



Amirkabir University of Technology
(Tehran Polytechnic)



MEHRANS. FALLAH

Associate Professor
Department of Computer Engineering
Software

Email:
msfallah@aut.ac.ir

Phone:

h-index (Scopus):
5

Citations (Scopus):
148

Supervised MSc Theses

| # | Thesis title | By | Date |
|---|--|---|----------------|
| 1 | Local Differential Privacy for Correlated Edge Information in Social Networks | Vajiheh Tarahomi & Mehrans. Fallah | July 2022 |
| 2 | Directed Fuzzing Based on Vulnerability Specification | Amir Abas Kabiri Zamani & Mehrans. Fallah | February 2022 |
| 3 | Concolic testing smart contract for detecting Vulnerabilities | Maryam Sadat Tabatabaei & Mehrans. Fallah | September 2021 |
| 4 | Program Rewriting for Enforcing Probabilistic Privacy Policies in JavaScript Programs | Mahdieh Hejazi & Mehrans. Fallah | September 2020 |
| 5 | Verifying Secure Web Applications Using Aspect-Oriented Hierarchical Colored Petri Nets | Zeinab Banayazdi & Mehrans. Fallah | September 2019 |
| 6 | Model-Based Security Testing of Real-time Systems Using Time Petri net | Tannaz Zamani & Mehrans. Fallah | February 2019 |
| 7 | A Provably Secure Scheme for Data Deduplication in Cloud | Faezeh Nasrabadi & Mehrans. Fallah | January 2019 |
| 8 | Improving Multi-Execution-based Mechanisms for Enforcing Information Flow Policies | Seyed Mohammad Mehdi Ahmadpanah & Mehrans. Fallah | September 2017 |
| 9 | Improving Haskell Programming Language to Enforce the Security Policies Expressed in the Decentralized Label Model | Muhammad Hussein Nasrollahpour & Mehrans. Fallah | July 2017 |

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| 10 | Monitoring Information Flow Security in Smartphones | Keywan Karimi & Mehrans. Fallah | February 2017 |
| 11 | A mechanism to mitigate cooperative gray hole attacks in MANETs | Nahal Shahini & Mehrans. Fallah | July 2016 |
| 12 | Abstract Interpretation for the Verification of Information Flow Security in Languages with Function Calls | Siamak Hatami & Mehrans. Fallah | February 2016 |
| 13 | Dynamic Slicing to Verify Information-Flow Security in Concurrent Programs | Mohammad Ghorbani & Mehrans. Fallah | February 2016 |
| 14 | Trust management in social networks using game theory | Mansoore Soltani Margani & Mehrans. Fallah | September 2015 |
| 15 | Language-based verification of zero-knowledge proof in e-voting protocols | Jamile Khalili Shahrooz & Mehrans. Fallah | February 2015 |
| 16 | A type system for discretionary access control with capability revocation and changing ownership | Masoud Ghaffarinia & Mehrans. Fallah | December 2014 |
| 17 | Trust management in mobile ad hoc networks using game theory | Shabnam Seraji & Mehrans. Fallah | October 2014 |
| 18 | A language- based approach to prevent data races | Ali Ghanbari & Mehrans. Fallah | October 2014 |
| 19 | Compositional Security in a model language for Java using language-based techniques | Kooshan Abedian & Mehrans. Fallah | September 2014 |
| 20 | A hybrid method for vulnerability analysis of web applications using static,dynamic,and run-time monitoring techniques | Mehdi Azvary Gahroei & Mehrans. Fallah | September 2014 |
| 21 | Enforcing flow-insensitive noninterference through program rewriting in a model language for java | Alireza Siadat & Mehrans. Fallah | February 2014 |
| 22 | Automatic enforcement of user-defined security policies in object-oriented programming | Seyedmahdi Fadaee & Mehrans. Fallah | February 2014 |
| 23 | the modeling of learning in adversarial environments using dynamic games | Abbas Tehrani Far & Mehrans. Fallah | July 2013 |
| 24 | static enforcement of noninterference in concurrent lambda-calculus | Soroosh Sardari & Mehrans. Fallah | February 2013 |
| 25 | static enforcement of quantified information flow security in middleweight java | Gohar Shakouri Gare Kani & Mehrans. Fallah | February 2013 |
| 26 | a labeled transition semantics for probabilistic applied pi calculus | Mitra Joz Nazemian & Mehrans. Fallah | February 2012 |
| 27 | state-space reduction in CTLx model checking by combining partial order reduction and bounded model checking | Hassan Arfaeinia & Mehrans. Fallah | February 2012 |
| 28 | inlined control-flow integrity enforcement for java bytecode | Mahdieh Karbalaie Hadi & Mehrans. Fallah | February 2012 |
| 29 | enhancing reputation mechanisms using markov model for detecting application layer denial-of-service attacks | Armin Imani & Mehrans. Fallah | February 2012 |
| 30 | denotational semantics for access control in polymorphic dependency calculi | Sepehr Amir-Mohammadian & Mehrans. Fallah | October 2011 |
| 31 | an extension of XCAP for verifying the assembly codes containing I/O | Zohreh Hamidi & Mehrans. Fallah | June 2011 |

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| 32 | improving access control in pervasive environment using semantic approaches | Zahra Eslami & Mehrans. Fallah | June 2011 |
| 33 | a type system for lambda -calculus for static verification of security policies | Arash Afshar & Mehrans. Fallah | February 2011 |
| 34 | mechanism design for prevention of malicious and selfish nodes collusion in routing and packet forwarding in mobile ad hoc networks using game theory | Saeedeh Alimohammadi & Mehrans. Fallah | July 2010 |
| 35 | Improving Reputation Systems for Trust Management in MANETs Using game theory | Maryam Mouzerani & Mehrans. Fallah | July 2010 |
| 36 | a reactive defense against bandwidth attacks utilizing learning techniques in distributed packet filtering | Nafiseh Kahani & Mehrans. Fallah | July 2009 |
| 37 | puzzle-based defense against bandwidth attacks using game theory | Mazdak Ali Madadi & Mehrans. Fallah | July 2009 |
| 38 | Improvement of cooperation stimulating mechanisms in MANET using game theory | Ebrahim Khalilzadeh & Mehrans. Fallah | July 2009 |
| 39 | A CALCULUS FOR TRUST MANAGEMENT IN SEMANTIC WEB | Azadeh Nematzadeh Chekuvar & Mehrans. Fallah | April 2008 |
| 40 | MODELING AND IMPROVING PUBLIC KEY CERTIFICATE REVOCATION SCHEMES IN MOBILE AD-HOC NETWORKS | Afshin Lamei & Mehrans. Fallah | January 2008 |
| 41 | ENFORCING COPPERATION AMONG NODES AND IMPROVING SERVICE AVAILABILITY IN MANETS USING GAME THEORY | Azadeh Omrani & Mehrans. Fallah | April 2007 |
| 42 | COMPARISON OF THE INTEGRATION OF DIFFERENT IP TRACEBACK MECHANISMS INTO THE FILTERING MECHANISM TO DEFEAT DOS ATTACKS | Kobra Khanmohammadi & Mehrans. Fallah | March 2007 |

Journal Papers

Portal Records

- 1 Sharar Ahmadi, Mehrans. Fallah, Masoud Pourmahdian, "On the Properties of Epistemic and Temporal Epistemic Logics of Authentication", INFORMATICA, November 2019 Vol. 43, Num. 0, Page 161-175, November 2019,
- 2 Behrouz Zolfaghari, Mehdi Sedighi, Mehrans. Fallah, "Designing programmable parallel LFSR using parallel prefix trees", Journal of Engineering Research, October 2019 Vol. 7, Num. 3, Page 105-122, October 2019,
- 3 Fatemeh Imanimehr, Mehrans. Fallah, "On transparent value-sensitive run-time monitoring for information flow policies", COMPUTER LANGUAGES SYSTEMS & STRUCTURES, December 2018 Vol. 54, Num. 1, Page 273-296, December 2018,
- 4 Sharar Ahmadi, Mehrans. Fallah, "An omniscience-free temporal logic of knowledge for verifying authentication protocols", BULLETIN OF THE IRANIAN MATHEMATICAL SOCIETY, November 2017 Vol. 44, Num. 1, Page 1-23, November 2017,
- 5 Zeinab Iranmanesh, Mehrans. Fallah, "Static Checking for Multiple Start of Threads in a Type-Safe Multithreaded Java", Journal of Object Technology, June 2017 Vol. 16, Num. 3, Page 1-31, June 2017,
- 6 Shabnam Seraji, Mehrans. Fallah, "A Bayesian Game of Whitewashing in Reputation Systems", COMPUTER JOURNAL, April 2017 Vol. 0, Num. 0, Page 1-15, April 2017,
- 7 Behrouz Zolfaghari, Mehrans. Fallah, Mehdi Sedighi, "S-Restricted Compositions revisited", DISCRETE MATHEMATICS AND THEORETICAL COMPUTER SCIENCE, April 2017 Vol. 19, Num. 1, Page 1-19, April 2017,

- 8 Afshin Lamei, Mehrans. Fallah, "Rewriting-Based Enforcement of Noninterference in Programs with Observable Intermediate Values", JOURNAL OF UNIVERSAL COMPUTER SCIENCE, August 2016 Vol. 22, Num. 7, Page 956-991, August 2016,
- 9 Zeinab Iranmanesh, Mehrans. Fallah, "Specification and Static Enforcement of Scheduler-Independent Noninterference in a Middleweight Java", COMPUTER LANGUAGES SYSTEMS & STRUCTURES, May 2016 Vol. 46, Num. 2, Page 1-24, May 2016,
- 10 Fatemeh Imanimehr, Mehrans. Fallah, "How Powerful Are Run-time Monitors with Static Information?", COMPUTER JOURNAL, April 2016 Vol. 0, Num. 0, Page 1-14, April 2016,
- 11 Behnam Satarzadeh, Mehrans. Fallah, "Automated Type-Based Analysis of Injective Agreement in the Presence of Compromised Principals", JOURNAL OF LOGIC AND ALGEBRAIC PROGRAMMING, June 2015 Vol. 84, Num. 1, Page 1-35, June 2015,
- 12 Ali Noorpllahi Ravari, Mehrans. Fallah, "A Nonmonotonic Modal Authorization Logic for Pervasive Computing", Security and Communication Networks, June 2014 Vol. 7, Num. 7, Page 1-15, June 2014,
- 13 Behnam Satarzadeh, Mehrans. Fallah, "Typing secure implementation of authentication protocols in environments with compromised principals", Security and Communication Networks, September 2013 Vol. 6, Num. 1, Page 1-16, September 2013,
- 14 Sepehr Amir-Mohammadian, Mehrans. Fallah, "Noninterference in a predicative polymorphic calculus for access control", COMPUTER LANGUAGES SYSTEMS & STRUCTURES, June 2013 Vol. 39, Num. 4, Page 1-15, June 2013,
- 15 Mehrans. Fallah, Nafiseh Kahani, "TDPF: A Traceback-based Distributed Packet Filter to Mitigate DDoS Attacks", Security and Communication Networks, January 2013 Vol. 7, Num. 1, Page 1-20, January 2013,
- 16 Mehrans. Fallah, Maryam Mouzerani, "A Game-Based Sybil-Resistant Strategy for Reputation Systems in Self-Organizing MANETs", COMPUTER JOURNAL, March 2011 Vol. 0, Num. 0, Page 0-0, March 2011,
- 17 Hamed Janzadeh, Seyed Kaveh Fayazbakhsh, Mehdi Dehghan Takht Fooladi, Mehrans. Fallah, "A secure credit-based cooperation stimulating mechanism for MANETs using hash chains", , September 2009 Vol. , Num. 25, Page 0-0, September 2009,
- 18 Mehrans. Fallah, "A Puzzle -Based Defense Strategy Against Flooding Attacks Using Game Theory", , September 2009 Vol. , Num. , Page 0-0, September 2009,
- 19 Azadeh Omrani, Mehrans. Fallah, "A Game -Theoretic Cooperation Stimulus Routing Protocol in Manets", , February 2008 Vol. , Num. 19, Page 0-0, February 2008,
- 20 Mehrans. Fallah, [en-name N/A], "Service Availability in Concurrent Systems-Part II:Analysis and Case Studies Using HSIP", , September 2007 Vol. , Num. 5, Page 0-0, September 2007,
- 21 Mehrans. Fallah, [en-name N/A], "Service Availability in Concurrent Systems-Part I:A Theory of Hierarchical Services of Interacting Processes", , September 2007 Vol. , Num. 5, Page 0-0, September 2007,
- 22 [en-name N/A], Mehrans. Fallah, "A framework for the analysis of denial of service attacks", , March 2004 Vol. , Num. 2, Page 0-0, March 2004,









Conference Papers

Portal Records

- 1 Nafiseh Kahani, Mehrans. Fallah, "A Reactive Defense Against Bandwidth Attacks Using Learning Automata ", International Conference on Availability, Reliability and Security, August 2018
- 2 Mohammad Ghorbani, Mehrans. Fallah, "Run-time Verification for Observational Determinism Using Dynamic Program Slicing ", Information Security Conference (ISC 2017), November 2017
- 3 Gohar Shakouri Gare Kani, Mehrans. Fallah, Zeinab Iranmanesh, "A Type System for Quantified Information-Flow Security in Java-Like Languages ", International Workshop on Software Assurance-International Conference on Availability, Reliability and Security, August 2016

- 4 Arash Afshar, Mehrans. Fallah, "Reconstructing Security Types for Automated Policy Enforcement in FABLE ", The 5th International Conference on Network and System Security, September 2011
- 5 Arash Afshar, Mehrans. Fallah, "Reconstructing Security Types for Automated Policy Enforcement in FABLE ", 5th International Conference on Network and System Security-NSS 2011, September 2011
- 6 Mazdak Ali Madadi, Mehrans. Fallah, "A Distributed Client-Puzzle Mechanism to Mitigate Bandwidth Attacks ", 5th International Conference on Network and System Security-NSS 2011, September 2011
- 7 Behnam Satarzadeh, Mehrans. Fallah, "Is Cryptoc Able to Detect Insider Attacks? ", 8th International Workshop on Formal Aspects of Security and Trust-FAST 2011, September 2011
- 8 Ali Noorplahi Ravari, Mehrans. Fallah, "A Logical View of Nonmonotonicity in Access Control ", International Conference on Security and Cryptography-Secrypt 2011, July 2011
- 9 [en-name N/A], Mehrans. Fallah, "HWSC An automatic web services composer ", , June 2009
- 10 Azadeh Omrani, Mehrans. Fallah, "Stimulating cooperation in MANETs using game theory ", , July 2007
- 11 Kobra Khanmohammadi, Mehrans. Fallah, "Distributed packet filtering based on IP traceback ", , December 2006

Taught Courses

| # | Course title | Description | Headlines | Date |
|---|---|---|---|-------------|
| 1 | Discrete Mathematics | To acquaint students with mathematical structures and their application in computer engineering and science |  | Spring 2022 |
| 2 | Formal Methods for Information Security | To acquaint students with formal approaches to the security of computer systems |  | Spring 2022 |
| 3 | Discrete Mathematics | To acquaint students with mathematical structures and their application in computer engineering and science |  | Spring 2022 |
| 4 | Game Theory | آشنا نمودن دانشجویان با مفاهیم نظریه بازیها و کاربردهای آن |  | Fall 2021 |
| 5 | (Special Topics (Program Analysis | This graduate course acquaints the students of software engineering with the techniques and skills of program analysis that are widely used in compilers and software development tools to improve productivity, reliability, and security. The students w |  | Fall 2021 |
| 6 | Programming Languages | This course acquaints students with the concepts and constituents of programming languages. It also surveys the constructs and capabilities typically found in modern programming languages with attention to design trade-offs and implementation consider |  | Fall 2021 |
| 7 | Discrete Mathematics | To acquaint students with mathematical structures and their application in computer engineering and science |  | Spring 2021 |
| 8 | Formal Methods for Information Security | To acquaint students with formal approaches to the security of computer systems |  | Spring 2021 |

9 Discrete Mathematics To acquaint students with mathematical structures and their application in computer engineering and science



Spring
2021