# CV: Peyman Teymoori

### PERSONAL INFORMATION

Family name, First name: Teymoori, Peyman

Date of birth: 1979
Gender: Male

Nationality: Iranian, Norwegian permanent resident
Researcher Unique https://orcid.org/0000-0002-9507-4373

Identifier:

URL for personal <a href="https://www.usn.no/english/about/contact-">https://www.usn.no/english/about/contact-</a>

websites: us/employees/peyman-teymoori

https://www.linkedin.com/in/peyman-teymoori-16a68424/ https://www.researchgate.net/profile/Peyman Teymoori

https://scholar.google.com/citations?user=55iOlb8AAAAJ&hl=en

### **EDUCATION**

2013 PhD in: Computer Engineering (Science)

PhD Subject Area: Wireless Communication Networks
Dissertation title: Scalability in Wireless Ad Hoc Networks

Grade: Excellent (the highest grade)

Supervisor: *Prof. Nasser Yazdani* 

University: School of Electrical and Computer Engineering, University of

Tehran, Iran

2004 Master in: Computer Engineering (Science)

Subject Area: Distributed/Autonomous/Intelligent Systems

Thesis title: Distributed Network Management in Active Networks using

**CORBA** 

Grade: 18.5 (in a 20 grade scale)
Supervisor: Prof. Hossein Pedram

University: Amirkabir University of Technology, Iran

2001 Bachelor in: Computer Engineering (Science)

Subject Area: Computer Networks, Distributed Systems

Thesis title: Network Management using Java Management Extension

Grade: 20 (in a 20 grade scale)
Supervisor: Prof. Mohsen Kahani

University: Ferdowsi University of Mashhad, Iran

### **LANGUAGES**

Persian (Native), English (Fluent), Norwegian (Upper intermediate – B2)

### RESEARCH INTERESTS (and some RELATED PUBLICATIONS)

Communication Networks: [j16 – j9, j7 – j1, c28, c26, c25, c23, c19,

Modelling, Optimization, Quality of Service c18, c17, c15, c13]

Recursive InterNetwork Architecture (RINA): [e2, j11, c25, c24, c21, c17, c16, r11]

for Distributed Computing, IoT, cyber-physical

(smart) systems

Artificial Intelligence: [j10, j8, b1, c6, c5, c3, r11, r10]

Machine Learning, RoboCup Rescue

Software Engineering: [b2, j8, c7, c3, r1]

Software Processes, Agile Processes, UML

Cybersecurity: [j10, c21, c19, c7, r11]

Security of wired/wireless networks and IoT

### **TAKEN COURSES DURING STUDIES**

### MSc:

Machine Learning, Advanced Artificial Intelligence, Distributed Artificial Intelligence, Distributed Systems, Parallel Systems, Advanced Computer Networks, Advanced Software Engineering.

### PhD:

Performance Modelling of Computer Network and Systems, Intelligent Transport Systems, Wireless Ad hoc and Sensor Networks, Real-Time and Embedded Systems, Stochastic Process, Network Optimization, Game Theory, Advanced Operating Systems.

# SOFTWARE DEVELOPMENT CONTRIBUTIONS (only public code listed)

- The RINASim simulator of the simulation platform OMNeT++
  - Link: <a href="https://rinasim.omnetpp.org/">https://rinasim.omnetpp.org/</a>
  - Description: RINASim is a stand-alone framework for OMNeT++ discrete event simulator environment that offers a reliable and the most up-to-date tool for simulating RINAbased computer networks.

### **CERTIFICATES**

- IBM Data Science Professional (certificate) 2021
  - What is Data Science (certificate)
  - Tools for Data Science (certificate)
  - Data Science Methodology (<u>certificate</u>)
  - Python for Data Science, AI & Development (<u>certificate</u>)
  - Python Project for Data Science (certificate)
  - Databases and SQL for Data Science with Python (<u>certificate</u>)
  - Data Analysis with Python (<u>certificate</u>)
  - Data Visualization with Python (<u>certificate</u>)
  - Machine Learning with Python (<u>certificate</u>)
  - Applied Data Science Capstone (<u>certificate</u>)

### Advanced Data Science with IBM Specialization (certificate in progress)

- o Fundamentals of Scalable Data Science
- Advanced Machine Learning and Signal Processing
- o Applied AI with Deep Learning
- Advanced Data Science Capstone

# • Cisco Instructor training program (certificate)

- Cybersecurity Operations (CyberOps) 2022
  - eligible to officially teach Cisco CyberOps Associate<sup>1</sup>

### **TECHNICAL SKILLS**

### AI & ML:

Machine learning models in Mathematica, MATLAB, and Python.

### **Data Science:**

Statistics, Databases (SQL), Plotting and Visualization, Optimization, Big Data

### Cyber-physical systems:

IoT devices, Raspberry pi, Jetson Nano, Arduino

## **Development and simulation:**

C/C++, Java, Python, NS-2, OMNeT++, SQL, DevOps, GitLab CI/CD.

### **Software processes:**

Agile methodologies, Rational Unified Process (RUP), Extreme Programming (XP).

### **CURRENT POSITIONS**

2023 – Title: Associate Professor

Type: Full-Time

Place: University of South-Eastern Norway, Drammen

Tasks: Program Coordinator of Industry Bachelor in IT and

Information Systems (IT), Teaching, Research

2022 – Title: Subject Matter Expert

Type: Part-time Place: Noroff<sup>2</sup>

Tasks: Course content development, lecturing, supervision

# **PREVIOUS POSITIONS**

2022 – 2023 Title: Visiting Scholar

Place: University of Oslo

Tasks: Research, Student co-supervision

 $<sup>{\</sup>color{blue} 1 \\ \underline{ https://www.cisco.com/c/en/us/training-events/training-certifications/certifications/associate/cyberops-associate.html} }$ 

<sup>2</sup> https://www.noroff.no/en/

*2022 – 2023* Title: **Lecturer** 

Type: Part-time

Place: Kristiania University college

Tasks: Teaching

*2016 – 2022* Role: [RP1]

Researcher (technical co-lead, researcher, co-supervisor)

Project: OCARINA<sup>3</sup> (Toppforsk project)

Place: Department of Informatics, University of Oslo, Norway

Funded by: Research Council of Norway

2015 – 2016 [RP2]

Role: Postdoc (work package co-leader, researcher)

Project: PRSTINE<sup>4</sup>

Place: Department of Informatics, University of Oslo, Norway

Funded by: European Commission under the FP7 program

2013 – 2014 [RP3]

Role: Researcher (technical lead, team building, researcher)

Project: 1.2 Tbps Router<sup>5</sup> (Design & implementation of a high-capacity

IP network router)

Place: School of Electrical and Computer Engineering, University of

Tehran, Iran

*2011 – 2013* [RP4]

Role: Visiting Researcher

Project: World-Class University (WCU)<sup>6</sup>

Place: Gwangju Institute of Science and Technology, Gwangju, South

Korea

Funded by: Korean Ministry of Education, Science, and Technology

(MEST)

2007 – 2009 INDUSTRIAL EXPERIENCE,

Role: Chief Executive Officer (CEO), board member

Project: Several industrial software engineering projects on banking

systems and e-commerce solutions

Place: Taban Tech company, Tehran, Iran (I ran my own company

before joining a PhD program)

2004 – 2007 INDUSTRIAL EXPERIENCE,

Role: **Project manager/coordinator**, **developer**, **team building** 

Project: Several national/international industrial software engineering

projects on banking systems, e-commerce solutions

5 http://routerlab.ut.ac.ir/projectslist

<sup>3 &</sup>lt;a href="https://www.mn.uio.no/ifi/english/research/projects/ocarina/index.html">https://www.mn.uio.no/ifi/english/research/projects/ocarina/index.html</a>

<sup>4</sup> http://ict-pristine.eu/

<sup>6</sup> https://wcu.gist.ac.kr/eng/pages/view/16

Place: Khorasan Data Processing company, Tehran, Iran (the

company is now active in the US)<sup>7</sup>

Web development (ASP JSP, JSF, .NET, HTML, Javascript, Technologies:

> Python), databases (MS SQL Server, Oracle, PostgreSQL), C/C++, JavaCard, Smart Cards, Point of Sale (POS) systems

2002 - 2004[RP5]

> Role: Chief developer, researcher

Project: ITMN (Iran Telecommunication Management Network)

Iran Telecommunication Research Center (ITRC)<sup>8</sup>, Tehran, Iran Place:

2003 - 2004 [RP6]

> Role: Researcher

Project: Design and implementation of a distributed network

management platform

Place: Iran Telecommunication Research Center (ITRC)<sup>9</sup>, Tehran, Iran

1999 - 2000[RP7]

> Developer, researcher Role:

Project: Design and prototype implementation of a real-time operating

system

Place: Ferdowsi University of Mashhad, Mashhad, Iran

1998 - 1999[RP8]

> Role: Chief developer, researcher

Project: Design and implementation of an e-learning platform Place: Ferdowsi University of Mashhad, Mashhad, Iran

# FELLOWSHIPS, AWARDS, AND GRANTS

2011	Scholarship, Ministry of Science, Research and Technology, Iran
2011	Scholarship, Ministry of Information and Communication Technology, Iran
2010	A two-year grant to support PhD activities from Iran National Science Foundation
1999	Ranked $1^{\text{st}}$ in the national programming contest held at Amirkabir University of Technology, Iran. The contest was similar to ACM ICPC.
1999 – 2001	Ranked 11 <sup>th</sup> , 15 <sup>th</sup> , and 21 <sup>st</sup> (among around 90 teams) in the regional (West Asia) ACM ICPC (International Collegiate Programming Contest)
1999	The best students award of Ferdowsi University of Mashhad, Iran
1997	Ranked 3 <sup>rd</sup> in the local province in the national University entrance exam

<sup>&</sup>lt;sup>7</sup> https://www.second-pos.com/

<sup>8</sup> https://www.ict.gov.ir/en/introduction/affileted/itrc

### **MOBILITY**

2011 – 2013 Gwangju Institute of Science and Technology, Gwangju, South Korea, Project: World-Class University (WCU)<sup>10</sup>. It was in an interdisciplinary project in the department of Nanobio Materials and Electronics that comprised Information and Communications, Materials Science and Engineering, Mechatronics, Environmental Science and Engineering, and Life Science. Grant received from the ministry of science, research and technology, Iran

### SUPERVISION OF GRADUATE STUDENTS AND RESEARCH FELLOWS

My supervision experience includes different types of supervision, depending on the program type the students were following or the project they were involved in. In the following, I elaborate these types.

# 1) Research-Based Supervision (In total: 10 students including 2 PhDs, 5 Master's students, and 3 bachelor students)

2022 -Supervising a master student:

> Martin Mihle Nygaard (Designing a multihop congestion control, will be finished by May 2024).

Department of Informatics, University of Oslo, Norway

2019 - 2022

Supervising a master student:

Lars Ovar Sveen (Designing a secure smart home framework using RINA). Department of Informatics, University of Oslo, Norway

2016 – 2022 Co-supervising 1 PhD Student (in the OCARINA project)

Students:

Kristjon Ciko (devising a proxy to deploy RINA/IoT)

Successfully defended in 2022. Now, he is a postdoc at the University of Oslo. Department of Informatics, University of Oslo, Norway

2013 – 2015 Informal co-supervision of a PhD Student (successfully defended in 2016)

Student:

Muhammadamin Araghizadeh (using UAVs in wireless sensor networks) School of Electrical and Computer Engineering, University of Tehran, Iran

2008 – 2010 Co-supervision of two master students:

Mohammadreza Effatparvar ("routing in wireless ad hoc networks", successfully defended in 2010)

School of Electrical and Computer Engineering, University of Tehran, Iran

Seyyed Alireza Hoseini ("High-Throughput Low Power CCNP Architecture for High-Speed Wireless Networks", successfully defended in 2010) School of Electrical and Computer Engineering, University of Tehran, Iran

<sup>10</sup> https://wcu.gist.ac.kr/eng/pages/view/16

2013 – 2014 Co-supervision of two bachelor student:

Mohammadreza Tajzad and Ashkan Moharrami ("Designing a dual-channel wireless ad hoc protocol in NS-2", successfully graduated in 2014)

2010 – 2011 Co-supervision of a bachelor student:

Ali Sehati ("Design of a Packet Aggregation Scheme for Wireless Networks in ns-2", successfully graduated in 2011)

# 2) Project-Based Student Supervision (In total: <u>17 students</u> including 4 PhDs, 11 Master's, and 2 bachelor students)

**Project:** Design & implementation of a high-capacity IP network router

**Duration:** 24 months, from 2013 – 2014.

**Place:** Router Lab, School of Electrical and Computer Engineering, University of Tehran, Iran

The team members were bachelor/master/PhD students, all working in this project as part of their research/thesis/part-time work. I was not their official supervisor (they already had supervisors), but as I was a team leader and technical lead, a significant part of their research/thesis supervision was performed by me under this project.

#	Name	Level	Contact
1	Mahdi Vajdi	Master	mahdi_vajdi@ut.ac.ir
2	Masoud Safarvand	Bachelor	masoud_safarvand@yahoo.com
3	Mohsen Mirzania	Master	mo.mirzania@gmail.com
4	Fatemeh Taheri	Master	htaheri.f@gmail.com
5	Iliar Rabet	Master	iliar.rabet@gmail.com
6	Mohammad Hossein Raeiszade	Bachelor	mhraeiszade@gmail.com
7	Saeed Soltabali	PhD	Soltanali@ut.ac.ir
8	Mohammadhasan Zarei	Master	mhzarei@ut.ac.ir
9	Fatemeh Sarhaddi	PhD	sarhaddif@yahoo.com
10	Noushin Behboodi	Master	noushin.behboodi@gmail.com
11	Milad Azizpour	Master	miladazizpour@gmail.com
12	Reza Avazeh	PhD	r.avazeh@ut.ac.ir
13	Narmin Pashapour	Master	narmin.pashapour@gmail.com
14	Amin Latifi	Master	a.latifi.al@gmail.com
15	Davoud Afshari	Master	d_afshari@live.com
16	Besat Jafarian	PhD	bst.jafarian@gmail.com
17	Reza Shekarchian	Master	rz.shekarchian@gmail.com

# Research

Packet processing module implementation plan

**Topics:** 

- Switch fabric: FPGA, ASIC
- SNMP implementation plan
- Packet filtering methods
- Route Map mechanisms
- Router security analysis
- Routing protocols: RIP, OSPF, BGP, ISIS
- Router test plan

- Command Line Interface design and implementation
- IPv6 implementation/integration
- MPLS implementation/integration
- NAT implementation/integration
- Network Time Protocol implementation/integration
- VLAN implementation/integration
- Packet classification methods
- NetFlow implementation/integration
- PORT mirroring implementation/integration
- STP implementation/integration
- Tunneling protocols integration
- TACACS+ implementation/integration
- RADIUS implementation/integration

# 3) Program-Based Student Supervision (In total: 12 students)

Place: Noroff, Oslo, Norway Date: From 2022 to 2023

Under the "Embedded Development" program I have run at Noroff, the students were supposed to work on an original AI-based project (to be eligible for an NVIDIA Jetson AI certificate) as their capstone case, which lasted for two full-time weeks. Most of the students already had a master's degree, but they needed supervision to do their capstone project. This included finding an original idea, defining the problem, and developing a solution. In the end, they documented and presented their work.

### 4) Course-Based Student Supervision (In total: 150 bachelor students)

Places: 1) Mahestan Institute, 2) Kanoon Ghalamchi, Tehran, Iran

Date: From 2002 to 2010

This supervision type belongs to students in course-based programs (without thesis). This mostly included guidance on the student study plan to be better prepared for future markets. There were 50 + 100 students (at two different private institutes) who were following a course-based program, and they needed supervision according to their program plan. This supervision included advising textbooks, materials, study approaches, how to choose a proper field in the master studies, future market, and the needs matching with courses to be taken.

# **TEACHING ACTIVITIES (details in the teaching portfolio document)**

2023 – Role: Main lecturer

Topics: 1) Object-Oriented Programming with Java (beginner, advanced),

- 2) Digital Transformation,
- 3) Business Intelligence and Data Warehouses,
- 4) Artificial Intelligence,
- 5) Various short crash courses on Python, Git, Docker, OpenCV, and Gitlab CI/CD.

Institute: <u>University of South-Eastern Norway</u>

2022 – Role: Main lecturer

Topics: 1) Front-End Development with HTML and JavaScript,

2) Embedded Development (of IoT devices/robots) with C++

and Python,

3) Full-stack development with Java and JavaScript.

Institute: Noroff

2020 – 2023 Role: (Guest) lecturer

Topics: 1) Cybersecurity Operations (Cyber Ops)

2) Computer Networks

Institute: Kristiania University College

*2010 – 2014* Role: (Main) Teacher

Courses: 1) Computer Networks,

2) Fundamentals of Computer Programming,

3) Fundamentals of Information Systems and Electronic

Commerce (master's level)

4) Lectures on "Wireless Networks and their Scalability Issues"

at the master's/PhD level.

Institute: <u>University of Tehran</u>, Iran

*2009 – 2011* Role: Main teacher

Courses: 1) Artificial Intelligence,

2) Simulation of Computer Networks,

3) Software Engineering.

Institute: University of Sistan and Balouchestan, Iran.

2004 – 2010 Role: Main teacher, course development

Courses: 1) Artificial Intelligence,

2) Software Engineering,

3) Database Systems.

Institute: <u>Mahestan Institute</u>, Iran.

*2004 – 2005* Role: Main teacher

Courses: 1) Information storage and retrieval,

2) Machine & assembly programming.

Institute: Azad University of Karaj, Iran.

2002 – 2004 Role: Manager of the computer engineering section

Institute: <u>Kanoon Ghalamchi</u>, Tehran, Iran

Task: Conducting national-wide contests on computer engineering

course among thousands of students who were getting ready for

the national MSc entrance exam.

Number of contestants: more than 10000.

1998 – 2001 Role: Teacher / Teaching assistant

Courses: 1) Object-Oriented Programming,

- 2) Web Programming (ASP, JSP, Javascript, HTML),
- 3) Java,
- 4) Assembly Language,
- 5) Compilers,
- 6) Data Structures and Algorithms.

Institutes: Ferdowsi University of Mashhad, Sadjad University, Khayyam

University, Islamic Azad University of Mashhad, Iran.

Number of students: around 900.

### **INSTITUTIONAL RESPONSIBILITIES**

- Program Coordinator of Industry Bachelor in Information Technology (IT) and Information Systems (IS) at USN
  - Program Advisor (Coordinator) of Microsoft Learn for Educators (MSLE) at USN
  - Program Coordinator of Cisco Networking Academy (NetAcad) at USN
- 2022 External sensor at Kristiania University College
- 2021 Third semester PhD evaluation at University of Oslo
- 2020 A defense committee member of three bachelor students at University of Stavanger
- 2016 A defense committee member at the master's level for four master's students at University of Oslo

# **COMMISSIONS OF TRUST**

## Reviewer

2013 – ACM's Transactions on Internet Technology (TOIT)

**IEEE/ACM Transactions on Networking** 

**IEEE Transactions on Wireless Communications** 

**IEEE Transactions on Communications** 

**IEEE Transactions on Signal Processing** 

IEEE Transactions on Network and Service Management

**IEEE Journal on Selected Areas in Communications** 

**IEEE Wireless Communications Letters** 

**IEEE Networking Letters** 

**Elsevier Computer Networks** 

**Springer Wireless Networks** 

Measuring Mobile Broadband Networks in Europe (MONROE)

# **Editorial, Conferences TPC/Organizer/Chair**

**Publicity Chair** of 17th Wireless On-demand Network systems and Services Conference, 30 March - 1 April 2022, Oppdal, Norway.

2020	<b>Guest editor</b> of the feature topic "Transport Layer Innovations for Future Networks" in IEEE Communications Magazine.			
2020	<b>Guest editor</b> of Special Issue "Post-IP Networks: Advances on RINA and other Alternative Network Architectures" in MDPI Computers journal.			
2020	<b>TPC</b> of the workshop on the Future of Internet Transport - FIT 2020 in Paris			
2020	Workshop (co-)organizer and TPC chair in the ICIN 2020 conference in Paris			
2019	Workshop (co-)organizer and TPC chair in the ICIN 2019 conference in Paris			
2019	<b>TPC</b> of International Conference on Computational Intelligence and Communication Networks (CICN 2019)			
2019	<b>TPC</b> of the Ninth International Conference on Performance, Safety and Robustness in Complex Systems and Applications (PESARO 2019)			
2018	TPC of International Conference on Communication Systems and Network Technologies (CSNT 2018)			
	Securing Fund			
2024	Being submitted / under preparation proposals:  As the coordinator: an EU proposal on Green Networking.			
	As the PI: a proposal on the theory of recursive networking, to Research Council of Norway.			
2020	Funded proposals: [SP1] Study quality fund (studiekvalitetsmidler 2020), by UiO A fund of 133000 NOK per year to develop a new study program for master students. It is now running as a pilot program in the department of informatics with two master students, with the possibility of renewing in next years. Role: PI			
2009	[FP1] Title: "A Scalable MAC Protocol for Wireless Ad hoc Networks" Source: Iran National Science Foundation Role: PI, researcher			
1998 – 2018	Collaborations in several national and international proposal writings.  Successful proposals: [RP1], [RP3], [RP6]-[RP8] (See the "Current and Previous Positions" section)			

• initiation of 9 proposals, collaboration in 6 proposal writing experiences (including the Research Council of Norway (RCN), EU, ERC).

In total:

• 4 (5) successful proposals as the PI: [RP8], [RP6], [FP1], [SP1], (+[RP1]) in 1998, 2003, 2009, 2020, (2016), respectively.

# Miscellaneous

- 2021 Member of the Norwegian Artificial Intelligence Research Consortium (NORA)
- 2018 European Commission (EC) Expert
- 1999 2001 Member of the ACM ICPC team of Ferdowsi University of Mashhad (selection through an internal programing contest)
- 1999 2000 An elected member of the student scientific society, Ferdowsi University of Mashhad

# **MAJOR (Key) COLLABORATIONS**

Name	Topic	Project	Institution	Country
Michael	<b>Congestion Control</b>	FP7 PRISTINE	UiO	Norway
Welzl		and OCARINA		
Eduard Grasa	Recursive	FP7 PRISTINE	i2CAT	Spain
	InterNetwork	and OCARINA		
	Architecture (RINA)			
John Day	Recursive	FP7 PRISTINE	Boston	USA
	InterNetwork	and OCARINA	University	
	Architecture (RINA)			
Hamid	RINA, Autonomous	FP7 PRISTINE	Thales UK	UK
Asgari	Networking	and proposals		
Diego Lopez	RINA, 5/6G	FP7 PRISTINE	Telefonica	Spain
		and proposals		
Jordi Perello	RINA, routing	FP7 PRISTINE	UPC	Spain
		and proposals		
Kiseon Kim	Communication	WCU	GIST	South Korea
	Networks			
Khosrow	Communication	WCU	UMKC,	USA
Sohraby	Networks, Data		Bayer	
	Science			

# **REFERENCES**

Stein Gjessing Former section leader at University of Oslo, Norway

steing@ifi.uio.no
+4792695558

Michael Welzl Direct manager at University of Oslo, Norway

michawe@ifi.uio.no

+4747346201

Khosrow Sohraby Former manager, University of Missouri-Kansas City, USA

khosrow.sohraby@bayer.com

### **PUBLICATIONS**

**Total: 80 (**4 books/lecture notes, 2 editorials, 1 scientific review, 16 journals, 28 conferences, 12 technical reports, 17 scientific talks)

I have had a major role in many of my publications, as the first or second author

# **BOOKS / LECTURE NOTES / Teaching Materials**

- [b4] **Peyman Teymoori.** C++ Bootcamp: From Beginners to Advanced, Noroff, Oslo, Norway, 2023. (Internal teaching material in the form of a book)
- [b3] **Peyman Teymoori**. *Database Systems*, Lectures on data modelling, data processing, SQL, and answers to hundreds of multiple-choice questions, Mahestan Institute, 2006.
- [b2] **Peyman Teymoori.** *Software Engineering*, 2nd Edition, Pouran Pajouhesh publications, ISBN: 978-964-184-472-3, 2013, Iran. (in Persian)

  (**Contributions**: the author. A comprehensive 300-page book on main software engineering topics and a solution manual to all the previous questions in the national graduate entrance exam. The book can be (is) used as a textbook at (some) universities in Iran.)
- [b1] Toktam Ramezanifarkhani, **Peyman Teymoori**, MohammadHosein Mansouri. *Electrical Circuits, Artificial Intelligence, and Design of Algorithms: Preparing for the National Graduate Entrance Exam.* Azadeh publications, ISBN: 978-964-501-274-6, 2008, Iran. (in Persian)

(**Contributions**: the author of the artificial intelligence section. A comprehensive 418-page book on the aforementioned topics and a solution manual to all the previous questions in the national graduate entrance exam)

### **BOOK SCIENTIFIC REVIEW**

[s1] Armin Shams-Baragh, ACM ICPC World Finals 1991-2002, Derakhshesh Publications, 2002. (in Persian)

**Contributions**: I was a <u>scientific reviewer</u> of the solutions provided by the author in the book. At the time of publication, it was the only book world-wide in which time-effective algorithmic solutions (almost always polynomial-time) to all the challenging problems of ACM International Collegiate Programming Contest World Finals have been proposed.

# **EDITORIALS**

- [e2] Michele Polese, **Peyman Teymoori**, Jing Zhu, "Guest Editorial: Transport Layer Innovations for Future Networks," *IEEE Communications Magazine* 59(4):14-15, 2021.
- [e1] John Day, Eduard Grasa, **Peyman Teymoori**, Special Issue "Post-IP Networks: Advances on RINA and other Alternative Network Architectures". *Computers* 2020, *9*, 82.

### **JOURNAL ARTICLES**

[j16] **Peyman Teymoori**, Toktam Ramezanifarkhani, "An Efficiency and Security Architecture for the Internet of Things: A Recursive InterNetwork Architecture (RINA) Approach", is being submitted.

(Already published as a technical report. See [r12])

(Contributions: the main idea, writing several sections of the article)

- [j15] Hamed Khanmirza, **Peyman Teymoori**, "BlueMIC: Coordination for Mitigating Inter-Piconet Interference in BLE5 Networks", *Submitted to Springer Wireless Networks*, 2024. (**Contributions**: editing and scientific reviewing the manuscript)
- [j14] Peyman Teymoori, Michael Welzl, David Hayes, "LGCC: A Novel High-Throughput and Low Delay Paradigm Shift in Multi-Hop Congestion Control", in IEEE/ACM Transactions on Networking, 2023, doi: 10.1109/TNET.2023.3301291.
   (Already published as a technical report. See [r9])
   (Contributions: the main idea, writing most of the article)
- [j13] Kristjon Ciko, Peyman Teymoori, Michael, Welzl, "LGC-ShQ: Datacenter Congestion Control with Queueless Load-based ECN Marking", ACM SIGCOMM Computer Communication Review, Volume 52, Issue 4, pp, 2–11, 2022 https://doi.org/10.1145/3577929.3577931 (Contributions: designing the congestion controller)
- [j12] David Hayes, David Ros, Ozgu Alay, Peyman Teymoori, "Investigating predictive model-based control to achieve reliable consistent multipath mmWave communication" Computer Communications 194 (2022): 29-43, ISSN 0140-3664, https://doi.org/10.1016/j.comcom.2022.07.011 (Contributions: designing the controller part)
- [j11] Michael Welzl, Peyman Teymoori, Safiqul Islam, David Hutchison, "The Future of Internet Congestion Control", in *IEEE Communications Magazine*, vol. 60, no. 9, pp. 87-92, September 2022, doi: 10.1109/MCOM.006.2200008.
  (Contributions: writing an analysis section on the Internet rates)
- [j10] Mohammad H. Bazrafkan, Alireza Nowroozi, Toktam Ramezanifarkhani, Peyman Teymoori, "IAVS: Intelligent Active Network Vulnerability Scanner", in the NISK journal, No. 3 (2020).
  (Contributions: editing/reviewing the paper, writing a section)
- [j9] **Peyman Teymoori**, David Hayes, Michael Welzl, Stein Gjessing. "Estimating an Additive Path Cost with Explicit Congestion Notification." *in IEEE Transactions on Control of Network Systems*, 2021. doi: 10.1109/TCNS.2021.3053179.

  (Contributions: the main idea, writing most of the article)

- [j8] Alireza Nowroozi, **Peyman Teymoori**, Toktam Ramezanifarkhani, Mohammad Reza Besharati, and Mohammad Izadi. "A Crisis Situations Decision-Making Systems Software Development Process with Rescue Experiences." *IEEE Access* 8 (2020): 59599-59617. (**Contributions**: involved in the writing of the article, the idea of how to develop a new software process)
- [j7] Mehdi Effatparvar, Mohammadreza Effatparvar, **Peyman Teymoori** and Naser Yazdani, "Revision of Request to Send (RTS) Threshold to Improve Efficiency of IEEE 802.11n Wireless Ad hoc Networks" *Research Journal of Applied Sciences, Engineering and Technology* 16(4):160-165, Maxwell Scientific Publication, 2019.

  (**Contributions**: helping with analyzing the problem and paper writing)
- [j6] Muhammad Amin Araghizadeh, Peyman Teymoori, Nasser Yazdani, Saeed Safari. "An efficient medium access control protocol for WSN-UAV." Ad Hoc Networks, Volume 52, 2016, Pages 146-159.
  (Contributions: coming up with an analytical solution, writing the related section, and editing the article)
- [j5] **Peyman Teymoori**, Khosrow Sohraby, and Kiseon Kim. "Fair flow control and fairness evaluation in computer networks and systems." *IEEE Transactions on Computers* 65.7 (2016): 2090-2103.
  - (Contributions: the main idea, writing most of the article)
- [j4] Peyman Teymoori, Khosrow Sohraby, and Kiseon Kim. "A fair and efficient resource allocation scheme for multi-server distributed systems and networks." *IEEE Transactions on Mobile Computing* 15.9 (2016): 2137-2150.
  (Contributions: the main idea, writing most of the article)
- [j3] **Peyman Teymoori**, and Nasser Yazdani. "Delay-Constrained Optimized Packet Aggregation in High-Speed Wireless Networks." *Journal of Computer Science and Technology* 28.3 (2013): 525-539.

  (**Contributions**: the main idea, writing most of the article) (extended version of [16])
- [j2] Peyman Teymoori, Nasser Yazdani, and Ahmad Khonsari. "DT-MAC: An efficient and scalable medium access control protocol for wireless networks." *IEEE Transactions on Wireless Communications* 12.3 (2013): 1268-1278.
  (Contributions: the main idea, writing most of the article)
- [j1] MohammadReza EffatParvar, **Peyman Teymoori**, Nasser Yazdani, Ali Movaghar, and Mehdi EffatParvar. "Evaluating Effectiveness of DSDV Routing Protocol on IEEE 802.11n Wireless LANs." *International Journal of Electrical & Computer Sciences IJECS-IJENS* 10, no. 04 (2010).

(Contributions: involved in the writing of the article, evaluation)

### **CONFERENCE PAPERS**

[c28] Kristjon Ciko, Michael Welzl, **Peyman Teymoori**, "Going Dark: A Software "Light Switch" for Internet Servers", 2023 IEEE 29th International Symposium on Local and

- Metropolitan Area Networks (LANMAN), London, United Kingdom, 2023, pp. 1-6, doi: 10.1109/LANMAN58293.2023.10189419.
- [c27] Michael Welzl, Ozgu Alay, **Peyman Teymoori**, Safiqul Islam, "Reducing Green House Gas Emissions With Congestion Control", in IAB workshop on Environmental Impact of Internet Applications and Systems, 2022. [online] <a href="https://github.com/intarchboard/e-impact-workshop-public/blob/main/papers/Welzel-Alay-Teymoori-Islam Reducing-Green-House-Gas-Emissions-With-Congestion-Control-v2.pdf">https://github.com/intarchboard/e-impact-workshop-public/blob/main/papers/Welzel-Alay-Teymoori-Islam Reducing-Green-House-Gas-Emissions-With-Congestion-Control-v2.pdf</a>
- [c26] David Hayes, David Ros, Ozgu Alay, **Peyman Teymoori**, "A Model Based Approach for Reliable Consistent Multi-path mmWave Communication", *Proceedings of the 24th International ACM Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems. 2021.*
- [c25] Kristjon Ciko, Michael Welzl, Peyman Teymoori, "PEP-DNA: A Performance Enhancing Proxy for Deploying Network Architectures", Accepted in IEEE 2nd Workshop on New Internetworking Protocols, Architecture and Algorithms 2021.
   (Contributions: editing the paper, coming up with evaluation scenarios)
- [c24] M. Welzl, **P. Teymoori**, S. Gjessing and S. Islam, "Follow the Model: How Recursive Networking Can Solve the Internet's Congestion Control Problems," *2020 International Conference on Computing, Networking and Communications (ICNC)*, Big Island, HI, USA, 2020, pp. 518-524.
- [c23] R. Barik, M. Welzl, **P. Teymoori**, S. Islam and S. Gjessing, "Performance Evaluation of Innetwork Packet Retransmissions using Markov Chains," *2020 International Conference on Computing, Networking and Communications (ICNC)*, Big Island, HI, USA, 2020, pp. 10-16.
- [c22] M. Marek, **P. Teymoori**, S. Gjessing and M. Welzl, "High-Rate Data Transfer with Congestion-Aware Multipath Routing," *2019 IEEE Globecom Workshops (GC Wkshps)*, Waikoloa, HI, USA, 2019, pp. 1-6.
- [c21] Toktam Ramezanifarkhani, **Peyman Teymoori**, "Securing the Internet of Things with Recursive InterNetwork Architecture (RINA)," *CNC'18 workshop, in proceedings of IEEE ICNC 2018*, Maui, HI, March 2018.
- [c20] Marcel Marek, **Peyman Teymoori**, Michael Welzl, Stein Gjessing: "Computer-Aided Reproducibility", *CNC'18 workshop, in proceedings of IEEE ICNC 2018*, Maui, HI, March 2018.
- [c19] **Peyman Teymoori**, Toktam Ramezanifarkhani, "Game-Theoretic Analysis of Markovian Play Order in Wireless Networks", in the *Conference on Networked Systems* (NetSys 2017), Gottigen, Germany.
- [c18] **Peyman Teymoori**, David Hayes, Michael Welzl, Stein Gjessing, "Even Lower Latency, Even Better Fairness: Logistic Growth Congestion Control in Datacenters", *IEEE LCN 2016*, Dubai, UAE, 7-10 November 2016. (**Best paper candidate**)

- [c17] David Hayes, **Peyman Teymoori**, and Michael Welzl. "Feedback in Recursive Congestion Control." In *European Workshop on Performance Engineering*, pp. 109-125. Springer, Cham, 2016.
- [c16] **Peyman Teymoori**, Michael Welzl, Stein Gjessing, Eduard Grasa, Roberto Riggio, Kewin Rausch, Domenico Siracusa: "Congestion Control in the Recursive InterNetworking Architecture (RINA)", in *IEEE ICC 2016*, Kuala Lumpur, Malaysia, 23-27 May 2016.
- [c15] **Peyman Teymoori**, Aresh Dadlani, Khosrow Sohraby, Kiseon Kim, "An Optimal Packet Aggregation Scheme in Delay-Constrained IEEE 802.11n WLANs," 8th International Conference on Wireless Communication, Networking and Mobile Computing (WiCom'12), China, September, 2012.
- [c14] **Peyman Teymoori**, Mehdi Kargahi, Nasser Yazdani, "A Real-Time Data Aggregation Method for Fault-Tolerant Wireless Sensor Networks," *27th ACM Symposium on Applied Computing*, ACM SAC 2012, Riva del Garda (Trento), Italy, March 26-30, 2012.
- [c13] **Peyman Teymoori**, Nasser Yazdani, Ali Sehati, "Delay-Constrained Optimized Packet Aggregation in High-Speed Wireless Ad hoc Networks", *The First International Conference on Wireless Communications and Applications*, Lecture Notes in ICST, China, 2011.
- [c12] MohammadReza EffatParvar, **Peyman Teymoori**, Nasser Yazdani, Ali Movaghar, Mehdi EffatParvar, "Network Layer Challenges of IEEE 802.11n Wireless Ad hoc Networks", *The First International Conference on Wireless Communications and Applications*, Lecture Notes in ICST, China, 2011.
- [c11] **Peyman Teymoori**, Nasser Yazdani, Alireza Hoseini, MohammadReza Effatparvar, "Analyzing Delay Limits of High-Speed Wireless Ad hoc Networks Based on IEEE 802.11n", in the 5th International Symposium on Telecommunications (IST2010), Dec. 4-6, 2010, Tehran, Iran.
- [c10] Seyyed Alireza Hoseini, Behnam Khodabandeloo, Mahdi Jelodari Mamaghani, **Peyman Teymoori**, Nasser Yazdani, "High Throughput Low Power CCMP Architecture for Very High Speed Wireless LANs", in the 15th CSI International Symposium on Computer Architecture and Digital Systems, Sep. 23-24, 2010, Tehran, Iran.
- [c9] **Peyman Teymoori**, N. Yazdani, "Local Reconstruction of Virtual Backbone to Support Mobility in Wireless Ad Hoc Networks", in the 4th International Symposium on Telecommunications (IST2008), Aug. 27-28, 2008, Tehran, Iran.
- [c8] **Peyman Teymoori**, T. Ramezani, "Heterogeneous Distributed Clustering in Wireless Sensor Networks", *International Conference on Computer and Communication Engineering* (ICCCE 08), Kualalumpur, Malaysia, 2008.
- [c7] T. Ramezani, **Peyman Teymoori**, "EAM: Expansive Access Modifiers in OOP", *International Conference on Computer and Communication Engineering* (ICCCE 08), Kualalumpur, Malaysia, 2008.

- [c6] Morteza Moghisi, **Peyman Teymoori**, Azadeh Pishdad, "Intelligent Transportation Management and its Importance in e-Commerce", in 4<sup>th</sup> National Conference on e-Commerce, Tehran, Iran, 2008.
- [c5] Morteza Moghisi, **Peyman Teymoori**, Azadeh Pishdad, "An Information Technology based Solution for Intelligent Transportation Management in Retail Distribution", in 8<sup>th</sup> Traffic and Transportation Engineering Conference, Tehran, Iran, 2008.
- [c4] **Peyman Teymoori**, "Active Discovery: Information Gathering in Active Networks", *In 11th Annual Computer Society of Iran Computer Conference (CSICC2006)*, Tehran, Iran, 2006.
- [c3] **Peyman Teymoori**, T. Ramezani, "Formal Representation and Verification of Fuzzy Object Design Using UML", *In 11th Annual Computer Society of Iran Computer Conference* (CSICC2006), Tehran Iran, 2006.
- [c2] **Peyman Teymoori**, "An Efficient Architecture for Integrated Active Network Management", *In 9th Annual Computer Society of Iran Computer Conference* (CSICC2004), Tehran Iran, 2004.
- [c1] M. Naghibzadeh, A. R. Noroozi, **Peyman Teymoori**, M. F. Mashhoor, R. Alesheikh, "Computing Overhead of EDF Real-Time Scheduling Method", *In 8th Annual Computer Society of Iran Computer Conference* (CSICC2003), Mashhad Iran, 2003.

# (PROJECT) TECHNICAL REPORTS

- [r12] **Peyman Teymoori,** Toktam Ramezanifarkhani, "Reconciling Efficiency and Security of the Internet of Things: A Recursive InterNetwork Architecture (RINA) Approach," 30 November 2023, PREPRINT, available at Research Square https://doi.org/10.21203/rs.3.rs-3234524/v1
- [r11] **Peyman Teymoori**, Toktam Ramezanifarkhani, "Transport Layer Efficiency and Security in IoT: RINA's Approach", *University of Oslo Department of Informatics*, technical report, 2021.

Online: <a href="https://peyman-t.github.io/files/RINATransport.pdf">https://peyman-t.github.io/files/RINATransport.pdf</a>

- [r10] Toktam Ramezanifarkhani, **Peyman Teymoori**, "Digital Intelligent Services based on Vehicle Data", *University of Oslo Department of Informatics*, technical report, May 2020. Online: <a href="https://peyman-t.github.io/files/SCOTT-Hackathon-White%20hats.pdf">https://peyman-t.github.io/files/SCOTT-Hackathon-White%20hats.pdf</a>
- [r9] **Peyman Teymoori**, Michael Welzl, David Hayes, "LGCC: A Food Chain Multi-Hop Congestion Controller," *University of Oslo Department of Informatics*, technical report 494, ISBN: 978-82-7368-459-2, May 2020.

  Online: https://peyman-t.github.io/files/LGCChain.pdf
- [r8] **Peyman Teymoori**, David Hayes, Michael Welzl, Stein Gjessing: "Estimating an Additive Path Cost with Explicit Congestion Notification", *University of Oslo Department of Informatics*, technical report 487, 21 March 2019. (Extended version)

- [r7] **Peyman Teymoori** (contributor, co-editor), "D3.3 Final specification and consolidated implementation of scalable techniques to enhance performance and resource utilization in networks", FP7 PRISTINE Project, June 2016.
- [r6] **Peyman Teymoori** (contributor, co-editor), "D3.2 Initial specification and proof of concept implementation of techniques to enhance performance and resource utilization in networks", FP7 PRISTINE Project, May 2015.
- [r5] **Peyman Teymoori** (Editor), "1.2 Tbps Router Project: Design and Implementation/Integration of Switching, NetFlow, Port Mirroring, STP, Tunneling, TACACS+, and RADIUS", University of Tehran, November 2014.
- [r4] **Peyman Teymoori** (Editor), "1.2 Tbps Router Project: Design and Implementation/Integration of Command Line, IPv6, MPLS, NAT, Security, NTP, VLAN, Packet Classifier", University of Tehran, June 2014.
- [r3] **Peyman Teymoori** (Editor), "1.2 Tbps Router Project: General Design and Platform Preparation", University of Tehran, January 2014.
- [r2] **Peyman Teymoori** (Editor), "1.2 Tbps Router Project: Integration and Interoperability Tests of the Routing Protocols in Quagga", University of Tehran, November 2013.
- [r1] **Peyman Teymoori** (Editor), "Writing various technical reports on Software Architecture, Project Management, Risk Management, Software Process, and Deployment Plan for projects," Data Processing Khorasan company, 2004 2007.

### SCIENTIFIC / ACADEMIC PRESENTATIONS (TALKS)

(excluding conference papers presentations)

- [p17] **Peyman Teymoori**, "TRICON: A Theory of Recursion in Communication Networks," *IØSS Research Seminar series*, School of Business, University of South-Eastern Norway, December 2023.
- [p16] **Peyman Teymoori,** "ChatGPT in Modern Education and Research: A Multifaceted Exploration," 11th Scandinavian Conference in Industrial Engineering and Management, USN Kongsberg, November 2023.
- [p15] **Peyman Teymoori**, "Cyber Threats Intelligence & Open-Source Intelligence in Incident Response", *Guest lecture*, Kristiania University College, Oslo, November 2022.
- [p14] **Peyman Teymoori**, "How Networking Is Implemented in Cloud Computing," *Guest lecture*, Faculty of Technology, Art and Design (TKD), OsloMet, Oslo, August 2022.
- [p13] **Peyman Teymoori**, "Recursion in Congestion Control: Benefits and Challenges", *Huawei workshop on RINA*, June 2022.
- [p12] **Peyman Teymoori**, "The Recursive InterNetwork Architecture (RINA): What It Is, and What It Is Not", *Huawei workshop on RINA*, June 2022.

- [p11] **Peyman Teymoori**, "Vehicle to Infrastructure (V2I) Communications", *Guest lecture*, Department of Electronic Systems, NTNU, Gjøvik, October 2021.
- [p10] **Peyman Teymoori**, "Key Success and Failure Factors of Smart Sustainable Cities," *Guest lecture*, Faculty of Technology, Art and Design (TKD), OsloMet, Oslo, August 2020.
- [p9] **Peyman Teymoori**, "Estimating an Additive Path Cost with Explicit Congestion Notification", *Internet Engineering Task Force (IETF)* 104 Prague ICCRG, 2019.
- [p8] **Peyman Teymoori**, "Advanced Congestion Control Policies in RINA," 5<sup>th</sup> RINA Workshop, i2CAT, Barcelona, Spain, May 2018.
- [p7] **Peyman Teymoori**, "Recursive Congestion Management in RINA", 25th European Conference on Networks and Communications (EuCNC'16), Athens, Greece, 2016.
- [p6] **Peyman Teymoori**, "Programmable Congestion Control", SDN & OpenFlow World Congress, The Hague, October 2016.
- [p5] David Hayes, **Peyman Teymoori**, and Michael Welzl, "Congestion Control in Recursive Network Architectures," *Internet Engineering Task Force (IETF) 95*, Buenos Aires ICCRG, 2016. (Presenter: David Hayes)
- [p4] **Peyman Teymoori**, Michael Welzl, "Congestion Control in RINA," *3rd RINA Workshop*, Ghent, Belgium, January 28th, 2015.
- [p3] **Peyman Teymoori**, Khosrow Sohraby, Kiseon Kim, "Fair Flow Control in Multi-Ring Networks," *Workshop of the Communications and Sensor Networks Lab*, GIST, Gwangju, South Korea, August 2013.
- [p2] **Peyman Teymoori**, Khosrow Sohraby, Kiseon Kim, "Capacity Assignment Problem in Multi-Ring Networks," *Workshop of the Communications and Sensor Networks Lab*, GIST, Gwangju, South Korea, February 2012.
- [p1] **Peyman Teymoori**, Khosrow Sohraby, Kiseon Kim, "Multi-Ring Networks: Maintaining Fairness & Honest Behavior," *Workshop of the Communications and Sensor Networks Lab*, GIST, Gwangju, South Korea, August 2011.