDIT), April 6-8 2016.
- [11] **Yujian Fu** and D. Ma. Applying Mobile and Pervasive Computing Security Projects in CS Courses. The International Conference on Frontiers in Education: Computer Science and Computer Engineer (FECS'15), Las Vegas, NV, USA, July 27 – 30, 2015.
- [12] **Yujian Fu**, H. Ayala, and J. Fu. *An Initial Study of Bioloid Humanoid Robot and Beyond*. The International Conference on Frontiers in Education: Computer Science and Computer Engineer (FECS'15), Las Vegas, NV, USA, July 27 - 30.

## Funding

- Served as PI/CO-PI for internal and external funding for amount of \$2M.

## Honors & Awards

- Faculty Summer Fellowship, Air Force, 2020
- Alabama A&M University Faculty Research Award, 2015
- College of Engineering, Technology, and Physical Science Research Award, 2015
- Faculty Summer Internship, Air Force Research Lab 2014
- Faculty Summer Internship, Air Force Research Lab 2012
- Faculty Scholarship, NSF/FIU, Jul 5<sup>th</sup> – Jul 18<sup>th</sup>, 2012

## Affiliations

Member of ACM, Member of IEEE Computer Society, Member of ASEE