Zahra Pooranian

Postdoctoral Research Associate

Contact

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Research Interests

- Cloud Security
- Data Privacy
- Security of Advertising
- Cloud/ Fog Computing
- Smart Grid System
- Wireless Sensor Network
- Machine Learning

Professional Experience

2017-Present **Postdoctoral Research Associate** University of Padua, Italy
SPRITZ Security and Privacy Research Group, Padua, Italy
Advisor: Prof. Mauro Conti

Education

2014–2017 **Ph.D.** in Computer Science University of Rome "La Sapienza", Italy
Thesis: On Automating Design of Smart Grid Systems
Advisor: Prof. Enrico Tronci

2009–2012 **M.Sc.** in Computer Engineering University of Dezful, Iran
Thesis: Designing a New Job Scheduling Based on Artificial Intelligence Algorithms for Computational Grid Systems. GPA (18.57/20.00)
Advisor: Prof. Ali Harounabadi

2005–2007 **B.Sc.** in Computer Engineering University of Mahshahr, Iran
Thesis: Module Programming in Linux Kernel. GPA (14.71/20.00)
Advisor: Prof. Amir.M.Rahmani

2002–2004 **Post.Diploma.** in Computer Engineering University of Dezful, Iran
Thesis: Automated Warehousing System. GPA (16.97/20.00)
Advisor: Prof. Jamshid Shanbehzadeh

Research Experience

2017–Present **University of Padua, Italy, Research Assistant** Padua, Italy

- **Horizon 2020:** TagItSmart!, Internet of Things and Platforms for Connected Smart Objects- Smart Tags driven service platform for enabling ecosystems of connected objects

2016–2019 **University of Rome "La Sapienza", Italy, Research Assistant** Rome, Italy

- **Italian PRIN15:** GAUCHO, A Green Adaptive Fog Computing and Networking Architecture

2013–2016 **University of Rome "La Sapienza", Italy, Research Assistant** Rome, Italy

- **FP7-ICT project:** SmartHG, Energy Demand Aware Open Services for Smart Grid Intelligent Automation

- **FP7-ICT project:** PAEON, Model Driven Computation of Treatments for Infertility Related Endocrinological Diseases

Teaching Experience

2009–2013 **Dezful University** Dezful, Iran

- Network, Software Engineering, Programming Languages, Strong and Retrieval Of Data

2011–2013 **Andimeshk University** Andimeshk, Iran

- Programming Languages, Network, Web Programming, Graphic Design, Strong and Retrieval Of Data

Fall 2013 **University of Applied Science and Technology** Dezful, Iran

- System Analysis and Design, Object Oriented Analysis and Design

Publications

h-index: 11
i10-index: 12
Citations: 342+

- **Work Under Review**

2. M. Fathi, M. Nazari, **Z. Pooranain**, M. Shojafar, Sh. Shamshirband, M. Conti, A. Gani, Computational Intelligence Intrusion Detection Techniques in (Mobile) Cloud Computing Environment: Review, Taxonomy, and Open Research Issues, KAIS Journal, **IF=2.004**, 2017.

4. P.G. Vineuza, **Z. Pooranian**, M. Shojafar, M. Conti, R. Buyya, FOCAN: A Fog-supported Smart City Network Architecture for Management of Applications in the Internet of Everything Environments, Elsevier, JPDC, **IF=1.9**, pp. 1-17, October 2017.

5. **Z. Pooranian**, J. H. Abawajy, M. Conti, Scheduling Distributed Energy Resource Operation and Daily Power Consumption for a Smart Building to Optimize Economic and Environmental Considerations, Elsevier, Applied Energy, **IF=7.182**, 2017.

6. H. Mehdi, **Z. Pooranian**, A. Abraham, M. Conti, "Cloud Traffic Prediction based on Fuzzy ARIMA Model with Low Dependence on Historical Data", Neural Computing and Applications, **IF=2.505**, 2018.

- **Conference and Journal Publications**

1. **Z. Pooranian**, K-Ch. Chen, Ch-Mu. Yu, M. Conti. RARE: Defeating Side Channels based on Data-Deduplication in Cloud Storage. In Proceedings of the 7th International workshop on Cloud Computing Systems, Networks, and Applications (**IEEE INFOCOM** 2018 workshop: CCSNA 2018), in press, Honolulu, USA, April 16, 2018.
2. F. Hajeforosh, **Z. Pooranian**, A. Shabani, M. Conti. Evaluating the High Frequency Behavior of the Modified Grounding Scheme in Wind Farms. In (MDPI) Applied Sciences, **IF=1.679**, Vol. 7, Iss. 12, 2017.
3. P. G. V. Naranjo, **Z. Pooranian**, Sh. Shamshirband, J. H. Abawajy, M. Conti. Fog over Virtualized IoT: New Opportunity for Context-Aware Networked Applications and a Case Study. In (MDPI) Applied Sciences, **IF=1.679**, Vol. 7, Iss. 12, 2017.
4. M. Shojafar, **Z. Pooranian**, P.G.V. Naranjo, E. Baccarelli, FLAPS: Bandwidth and Delay-efficient Distributed Data Searching in Fog-supported P2P Content Delivery Networks, Springer, Journal of Supercomputing (SUPE), **IF=1.3**, Vol. 73, Iss. 12, pp. 5239–5260, December 2017.
5. **Z. Pooranian**, M. Shojafar, P.G. V. Naranjo, L. Chiaraviglio, M. Conti, A Novel Distributed Fog-based Networked Architecture to Preserve Energy in Fog Data Centers, 14th **IEEE MASS**, Florida, USA, pp. 604-609, October 2017.
6. P.G. Vineuza, M. Shojafar, H. Mostafaei, **Z. Pooranian**, E. Baccarelli, P-SEP: A Prolong Stable Election Routing Algorithm for Energy-limited Heterogeneous Fog-supported Wireless Sensor Networks, Springer, Journal of Supercomputing (SUPE), **IF=1.3**,Vol. 73, Iss. 2, pp. 733–755, 2017.
7. **Z. Pooranian**, N. Nikmehr, S. Najafi-Ravadanegh, H. Mahdin, J. Abawajy, Economical and environmental operation of smart networked microgrids under uncertainties using NSGAII, 24th IEEE SOFTCOM, Split, Croatia, August 2016.
8. **Z. Pooranian**, M. Shojafar, J.H. Abawajy, A. Abraham, An Efficient Meta-heuristic Algorithm for Grid Computing, Springer, Journal of Combinatorial Optimization (JOCO), **IF=1.2**, Vol. 30, No. 3, pp. 413-434, 2015.
9. M. Shojafar, **Z. Pooranian**, M.R. Meybodi, M. Singhal, ALATO: An Efficient Intelligent Algorithm for Time Optimization in an Economic Grid Based on Adaptive Stochastic Petri Net, Springer, Journal of Intelligent Manufacturing (JIMS), **IF=3.1**, Vol. 26, Iss. 4, pp. 641–658, August 2015.
10. M. Shojafar, J.H. Abawajy, Z. Delkhah, A. Ahmadi, **Z. Pooranian**, A. Abraham, An Efficient and Distributed file search in Unstructured Peer-to-Peer Networks, Springer, Peer-to-Peer networking and Applications, **IF=1.26**, Vol. 8, No. 1, pp. 120-136, January 2015.
11. M. Shojafar, **Z. Pooranian**, M. Shojafar, A. Abraham, LLLA: New Efficient Channel Assignment Method in Wireless Mesh Networks, Springer Invited Book Chapter in Innovations in Bio-inspired Computing and Applications Advances in Intelligent Systems and Computing, Vol. 237, pp. 143-152, January 2014.
12. **Z. Pooranian**, M. Shojafar, B. Javadi, A. Abraham, Using Imperialist Competition Algorithm for Independent Task Scheduling in Grid Computing, IOS Press, Journal of Intelligent and Fuzzy Systems, **IF=1.26**, Vol. 27, No. 1, pp. 55-67, July 2014.
13. R. Tavoli, E. Kozegar, M. Shojafar, H. Soleimani, **Z. Pooranian**, Weighted PCA for improving Document Image Retrieval System based on keyword spotting accuracy, Telecommunications and Signal Processing (TSP), 2013 36th International Conference on, Rome, Italy, pp. 773-777, 2-4 July 2013.

14. **Z. Pooranian**, M. Shojafar, R. Tavoli, M. Singhal, A. Abraham, A hybrid metaheuristic algorithm for Job scheduling on computational grids, Informatica, **IF=0.873**, Vol. 37, No. 2, pp. 157, 2013.
15. **Z. Pooranian**, M. Shojafar, J.H. Abawajy, M. Singhal, GLOA: A New Job Scheduling Algorithm for Grid Computing, International Journal of Interactive Multimedia and Artificial Intelligence (IJIMAI), **IF=0.83**, Vol. 2, No. 1, pp.59-64, March 2013.
16. M. Shojafar, **Z. Pooranian**, J.H. Abawajy, M.R. Meybodi, An Efficient Scheduling Method for Grid Systems Based on a Hierarchical Stochastic Petri Net, Journal of Computing Science and Engineering (JCSE), Vol. 7, No. 1, pp. 44-52, March 2013.
17. **Z. Pooranian**, M. Shojafar, B. Javadi, Independent Task scheduling in Grid Computing based on Queen Bee Algorithm, IAES International Journal of Artificial Intelligence (IJAI), December 2012.
18. **Z. Pooranian**, A. Harounabadi, M. Shojafar, N. Hedayat, New Hybrid Algorithm for Task Scheduling in Grid Computing to Decrease missed Task, ICCCIT, Vol. 55, pp. 5-9, 2011.
19. **Z. Pooranian**, A. Barati, A. Movaghar, Queen-bee algorithm for energy efficient clusters in wireless sensor networks. WASET, pp. 1080–1083, 2011.
20. **Z. Pooranian**, A. Harounabadi, M. Shojafar, J. Mirabedini, Hybrid PSO for Independent Task scheduling in Grid Computing to Decrease Makespan, 2nd ICFIT, Singapore, pp. 327-331, August 2011.

Honors and Awards

2017–2018 **Research Assistant Fellowship, University of Padua, Italy, H2020 Support, 19,500 Euro**

2014–2017 **Ph.D. Fellowship, University of Rome "La Sapienza", Italy, FP7 European Support, 16,800 Euro per year**

2018 **International Transactions on Electrical Energy Systems, Review Certificate Award**

2016 **Journal of Network and Computer Applications (JNCA), Review Certificate Award**

2012 **Ranked 5^{th} between M.Sc. holders for Master in Computer Engineering**

Certificates and Membership

2013 **Certificate LITEC-IRAN L.P.I, Sharif University, CCNA**

2013 **Certificate LITEC-IRAN L.P.I, Sharif University, CCNP**

2013 **Certificate LITEC-IRAN L.P.I, Sharif University, Web Design**

2016 **Conference Certificate of Presentation Paper- SOFTCOM- Split**

2011 **Conference Certificate of Presentation Paper- ICFIT- Singapore**

2014- Present **IEEE Computer Society**

Invited Talks

- "RARE: Defeating Side Channels based on Data-Deduplication in Cloud Storage", Paper presentation, 7^{th} International workshop on Cloud Computing Systems, Networks, and Applications (IEEE **INFOCOM** 2018 workshop: CCSNA 2018), Honolulu, USA, 2018.
- "A Novel Distributed Fog-Based Networked Architecture to Preserve Energy in Fog Data Centers", Paper presentation, IEEE 14^{th} International Conference on Mobile Ad Hoc and Sensor Systems (**MASS**), Orlando, FL, USA, 2017.
- "Economical and environmental operation of smart networked microgrids under uncertainties using NSGA-II", Paper presentation, 24^{th} IEEE **SOFTCOM**, Split, Croatia, 2016.
- "Hybrid PSO for Independent Task scheduling in Grid Computing to Decrease Makespan", Paper presentation, 2^{th} **ICFIT**, Singapore, 2011.

Academic Service and Volunteer

- **Academic Reviewer**
  - IEEE Transactions on Industrial Informatics, 2015
  - IEEE Transactions on Evolutionary Computation, 2016
  - Journal of Network and Computer Applications (Elsevier), 2016
  - Journal of Cluster Computing (Springer), 2015
  - Journal of Telecommunication Systems (Springer), 2014
  - Journal of Applied Soft Computing (Elsevier), 2014
  - Journal of Wireless Personal Communications (Springer), 2014
  - Journal of Supercomputing (Springer), 2014
- **Workshops Assistant**
  - TagItSmart - OC2 Workshop, Padua, Italy, 2018
  - SPRITZ-CLUSIT Workshop on Future Systems Security and Privacy, Padua, Italy, 2017
  - eWINE- Intelligent wireless connectivity for Future Networks (Presenters: Accademia Nazionale dei Lincei), Rome, Italy, 2016
  - Edge Computing, 5G, and IoT (Presenters: CISCO, Huawei, Samsung Electronics RD, ATOS, Telecom Italia, NEC, CEA), Rome, Italy, 2015
- **Committee Member**
  - Program Committee Member, 10^{th} International Conference On Security Of Information And Networks (SIN-2017), India, 2017

- Program Committee Member, International Conference Cloud and Trusted Computing 2018 (CTC 2018), Valletta, Malta, 2018

- **Editorial Member**
  - Editor, KSII Transactions on Internet and Information Systems, 2018
- **Mentored Researchers**
  - Project Mentor, Undergraduate/Graduate Students, 2010-2013
  - Ph.D. Mentor
    * QianQian Li, Ph.D. Candidate, Dept. Mathematics and HIT Center, University of Padua, Italy
    * Seyede Fatemeh Hajeforosh, Ph.D. Candidate, Dept. Electrical Engineering, University of Sweden
    * Hamid Mehdi, Ph.D. Candidate, Dept. Computer Engineering, University of Tehran

Industry Experience

2004–2007 **Avan-Pardaz Company** Dezful, Iran

- Software Designer, Project Manager, RD Analyst

2007–2008 **Dezful Registration Land and Documents Organization** Dezful, Iran

- Leading the over 20 Members of a Team
- Operating System Troubleshooting, Data Entry Consistency and Integrity Guarantee and Automation of the Land Registry System

Technical Skills

- **Scientific programming tools:** Modelica, CPLEX, CVX, LaTeX
- **Programming Languages:** C++, C, Java, Python, Bash Scripting, SQL, jQuery, PHP, CSS, ASP.Net, HTML, Assembly, Matlab
- **Operating Systems:** Linux, Windows, Mac OS

Languages

- **Persian:** Native
- **English:** English IELTS AT Score: 6.5
- **Italian:** Intermediate level