# Curriculum Vitae of Mohammad Abdollahi Azgomi
### *Updated: February 5, 2024*

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| **First Name:** | **Mohammad** |
| **Last Name:** | **Abdollahi Azgomi** |
| **Languages:** | English, Persian |
| **Occupation:** | Professor of Computer Engineering, School of Computer Engineering (CE), Iran University of Science and Technology (IUST) |
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## Contents

## 1.  EDUCATION

- Ph.D. in Computer Engineering (Software) from Department of Computer Engineering, Sharif University of Technology, Tehran, Iran (2005):
  - Dissertation: *High-Level Extensions for Stochastic Activity Networks: Theories, Tools and Applications*
  - Advisor: Prof. Ali Movaghar

- M.S. in Computer Engineering (Software) from Department of Computer Engineering, Sharif University of Technology, Tehran, Iran (1996):
  - Thesis: *Design and Implementation of Security Services for Computer Networks*
  - Advisor: Prof. Ali Movaghar
  - *Graduated with honors*

- B.S. in Computer Engineering (Software) from Department of Computer Engineering, Sharif University of Technology, Tehran, Iran (1991):
  - Project: *Text Retrieval System Based on Hypertext*
  - Advisor: Dr. Mehrdad Fahimi

- Diploma in Mathematics and Physics from Bijan Haghiri High-School, Sowme'eh Sara, Gilan, Iran (1987)

## 2. PROFESSIONAL BACKGROUND

**Academic/Scientific:**

- Professor of Computer Engineering, School of CE, IUST (2022-Present)

- Associate Professor of Computer Engineering, School of CE, IUST (2013-2022)

- Assistant Professor of Computer Engineering, School of CE, IUST (2005-2013)

- Research Deputy, School of CE, IUST (2020-2023)

- Director, Trustworthy Computing Laboratory (TwCL), School of CE, IUST (2006-Present)

- Member of ICT Strategic Council, Technical and Vocational University (TVU) (2021-2022)

- Member of the Board, Cyber-Physical Systems Society of Iran (CPSSI) (2018-2022)

- Director, ICT Sector Liaison, Research Deputy, IUST (2016-2017)

- Member, Editorial Board, The CSI Journal on Computing Science and Information Technology (CSIT) (2015-Present)

- Director, Computer Networks Department, School of CE, IUST (2015-2017)

- Member, Computer Engineering Curriculum Setting Committee, Ministry of Science, Research and Technology of Iran (2014-2018)

- Member, Computer Networks Department, School of CE, IUST (2011-Present)

- Member of the Scientific Committee, Iranian Society of Cryptology (ISC) (2010-2022)

- Director, Information Technology Department, E-Learning Center, IUST (2006-2012)

- Director, Scientific Affairs of Students, School of CE, IUST (2006-2008)

- Member, Software Department, School of CE, IUST (2005-Present)

**Vocational:**

- Founder and CEO, Daneshgar Technology Co. (1998-Present)

- Member of the Board and Manager of software division, Rahyab Fan Ava Co. (2001-2005)

## 3. RESEARCH AREAS

- Modeling and Simulation

- Petri Nets

- Performance and Dependability Evaluation

- Quantitative Evaluation

- Security and Privacy

- Trust Models

## 4. PC MEMBERSHIP

**PC Memberships of Recent/Upcoming Conferences:**

- ISCISC'24: PC Member, The 20th International ISC Conference on Information Security and Cryptology (ISCISC2024), Tarbiat Modares University, Oct. 16-17, 2024, Tehran, Iran.

- NIC'02: PC Member & Multidisciplinary Track Chair, National Informatics Conference, Institute for Research in Fundamental Sciences (IPM), Jan. 03-04, 2024, Tehran, Iran.

- ISCISC'23: PC Member, The 20th International ISC Conference on Information Security and Cryptology (ISCISC2023), Iranian Research Organization for Science & Technology (IROST), August 33-31, 2023, Tehran, Iran.

- NIC'01: PC Member & Multidisciplinary Track Chair, National Informatics Conference, Institute for Research in Fundamental Sciences (IPM), Jan. 04-05, 2023, Tehran, Iran.

- ISCISC'22: PC Member, The 19th International ISC Conference on Information Security and Cryptology (ISCISC'22), University of Guilan, August 31-September 1, 2022, Gilan, Iran.

- RTEST'22: PC Co-chair, The 4th CPSSI International Symposium on Real-Time and Embedded Systems and Technologies (RTEST 2022), Iran University of Science and Technology, May 30-31, 2022, Tehran, Iran.

- ISCISC'21: PC Member, The 18th International ISC Conference on Information Security and Cryptology, University of Isfahan, Sept. 1-2, 2021, Isfahan, Iran.

- CSICC'21: PC Member & Computer Security Track Chair, The 26th National Annual CSI Conference of the Computer Society of Iran, K. N. Toosi University of Technology, March 3-4, 2021, Tehran, Iran.

- NIC'99: PC Member & Multidisciplinary Track Chair, National Informatics Conference, Institute for Research in Fundamental Sciences (IPM), Dec. 23-24, 2020, Tehran, Iran.

- ISCISC'20: PC Member, The 17th International ISC Conference on Information Security and Cryptology, Iran University of Science and Technology (IUST), Sept. 9-10, 2020, Tehran, Iran.

- RTEST'20: PC Member, The 3rd The CSI/CPSSI International Symposium on Real-Time and Embedded Systems and Technologies Institute for Research in Fundamental Sciences (IPM), June 10-11, 2020, Tehran, Iran.

- CSICC'20: PC Member & Computer Security Track Chair, The 25th National Annual CSI Conference of the Computer Society of Iran, Iran University of Science and Technology, Jan 1-2, 2020, Tehran, Iran.

- NIC'98: PC Member & Multidisciplinary Track Chair, National Informatics Conference, Institute for Research in Fundamental Sciences (IPM), Dec. 15-16, 2019, Tehran, Iran.

- ISCISC'19: PC Member, The 16th International ISC Conference on Information Security and Cryptology, Ferdowsi University of Mashhad, Aug. 28-29, 2019, Mashhad, Iran.

- ISCISC'18: PC Member, The 15th International ISC Conference on Information Security and Cryptology, Shahid Rajaee Teacher Training University, Aug. 28-29, 2018, Tehran, Iran.

- RTEST'18: PC Member, The 2nd CSI Symposium on Real-Time and Embedded Systems and Technologies, University of Tehran (College of Engineering), May 9-10, 2018, Tehran, Iran.

- ISCISC'17 PC Member, The 14th International ISC Conference on Information Security and Cryptology, Shiraz University, Sept. 6-7, 2017, Tehran, Iran.

- CSICC'17: PC Member & Information Technology Track Chair, The 22nd National Annual CSI Conference of the Computer Society of Iran, Sharif University of Technology, March 11-13, 2017, Tehran, Iran.

- CSIV'17: PC Member, The 2nd Conference on Cyberspace Security Incidents and Vulnerabilities, Ferdowsi University of Mashhad, March 8-9, 2017, Mashhad, Iran.

- FSEN'17: PC Member, The 7th IPM International Conference on Fundamentals of Software Engineering, April 26-28, 2017, Tehran, Iran.

- GAIWDSP'16: PC Member, The 2016 German-Austrian-Iranian Workshop on Digital Security and Privacy, Oct. 30, 2016, Tehran, Iran.

- ISCISC'16  PC Member, The 13th International ISC Conference on Information Security and Cryptology, Sept. 7-8, 2016, Tehran, Iran.
- CSICC'16: PC Member & Information Technology Track Chair, The 21st National Annual CSI Conference of the Computer Society of Iran, The Institute for Research in Fundamental Sciences (IPM), March 9-11, 2016, Tehran, Iran.
- RTEST'15:  PC Member, The CSI Symposium on Real-Time and Embedded Systems and Technologies, Oct. 7-8, 2015, Tehran, Iran.
- ISCISC'15:  PC Member, The 12th International ISC Conference on Information Security and Cryptology, Sept. 8-10, 2015, Gilan, Iran.
- IKT'15:  PC Member, The 7th International Conference on Information Knowledge and Technology, Urmia University, May 26-28, Urmia, Iran.
- ICEE'15:  PC Member, The 23rd Iranian Conference on Electrical Engineering, Sharif University of Technology, May 10-14, 2015, Tehran, Iran.
- FSEN'15:  PC Member, The 6th IPM International Conference on Fundamentals of Software Engineering, April 22-24, 2015, Tehran, Iran.
- CSICC'15:  PC Member, The 20th National Annual CSI Conference of the Computer Society of Iran, Ferdowsi University of Mashhad, March 3-5, 2015, Mashhad, Iran.
- ISCISC'14:  PC Member & Network Security Track Chair, The 11th International ISC Conference on Information Security and Cryptology, Sept. 3-4, 2014, Tehran, Iran.
- FSEN'13:  PC Member, The 5th IPM International Conference on Fundamentals of Software Engineering, April 24-26, 2013, Tehran, Iran.
- CSSE'11:  PC Member, The 2011 CSI International Symposium on Computer Science and Software Engineering, June 15-16, 2011, Tehran, Iran.

# 5.  ACHIEVEMENTS

- Best Researcher of the Year, School of Computer Engineering, Iran University of Science and Technology, 2013, 2014, 2016 and 2017.
- Best Paper: R. Fathi and M. Abdollahi Azgomi, "Implementation of a Symbolic State Space Generator for SDES Descriptions in PDETool Framework," *The 17th Annual National CSI Computer Conference (CSICC'12)*, Sharif University of Technology, Tehran, Iran, March 6-8, 2012.
- Best Paper: M. Akbarzadeh and M. Abdollahi Azgomi, "Modeling and Analysis of Agent-Based Specifications of Security Protocols Using CSANs and PDETool", *The 6th International Conference on Innovations in Information Technology (Innovations'09)*, UAEU, Al Ain, Emirates, Dec. 15-17, 2009.
- Best Bachelor Thesis Supervisor Award, Education Deputy, Iran University of Science and Technology, 2009.
- Best Lecturer Award, E-Learning Center, Iran University of Science and Technology, 2008.
- Distinguished M.S. graduate, Department of Computer Engineering, Sharif University of Technology, 1996.

# 6.  TEACHING EXPERIENCES

*Graduate Courses:*

- Performance Evaluation of Computer Systems (PECS)
- Dependable Software Systems (DSS)
- Secure Software Development (SSD)
- Formal Specification and Verification of Programs (FSVP)
- Secure Computer Systems
- Security of Software Systems
- Advanced Topics in Software Systems Security

- Network Security

- Communication and Concurrency (C&C) (Model Checking)

- Stochastic Processes

- Data Protection

- Fundamentals of Cryptography

- Electronic Commerce Technologies

*Undergraduate Courses:*

- Research Methods and Presentation (RMP)

- Computer Simulation

- Formal Methods in Software Engineering (FMSE)

- Software Testing (ST)

- Discrete Mathematics (DiM)

- Theory of Computation

- Concurrent Programming

- Advanced Programming

- Fundamentals of Computer and Programming

- Information Technology Engineering I

- Machine Language and System Programming

- Principles of Design and Implementation of Compilers

## 7. SOFTWARE TOOLS DEVELOPED

| Tool Name | Date | Place | Contributors | Description |
|---|---|---|---|---|
| *SQME Tool* | 2015 | IUST-CE/TwCL | A. Sedaghatbaf, M. Abdollahi Azgomi | A Tool for Modeling and Evaluation of Software Quality Attributes |
| *DSCMC* | 2011-2013 | IUST-CE/TwCL | E. Ghassabani, M. Abdollahi Azgomi | A Distributed Stateless Code Model Checker |
| *DCAS* | 2010-2012 | IUST-CE/TwCL | M. Ashtiani, M. Abdollahi Azgomi | A Distributed Cyber Attack Simulator Based on HLA |
| *HCSAMTool* | 2010-2012 | IUST-CE/TwCL | A. Sedaghatbaf, M. Abdollahi Azgomi | A Tool for Attack Modeling and Security Evaluation Base on Stochastic Activity Networks |
| *PDETool* | 2008-2010 | IUST-CE/TwCL | A. Khalili, A. Jalaly Bidgoly, M. Abdollahi Azgomi | A Tool for Performance and Dependability Modeling and Evaluation Based on SDES Description |
| *SimGine* | 2008-2010 | IUST-CE/TwCL | A. Khalili, A. Jalaly Bidgoly, M. Abdollahi Azgomi | A Simulation Engine for Stochastic Discrete-Event Systems |
| *SANBuilder* | 1999-2004 | SUT-CE/PDL | M. Abdollahi Azgomi, A. Movaghar | A Modelling Tool for Hierarchical Stochastic Activity Networks |
| *SharifSAN* | 1996-1999 | SUT-CE/PDL | M. Abdollahi Azgomi, A. Movaghar | A Modeling Tool for a New Definition of Stochastic Activity Networks |

## 8. PUBLICATIONS

**Authored Book:**

- M. Abdollahi Azgomi and H. Motallebi, *Performance Evaluation of Computer Systems: A Model-Based Approach*, KGUT Publication, 2023 (in *Persian*)

**ISI-JCR Journal Papers:**

1.  R. Naseri, M. Abdollahi Azgomi and A. Naghash Asadi, "Task Offloading in an Optimized Power-Performance Manner," *International Journal of Communication Systems*, Wiley, 2023, *In Press*, DOI: 10.1002/dac.5686

2.  A. Sanahmadi, M. Abdollahi Azgomi, and S. Goudarzi, "An SRN-based model for quantitative evaluation of IoT quality attributes," *Internet of Things*, vol. 23, p. 100894, 2023.

3.  A. Naghash Asadi, M. Abdollahi Azgomi, and R. Entezari-Maleki, "Evaluation of the functionality of mobile wireless sensor networks using stochastic reward nets," *Scientia Iranica*, vol. 30, no. 1, pp. 91-103, 2023.

4.  M. Hosseinnezhad, M. Abdollahi Azgomi, and M. R. E. Dishabi, "A probabilistic trust model for cloud services using Bayesian networks," *Soft Computing*, pp. 1-18, 2023.

5.  S. Anvari, M. Abdollahi Azgomi, M. Ebrahimi Dishabi, and M. Maheri, "Weighted K-nearest neighbors classification based on Whale optimization algorithm," *Iranian Journal of Fuzzy Systems*, 2023.

6.  A. Shimi, M. R. Ebrahimi Dishabi, and M. Abdollahi Azgomi, "An intelligent parking management system using RFID technology based on user preferences," *Soft Computing*, vol. 26, no. 24, pp. 13869-13884, 2022.

7.  J. J. Lotf, M. Abdollahi Azgomi, and M. R. E. Dishabi, "An improved influence maximization method for social networks based on genetic algorithm," *Physica A: Statistical Mechanics and its Applications*, vol. 586, p. 126480, 2022.

8.  S. Goudarzi et al., "A privacy-preserving authentication scheme based on Elliptic Curve Cryptography and using Quotient Filter in fog-enabled VANET," *Ad Hoc Networks*, vol. 128, p. 102782, 2022.

9.  H. Ahmadi, M. Ashtiani, M. Abdollahi Azgomi, and R. Saheb-Nassagh, "A DQN-based agent for automatic software refactoring," *Information and Software Technology*, vol. 147, p. 106893, 2022.

10. A. Allahverdi Mamaghani, M. R. Ebrahimi Dishabi, S. Tabatabaei, and M. Abdollahi Azgomi, "A novel clustering protocol based on willow butterfly algorithm for diffusing data in wireless sensor networks," *Wireless Personal Communications*, vol. 121, no. 4, pp. 3425-3450, 2021.

11. S. Goudarzi et al., "Real-time and intelligent flood forecasting using UAV-assisted wireless sensor network," *Computers, Materials and Continua*, vol. 70, no. 1, pp. 715-738, 2021.

12. M. Hanaforoosh, M. Ashtiani, and M. Abdollahi Azgomi, "An approach based on multiplex networks for modeling cascading trust failures in social networks," *Journal of Computational Science*, vol. 54, p. 101430, 2021.

13. A. Naghash Asadi, M. Abdollahi Azgomi, and R. Entezari-Maleki, "Model-based evaluation of the power versus performance of network routing algorithms," *Computing*, pp. 1-24, 2021.

14. A. Naghash Asadi, M. Abdollahi Azgomi, and R. Entezari-Maleki, "Analytical evaluation of resource allocation algorithms and process migration methods in virtualized systems," *Sustainable Computing: Informatics and Systems*, vol. 25, p. 100370, 2020.

15. N. H. Aghdam, M. Ashtiani, and M. Abdollahi Azgomi, "An uncertainty-aware computational trust model considering the co-existence of trust and distrust in social networks," *Information Sciences*, vol. 513, pp. 465-503, 2020.

16. M. Ashtiani and M. Abdollahi Azgomi, "A novel trust evolution algorithm based on a quantum-like model of computational trust," *Cognition, Technology & Work*, vol. 21, pp. 201-224, 2019.

17. A. Naghash Asadi, M. Abdollahi Azgomi, and R. Entezari-Maleki, "Unified power and performance analysis of cloud computing infrastructure using stochastic reward nets," *Computer Communications*, vol. 138, pp. 67-80, 2019.

18. A. Sedaghatbaf and M. Abdollahi Azgomi, "SQME: A framework for modeling and evaluation of software architecture quality attributes," *Software & Systems Modeling*, vol. 18, pp. 2609-2632, 2019.

19. H. Orojloo and M. Abdollahi Azgomi, "Modelling and evaluation of the security of cyber-physical systems using stochastic Petri nets," *IET Cyber-Physical Systems: Theory & Applications*, vol. 4, no. 1, pp. 50-57, 2019.

20. A. Naghash Asadi, M. Abdollahi Azgomi, and R. Entezari-Maleki, "Evaluation of the impacts of failures and resource heterogeneity on the power consumption and performance of IaaS clouds," *The Journal of Supercomputing*, vol. 75, pp. 2837-2861, 2019.

21. S. Hosseini and M. Abdollahi Azgomi, "Dynamical analysis of a malware propagation model considering the impacts of mobile devices and software diversification," *Physica A: Statistical Mechanics and its Applications*, vol. 526, p. 120925, 2019.

22. A. Sedaghatbaf and M. Abdollahi Azgomi, "Reliability evaluation of UML/DAM software architectures under parameter uncertainty," *IET Software*, vol. 12, no. 3, pp. 236-244, 2018.

23. H. Orojloo and M. Abdollahi Azgomi, "A stochastic game model for evaluating the impacts of security attacks against cyber-physical systems," *Journal of Network and Systems Management*, vol. 26, pp. 929-965, 2018.

24. K. Karimian, M. Ashtiani, and M. Abdollahi Azgomi, "An approach based on the transferrable belief model for trust evaluation in web services," *Soft Computing*, vol. 22, pp. 7293-7311, 2018.

25. S. Hosseini and M. Abdollahi Azgomi, "The dynamics of an SEIRS-QV malware propagation model in heterogeneous networks," *Physica A: Statistical Mechanics and its Applications*, vol. 512, pp. 803-817, 2018.

26. J. Almasizadeh and M. Abdollahi Azgomi, "A probabilistic model for anonymity analysis of anonymous communication networks," *Telecommunication Systems*, vol. 69, pp. 171-186, 2018.

27. M. Ashtiani, Sh. Hakimi-Rad and M. Abdollahi Azgomi, "A Model of Trust Based on Uncertainty Theory International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems," *Internaltional Journal of Uncertainty, Fuzziness & Knowledge-Based Systems*, World Scientific, Vol. 26, No. 02, 2018, pp. 269-298.

28. A. Sedaghatbaf and M. Abdollahi Azgomi, "A method for dependability evaluation of software architectures," *Computing*, Springer , Vol. 100, 2018, pp. 119-150.

29. K. Karimian, M. Ashtiani and M. Abdollahi Azgomi, "An approach based on the transferrable belief model for trust evaluation in web services," *Soft Computing*, Springer, Vol. 22, 2018, pp. 7293-7311.

30. H. Orojloo and M. Abdollahi Azgomi, "A game-theoretic approach to model and quantify the security of cyber-physical systems," *Computers in Industry*, Elsevier, Vol. 88, 2017, pp. 44–57

31. H. Orojloo and M. Abdollahi Azgomi, "A method for evaluating the consequence propagation of security attacks in cyber-physical systems," *Future Generation Computer Systems (FGCS)*, Vol. 67, Elsevier, Feb. 2017, pp. 57-71

32. H. Orojloo and M. Abdollahi Azgomi, "Predicting the Behavior of Attackers and the Consequences of Attacks against Cyber-Physical Systems," *Security and Communication Networks*, Wiley, Vol. 9, Dec. 2016, pp. 6111–6136

33. S. Hosseini and M. Abdollahi Azgomi, "A model for malware propagation in scale-free networks based on rumor spreading process," *Computer Networks*, Vol. 108, Elsevier, Oct. 2016, pp. 97-107

34. S. Hosseini, M. Abdollahi Azgomi and A. Torkaman Rahmani, "Agent-based simulation of the dynamics of malware propagation in scale-free networks," *Simulation: Transactions of the Society for Modeling and Simulation International*, Vol. 92, No. 7, SAGE, July 2016, pp. 709-722

35. M. Ashtiani and M. Abdollahi Azgomi, "A formulation of computational trust based on quantum decision theory," *Information Systems Frontiers*, Vol. 18, No. 4, Springer, August 2016, pp. 735-764

36. M. Ashtiani and M. Abdollahi Azgomi, "A hesitatnt fuzzy model of computational trust considering hesitancy, vagueness and uncertainty," *Applied Soft Computing*, Vol. 42, Elsevier, May 2016, pp. 18-37

37. S. Hosseini, M. Abdollahi Azgomi and A. Torkaman Rahmani, "Malware propagation modeling considering software diversity and immunization" *Journal of Computational Science*, Vol. 13, Elsevier, March 2016, pp. 49-67

38. J. Amasizadeh and M. Abdollahi Azgomi, "A probabilistic model for anonymity analysis of anonymous communication networks," *Telecommunication Systems, The Special Issue on Secure Communications*, Springer, Accepted: July 10, 2014, Tentative: 2017, *In Press*

39. M. Ashtiani and M. Abdollahi Azgomi, "Trust modeling based on a combination of fuzzy analytic hierarchy process and fuzzy VIKOR," *Soft Computing*, Vol. 20, No. 1, Springer, Jan. 2016, pp. 399-421

40. S. Hosseini, M. Abdollahi Azgomi and A. Torkaman Rahmani, "Dynamics of a rumor spreading model with diversity of configurations in scale-free networks," *International Journal of Communication Systems*, Vol. 28, No. 18, Wiley, Dec. 2015, pp. 2255-2274

41. M. Dabaghchian and M. Abdollahi Azgomi, "Model checking the observational determinism security property using PROMELA and SPIN," *Formal Aspects of Computing,* Vol. 27, No. 5, Springer, Nov. 2015, pp. 789-804

42. M.R. Ebrahimi Dishabi and M. Abdollahi Azgomi, "Differential privacy preserving clustering in distributed datasets using Haar wavelet transform," *Intelligent Data Analysis*, Vo. 19, No. 6, IOS Press, Nov. 2015, pp. 1323-1353

43. M. Ashtiani and M. Abdollahi Azgomi, "A multi-criteria decision making formulation of trust using fuzzy analytic hierarchy process," *Cognition Technology and Work*, Vol. 17, No. 4, Springer, Nov. 2015, pp. 465-488

44. A. Jafarabadi and M. Abdollahi Azgomi, "A stochastic epidemiological model for the propagation of active worms considering the dynamicity of network topology," *Peer-to-Peer Networking and Applications*, Vol. 8, No. 6, Springer, Nov. 2015, pp. 1008-1022

45. M.R. Ebrahimi Dishabi and M. Abdollahi Azgomi, "Differential privacy preserving clustering using Daubechies-2 wavelet transform," *International Journal on Wavelets, Multiresolution and Information Processing (IJWMIP),*Vol. 13, No. 4, World Scientific, July 2015, 1550028 (35 pages)

46. M. Ashtiani and M. Abdollahi Azgomi, "A Survey of Quantum-Like Approaches to Decision Making and Cognition," *Mathematical Social Sciences*, Vol. 75, Elsevier, May 2015, pp. 49-80

47. H. Motallebi and M. Abdollahi Azgomi, "Parametric multisingular hybrid Petri nets: Formal definitions and analysis techniques," *Information & Computation*, Vol. 241C, Elsevier, 2015, pp. 321-348

48. E. Mojahedi and M. Abdollahi Azgomi, "Modeling the propagation of topology-aware P2P worms considering temporal parameters," *Peer-to-Peer Networking and Applications*, Vol. 8, No. 1, Springer, Jan. 30, 2015, pp. 171-180

49. M. Ashtiani and M. Abdollahi Azgomi, "Contextuality, Incompatibility and Biased Inference in a Quantum-Like Formulation of Computational Trust," *Advances in Complex Systems*, Vol. 17, No. 5, World Scientific, Sept. 4, 2014, 1450020 (61 pages)

50. M. Ashtiani and M. Abdollahi Azgomi, "A Distributed Simulation Framework for Modeling Cyber Attacks and the Evaluation of Security Measures," *Simulation: Transactions of the Society for Modeling and Simulation International*, Vol. 90, No. 9, SAGE, Sept. 03, 2014, pp. 1071-1102

51. J. Amasizadeh and M. Abdollahi Azgomi, "Mean privacy: a metric for security of computer systems," *Computer Communications*, Vol. 54C, Elsevier, July 2014, pp. 47-59.

52. M. R. Ebrahimi Dishabi and M. Abdollahi Azgomi, "Differential Privacy Preserving Clustering Based on Haar Wavelet Transform," *Intelligent Data Analysis*, Vol. 18, No. 4, IOS Press, July 23, 2014, pp. 583–608

53. A. Sedaghatbaf and M. Abdollahi Azgomi, "Attack Modeling and Security Evaluation Based on Stochastic Activity Networks," *Security and Communication Networks*, Vol. 7, No. 4, Wiley, April 2014, pp. 714-737

54. H. Motallebi and M. Abdollahi Azgomi, "Translation from Multisingular Hybrid Petri Nets to Multisingular Hybrid Automata," *Fundamenta Informaticae*, Vol. 130, No. 3, IOS Press, Feb. 2014, pp. 275-315

55. M.R. Ebrahimi Dishabi, M. Abdollahi Azgomi and A. M. Rahmani, "An Improved Technique for Privacy Preserving Clustering Based on Daubechies-2 Wavelet Transform," *International Journal on Wavelets, Multiresolution and Information Processing (IJWMIP)*, Vol. 11, No. 5, World Scientific, Oct. 2013, 1350039 (42 pages)

56. H. Motallebi, M. Abdollahi Azgomi, M. S. Mirzaei and A. Movaghar, "A New Extension of Activity Networks for Modelling and Verification of Timed Systems," *Turkish Journal of Electrical Engineering & Computer Sciences (TJEECS),*Vol. 21, No. 6, TÜBİTAK, Oct. 2013, pp. 1751-1779

57. J. Almasizadeh and M. Abdollahi Azgomi, "A Stochastic Model of Attack Process for the Evaluation of Security Metrics," *Computer Networks*, Vol. 57, No. 10, Elsevier, 2013, pp. 2158-2179

58. T. Broomandnezhad and M. Abdollahi Azgomi, "An Efficient Control-Flow Checking Technique for the Detection of Soft-Errors in Embedded Software," *Computers & Electrical Engineering*, Vol. 39, No. 4, Elsevier, 2013, pp. 1318-1330

59. A. Khalili, M. Abdollahi Azgomi and A. Jalaly, "SimGine: A Simulation Engine for Stochastic Discrete-Event Systems Based on SDES Description," *Simulation: Transactions of the Society for Modeling and Simulation International*, Vol. 89, No. 4, SAGE, April 2013, pp. 539-555

60. A. Jalaly Bidgoly and M. Abdollahi Azgomi, "A New Technique for Rare-Event Simulation Based on Partition of the Region," *Turkish Journal of Electrical Engineering & Computer Sciences (TJEECS)*, TÜBİTAK, ISSN: 1300-0632, Vol. 21, No. 2, March 2013, pp. 309-329

61. A. Khalilian, M. Abdollahi Azgomi and Y. Fazlalizadeh "An Improved Method for Test Case Prioritization by Incorporating Historical Test Case Data," *Science of Computer Programming (SCP)*, Vol. 78, No. 1, Elsevier, 2012, pp. 93-118

62. H. Motallebi and M. Abdollahi Azgomi, "Modelling and Verification of Hybrid Dynamic Systems Using Multisingular Hybrid Petri Nets," *Theoretical Computer Science (TCS)*, Elsevier, ISSN: 0304-3975, Vol. 446, Aug. 2012, pp. 48-74

63. B. Zare Moayedi and M. Abdollahi Azgomi, "A Game Theoretic Framework for Evaluation of the Impacts of Hackers Diversity on Security Measures," *Reliability Engineering & System Safety (RESS)*, Elsevier, ISSN: 0951-8320, Vol. 99, No. 1, March 2012, pp. 45-54

64. M. Dashtbozorgi and M. Abdollahi Azgomi, "A High-Performance and Scalable Multi-Core Aware Software Solution for Network Monitoring," *The Journal of Supercomputing*, Springer, ISSN: 0920-8542, Vol. 59, No. 2, Feb. 2012, pp. 720-743

65. S. Hajian and M. Abdollahi Azgomi, "On the Use of Haar Wavelet Transform and Scaling Data Perturbation for Privacy Preserving Clustering of Large Datasets," *International Journal of Wavelets, Multiresolution and Information Processing (IJWMIP)*, World Scientific, ISSN: 0219-6913, Vol. 9, No. 6, Dec. 2011, pp. 867-904

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**National (Iranian) Conference Papers:**

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2. E. Sargolzaee and M. Abdollahi Azgomi, "Preserving the Privacy of Published Social Networks Data Based on Graph Modification," *Proc. of the 10th International ISC Conference on Information Security and Cryptology (ISCISC'13)*, Yazd University, Yazd, Iran, Aug. 29-30, 2013 (in *Persian*)

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5. Z. Mousavi and M. Abdollahi Azgomi, "New Method for Determination of Effective History of Mutable Attributes in Usage Control Model," *Proc. of the First Conference on Intelligent Computer Systems and Applications (ITICS'11)*, Tehran, Iran, Dec. 21, 2011 (*in Persian*)

6. M. Ashtiani and M. Abdollahi Azgomi, "A Framework for High-Level Modeling and Simulation of Cyber Attacks for Evaluation of Availability," *Proc. of the 8th International ISC Conference on Information Security and Cryptology (ISCISC'11)*, Ferdowsi University of Mashhad, Mashhad, Iran, Sept. 14-15, 2011, pp. 93-98 (*in Persian*)

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9. R. Fathi and M. Abdollahi Azgomi, "Implementing a Symbolic State Space Generator for SDES Descriptions," *Proc. of the 2nd International Conference on Contemporary Issues in Computer and Information Sciences (CICIS'11)*, IASBS, Zanjan, Iran, May 31-June 2, 2011, pp. 470-475 (*in Persian*)

10. Sh. Torabi and M. Abdollahi Azgomi, "A New Parallel Numerical Solver for CTMCs," *Proc. of the 16th Annual National CSI Computer Conference (CSICC'11)*, Sharif University of Technology, Tehran, Iran, March 7-9, 2011, pp. 84-89 (*in Persian*)

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13. A. Vakili, M. Abdollahi Azgomi and M. Taromi, "A Solution for Security Modeling and Evaluation Based on Game Theory and Generalized Stochastic Petri Nets," *Proc. of the First Iranian Information and Communication Technology Congress* (IICTC'10), Tehran Metropolitan, Tehran, Iran, May. 22-24, 2010 (*in Persian*)

14. M. Taromi, M. Abdollahi Azgomi and A. Vakili, "Security Risk Estimation by Considering the Dependencies of the System Vulnerabilities," *Proc. of the First Iranian Information and Communication Technology Congress* (IICTC'10), Tehran Metropolitan, Tehran, Iran, May. 22-24, 2010 (*in Persian*)

15. T. Broomandnezhad and M. Abdollahi Azgomi, "A New Technique for Optimizing Software-Implemented Methods for Detection of Transient Faults in Embedded Software," *Proc. of the 15th Annual National CSI Computer Conference (CSICC'10)*, Niroo Research Institute, Tehran, Iran, Feb. 20-22, 2010 (*in Persian*)

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17. M.S.A. Najjar and M. Abdollahi Azgomi, "A New Technique for Anomaly Detection in Web Services using Hidden Markov Models," *Proc. of the 15th Annual National CSI Computer Conference (CSICC'10)*, Niroo Research Institute, Tehran, Iran, Feb. 20-22, 2010 (*in Persian*)

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53. S. Shariati, M. Sharifi and M. Abdollahi Azgomi, "Topology Approximation in Mobile Ad Hoc Networks using Stochastic Activity Networks and Neural Networks," *Proc. of the 13th National CSI Computer Conference (CSICC'08)*, Sharif University of Technology, Kish Island, Iran, March 9-11, 2008 (*in Persian*)

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55. A. Khalili and M. Abdollahi Azgomi, "Formal Modeling and Probabilistic Verification of an Intrusion Alert System in Wireless Sensor Networks," *Proc. of the 5th International Conference on Information and Knowledge Technology (IKT'07)*, Ferdowsi of Mashhad University, Mashhad, Iran, 27-29 Nov., 2007 (*in Persian*)

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58. S. Shirvani, S. Almassi and M. Abdollahi Azgomi, "Modeling and Analysis of Digital Library Preprocessing System Using Generalized Stochastic Petri Nets," *Proc. of the 12th Annual International CSI Computer Conference (CSICC'07)*, Tehran, Iran, Feb.20-22,, 2007, pp. 995-1002 (*in Persian*)

59. M. Nasri and M. Abdollahi Azgomi, "Designing Agents by Market Mechanism for e-Commerce Automation," *Proc. of the 12th Annual International CSI Computer Conference (CSICC'07)*, Tehran, Iran, Feb.20-22, , 2007, pp. 2098-2102 (*in Persian*)

60. Kamandi, M. Abdollahi Azgomi and A. Movaghar, "A Tool for Modeling with Object Stochastic Activity Networks," *Proc. of the 9th Annual International CSI Computer Conference (CSICC'04)*, Tehran, Iran, 2004, pp. 408-419 (*in Persian*)

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63. A. Movaghar and M. Abdollahi Azgomi, "An Overview on Some Design and Implemental Features of SharifSAN," *Research Proc. of Sharif University of Technology: Department of Computer Engineering*, Tehran, Iran, 2000, pp. 65-72 (*in Persian*)

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65. A. Movaghar, K. Davoodi and M. Abdollahi Azgomi, "Design and Implementation of a Firewall in Computer Networks," *Research Proc. of Sharif University of Technology: Department of Computer Engineering*, Tehran, Iran, 1999, pp. 137-145 (*in Persian*)

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## 9.   PRESENTATIONS

1. "Model-Based Quantitative Security Evaluation: Challenges, Results of Past Researches and Future Outlook ," Keynote Speech, The 13th International ISC Conference on Information Security and Cryptology (ISCISC'16), SBU, Tehran, Iran, Sept. 7-8 (2016)

2. "A Framework for Probabilistic Model Checking of Security Protocols Using Coloured Stochastic Activity Networks and PDETool," The 5th International Symposium on Telecommunications (IST'10), ITRC, Tehran, Iran, Dec. 4-6 (2010)

3. "Modeling and Analysis of Agent-Based Specifications of Security Protocols Using CSANs and PDETool," The 6th International Conference on Innovations in Information Technology (Innovations'09), UAEU, Al Ain, Emirates, Dec. 15-17 (2009)

4. "Towards an Anomaly Detection Technique Based on Kernel Methods for Web Services," The 6th International Conference on Innovations in Information Technology (Innovations'09), UAEU, Al Ain, Emirates, Dec. 15-17 (2009)

5. "A Majority Voter for Intrusion Tolerant Software Based on N-Version Programming Techniques," The 6th International Conference on Innovations in Information Technology (Innovations'09), UAEU, Al Ain, Emirates, Dec. 15-17 (2009)

6. "Combination of Duty and Historical Constraints in Role-Based Access Control," The 6th International Conference on Innovations in Information Technology (Innovations'09), UAEU, Al Ain, Emirates, Dec. 15-17 (2009)

7. "An Architecture for E-Voting Systems Based on Dependable Web Services," The 6th International Conference on Innovations in Information Technology (Innovations'09), UAEU, Al Ain, Emirates, Dec. 15-17 (2009)

8. "PDETool: A Multi-Formalism Modeling Tool for Discrete-Event Systems Based on SDES Description," ICATPN'09, Paris, France, June 22-26 (2009)

9. "A Case Study on Application of CSAN Models on Network Modeling," *CSNDSP'06*, Patras, Greece, July 19-21 (2006)

10. "A Modelling Tool for Hierarchical Stochastic Activity Networks," *ESM/ASMTA'04*, Magdeburg, Germany, June 13-16 (2004)

11. "Towards an Object-Oriented Extension for Stochastic Activity Networks," *AWPN'03*, Eichstaett, Germany, Sept. 26-27 (2003)

12. "Coloured Stochastic Activity Networks: Preliminary Definitions and Properties," *ICALP'03 Satellite Workshop on SPNs*, Eindhoven, The Netherlands, June 28-29 (2003)

13. "Performance Evaluation of Computer and Communication Systems with SharifSAN," *CSICC'01*, Isfahan, Iran (March 2001)

14. "A Tool for Verification of Concurrent Systems Using Activity Networks," *CSICC'00*, Tehran, Iran (March 2000)

15. "Security Enhancement for Network Services," *CSICC'97*, Tehran, Iran (Dec. 1997)

# 10. PH.D. STUDENTS

**Current Ph.D. Students:**

1. Fatemeh Bakhshi, Ph.D. Student in Computer Engineering (Software) (started: Fall 2021)

2. Saiedeh Ghafoori, Ph.D. Student in Computer Engineering (Network and Computing) (started: Fall 2021)

3. Mahrad Hanaforoush, Ph.D. Candidate in Computer Engineering (Software) (started: Fall 2019)

4. Arman Sanahmadi, Ph.D. Candidate in Computer Engineering (Network and Computing) (started: Fall 2018)

**Graduated Ph.D. Students (IUST):**

1. Dr. Ali Naghash Asadi, Ph.D. in Computer Engineering (Software) (IUST-CE) (2015-2020):

   o Thesis Title: Unified Power and Performance Modeling and Evaluation in Computing Systems

2. Dr. Ali Sedaghatbaf, Ph.D. in Computer Engineering (Software) (IUST-CE) (2013-2018):

   o Thesis Title: A Framework for Quantitative Evaluation of the Quality Attributes of Software Architecture

3. Dr. Hamed Sepehrzadeh (Orojloo), Ph.D. in Computer Engineering (Software) (IUST-CE) (2012-2017):

   o Thesis Title: A Method for Modeling and Quantitative Security Evaluation of Cyber-Physical Systems

4. Dr. Soodeh Hosseini, Ph.D. Computer Engineering (Software) (IUST-CE) (2011-2016):

   o Thesis Title: Modeling and Evaluation of the Effects of Software Diversification on Malware Propagation

5. Dr. Jaafar Almasizadeh, Ph.D. in Computer Engineering (Software) (IUST-CE) (2009-2016)

   o Thesis Title: A Formal Model for Privacy Quantification

6. Dr. Mehrdad Ashtiani, Ph.D. in Computer Engineering (Software) (IUST-CE) (2011-2015):

   o Thesis Title: A Computational Model of Trust in Support of Software Trust Management Components

7. Dr. Hassan Motallebi, Ph.D. in Computer Engineering (Software) (IUST-CE) (2008-2013):

   o Thesis Title: A Formalism for Modeling and Timing Analysis of Hybrid Systems

**Graduated Ph.D. Students (Other Universities):**

8. Dr. Jalil Jabbari Lotf, Ph.D. in Computer Engineering (Software) (M-IAU) (2018-2023):

   o Thesis Title: Maximization and Estimation of Individuals' Influence in Social Networks

9. Dr. Mohammad Reza Ebrahimi Dishabi, Ph.D. in Computer Engineering (Software) (IAU-SRB) (2010-2013):

   o Thesis Title: Improved Methods for Privacy Preserving Clustering Based on Wavelet Transforms

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