

# CURRICULUM VITAE

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## PERSONAL INFO.:

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## EDUCATION:

**2005-2011 Ph.D. in Computer Engineering (Software)**  
Iran University of Science and Technology, Tehran, Iran.

**Ph.D. Thesis:** *Real-Time Query Processing in Data Stream Management System*  
Supervisor: Dr. M. Haghjoo  
Advisor: Prof. M. Sharifi

**2001-2004 M.Sc. in Computer Engineering (Software)**  
Ferdowsi University, Mashhad, Iran.

**M.Sc. Thesis:** *MPLS Traffic Engineering Using Constraint-Based Routing*  
Supervisor: Prof. M. H. Yaghmae Moghadam

**1997- 2001 B.Sc. in Computer Engineering (Software)**  
Shahid Sattari Air University, Tehran, Iran.

## RESEARCH INTERESTS:

- *Semantic web*
- *Cognitive knowledge discovery and management*
- *Web Information Retrieval and Crowdsearching*
- *Medical Data Management (including Big Data, data integration, data quality, etc.)*
- *Security and privacy in medical information systems*
- *IoT and Pervasive medical systems*

## HONORS:

- *Awarded First Rank in B.Sc. in Computer Engineering at Air University, 2001.*

## WORK EXPERIENCE:

<i>Dec.2014-...</i>	<i>Ministry of Science, Research and technology</i> <b>VICE-CHANCELLER of RAIRO GENERAL MANAGER</b>
<i>Feb. 2014- ...</i>	<i>Tarbiat Modares University, Tehran, Iran</i> <b>ASSISTANT PROFESSOR OF MEDICAL INFORMATICS DEPARTMENT</b>
<i>Sep. 2012- Feb. 2014</i>	<i>K.N. Toosi University of Technology, Tehran, Iran</i> <b>ASSISTANT PROFESSOR OF COMPUTER ENGINEERING DEPARTMENT</b>
<i>Sep. 2008- Sep. 2012</i>	<i>ISIRAN Company, Tehran, Iran</i> <b>TECHNICAL VICE-CHANCELLER, DBMS DEVELOPMENT PROJECT MANAGER</b>
<i>2001-2003</i>	<i>Iran Telecommunication Research Center (ITRC), Tehran, Iran</i> <b>RESEARCHER</b>

## TEACHING EXPERIENCE:

- **Grad. Level:**
  - *Medical Software Design (Ph. D.)*
  - *Nursing Informatics (Ph. D.)*
  - *Free/Open Source Software (FOSS) Development*
  - *Clinical Decision Support Systems (CDSSs)*
  - *Electronic Health Record (EHR) Systems*
  - *Medical Information Systems: Design and Evaluation*
  - *Applied Research Methods*
  - *Distributed Systems*
  - *Database Security*
  - *Advanced Databases*
  - *Advanced Software Engineering*
- **Undergrad. Level:**
  - *Fundamentals of Database Design*

- *Information Storage and Retrieval*
- *Computer Algorithms: Analysis & Design*
- *Data Structures & Algorithms*
- *Theory of Languages & Automata*
- *Operating Systems*

## PUBLICATIONS:

## BOOKS:

1. Mostafa S. Haghjoo, Ali A. Safaei, ***"Database Systems: Theory and Application"***, 2nd volume: Advanced Concepts, Iran University of Science and Technology publications, 2007 (in Persian).

## JOURNAL PAPERS:

1. A. A. Safaei, ***" Real-time processing of streaming big data"***, Real Time Systems Journal, Pages: 1-44, Published online 01 Aug. 2016. DOI 10.1007/s11241-016-9257-0
2. M. Shahmoradi, A. A. Safaei, H. Tajrishi, E. Nazari, Z. Delaram, Z. Zarei, N. Zeinali, ***"common Applications of Social Networking in Medicine and Health"***, Journal of Health Information Management, 13 (3), 2016. (in Persian)
3. A. Iranpour, A. A. Safaei, A. Sahafi, ***"Distributed Task Scheduling Algorithm for Grid Computing based on Learning Automata"***, Computing Science Journal, 1 (1), 2016. (in Persian)
4. E. Naseh, A. A. Safaei, ***" A Gene Structure Prediction Model using Bayesian Algorithm and the Nearest Neighbor"***, International Journal of Computer Applications Technology and Research 5 (8), 509 - 515, 2016.
5. E. Naseh, A. A. Safaei, ***"The Presentation of a Genetic Algorithm to Solve Steiner Tree"***, International Journal of Computer Applications Technology and Research 5 (8), 516 - 518, 2016.
6. R. Moosaei, A. A. Safaei, ***"Classification of service delivery to airport passengers using data mining"***, International Journal of Advanced and Applied Sciences, 3(6) 2016, Pages: 87-94
7. M. Tanhapour, A. A. Safaei, ***"Specification of requirements for health social-network as Personal Health Record (PHR) system"***, Tehran University Medical Journal TUMS Publications 73 (6), 431-441, (2015). (in Persian)
8. M. Shahmoradi, H. Tajrishi, E. Nazari, Z. Delaram, Z. Zarei, N. Zeinali, A. A. Safaei, ***"The Role of Social Networks in Healthcare: Applications and Limitations"***, Journal of Health and Biomedical Informatics, 2 (2), (2015). (in Persian)
9. Fatemeh Abdi, Ali Asghar Safaei, ***"Mining Frequent Patterns in Uncertain and Relational Data Streams using the Landmark Windows"***, Journal of Advances in Computer Engineering and Technology, 1(4) 2015.
10. S Setareh, AA Safaei, F Najafi, ***"Using machine learning techniques to differentiate acute coronary syndrome"***, Journal of Kermanshah University of Medical Sciences, 18(11), 631-639, (2015), (in Persian).

11. F. Abdi, Ali A. Safaei, "**Processing Ad-hoc Continuous Aggregate queries**", Indian J. Sci. Res 7 (1), 1001-1010 (2014).
12. A. A. Safaei, M. S. Haghjoo, "**Parallelism of Data Streams**", Journal on Computer Science and Engineering (JCSE), 11(2), 11-29, (2013). (in Persian)
13. B. Tajalli-Pour, Ali A. Safaei, "**Syntax and Semantic Analysis of SQL-Injection Attacks**", Electronic and Cyber Defense Journal, 1(2): 53-69, (2013). (in Persian)
14. A. A. Safaei, A. Sharifrazavian, M. Sharifi, M. S. Haghjoo, "**Dynamic Routing of Data Stream Tuples among Parallel Query Plan Running on Multi-core Processors**", Journal of Distributed and Parallel Databases, 30(2): 145-176, (2012) (DOI: 10.1007/s10619-012-7090-6).
15. A. A. Safaei, M. S. Haghjoo, "**Dispatching of Stream Operators in Parallel Execution of Continuous Queries**", Journal of Supercomputing, Volume 61, Number 3 (2012), 619-641, DOI: 10.1007/s11227-011-0621-5
16. Sh. Mohammadi, A. A. Safaei, F. Abdi and M. S. Haghjoo, "**Adaptive Data Stream Management System Using Learning Automata**", Advanced Computing: An International Journal (ACIJ), Vol.2, No.5, September 2011.
17. Ali A. Safaei, M. Alemi, Mostafa S. Haghjoo, Sh. Mohammadi, "**Hybrid Multiprocessor Real-Time Scheduling Approach**", International Journal of Computer Science Issues, Vol. 8, Issue 2, March 2011.
18. A. A. Safaei, M. S. Haghjoo, "**Parallel processing of continuous queries over data streams**", Journal of Distributed and Parallel Databases, (28)2: 93-118, (2010) (DOI: 10.1007/s10619-010-7066-3).
19. A. A. Safaei, R. Pirshayan, M. S. Haghjoo, "**Modeling Heterogeneous Dimensions in Multi-Dimensional Databases**", International Journal of Computer Science and Research, Vol. 1 Issue 1, 2010.
20. Ali A. Safaei, et. al., "**Using Finite State Machines in Processing Continuous queries**", Journal of International Review on Computers and Software (IRECOS), 4(5): 551-556, (2009).

## BOOK CHAPTER:

1. A. A. Safaei, M. S. Haghjoo, F. Abdi, "**PFGN: A Hybrid Multiprocessor Real-Time Scheduling Algorithm for Data Stream Management Systems**", International Conference on Digital Information and Communication Technology and its Applications (CCIS Springer Book Series), 180-192, (2011).
2. M. Alemi, A. A. Safaei, M. S. Haghjoo, F. Abdi, "**PDMRTS: Multiprocessor Real-Time Scheduling Considering Process Distribution in Data Stream Management System**", International Conference on Digital Information and Communication Technology and its Applications (CCIS Springer Book Series), 166-179, (2011).
3. A. A. Safaei, Mostafa S. Haghjoo, M. Ghalambor, "**GMTM: A Grid Transaction Management Model**", Advances in Computer Science and Engineering (CCIS Springer Book Series), 2009, Volume 6, Part 2, 786-789, DOI: 10.1007/978-3-540-89985-3\_103

## INTERNATIONAL CONFERENCE PAPERS:

1. Shirin Jabbari, A. A. Safaei, "***A new method for data security in cloud computing using and Particle Swarm Optimization***", 2nd International Conference & 3rd National Conference on New Technologies Application in Engineering, Iran, Feb. 2016.
2. M. Shokouh, A. A. Safaei "***Knowledge Extraction form databases***", in proc. of Int. conf. on computer engineering and information technology, Tehran, Iran, 2016. (in Persian)
3. F. Marzoogi, A. A. Safaei "***A Breast Cancer Diagnosis Model based on Artificial Neural Networks***", in proc. of Int. conf. on computer engineering and information technology, Tehran, Iran, 2016. (in Persian)
4. M. Shokouh, A. A. Safaei "***Data Mining, Statistics and Machine Learning***", in proc. of Int. conf. on computer engineering and information technology, Tehran, Iran, 2016. (in Persian)
5. S. Setareh, A. A. Safaei, F. Najafi, "***Using machine learning techniques to differentiate Myocardial infarction and Unstable Angina***", in proc. of the International Conference on Information and Communication Technology, Iran, 2015. (in Persian)
6. M. Azad, A. A. Safaei, "***A graph-based data model for HIV diseases efficient for epidemic discovery services***", in proc. of 2<sup>nd</sup> congress of electrical engineering, computer science and Information technology, Tehran, Iran, 2015. (in Persian)
7. A. A. Safaei, S. A. Zahiri, "***Proper Data Model for Big Data***", in proc. of the International Conference on Big Data, Iran, 2015. (in Persian)
8. Sh. Mohammadi, A. A. Safaei, M. S. Haghighi, F. Abdi, "***Effective Parameters on Response Time of Data Stream Management Systems***", in proc of the 10th International Conference on Information and Knowledge Engineering, USA, 2011.
9. M. Alemi, m. S. haghjoo, A. A. Safaei, "***Multiprocessor Real-time Scheduling for RT-DSMSs***", in proc. of 3<sup>rd</sup> CEIT conf., Hamedan, Iran, 2011. (in Persian)
10. A. A. Safaei, M. Haghjoo, F. Abdi, "***On-line Data Stream Query Processing Using Finite State Automata***", in proc. of 4th International Conference on Cooperation and Promotion of Information Resources in Science and Technology, China, 2009.
11. M. Ghalambor, A. A. Safaei, M. Abdollahi, "***DSMS Scheduling Regarding Complex QoS Metrics***", in proc. of 7th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA-2009), Morocco, 2009.
12. A. A. Safaei, M. Haghjoo, F. Abdi, "***Semantic Cache Schema for Query Processing in Mobile Databases***", in proc. of IEEE ICDIM'08, London, UK, 2008.
13. A. A. Safaei, M. Kamali, M. S. Haghjoo, K. Izadi, "***Caching Intermediate Results for Multiple-Query Optimization***", in proc. of 5th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA-2007), Jordan, 2007.
14. E. Eskandari, A. A. Safaei, M. Haghjoo, "***Memo, a New Approach to Mobile Data Management***", in proc. of IEEE International Conference on Information & Communication Technologies: from Theory to Applications (ICTTA'06), Syria, 2006.
15. M.H. Yaghmae, A. A. Safaei, "***Quality-Of-Service Routing in MPLS Networks Using Bandwidth and Delay Constraints***", in proc. of HetNets'04, West Yorkshire, U.K., 2004.
16. A. A. Safaei, "***Design and Construction of Management Information Bases (MIB) for DiffServ MPLS Networks***", in proc. of WISICT'04, Mexico, Win2004.
17. M.H. Yaghmae, A. A. Safaei, "***Design Of Management Information Base (MIB) for MPLS Routers with Differentiated-Services Capabilities***", in proc. of 11<sup>th</sup> Iranian Conference on Electrical Engineering (ICEE2003), Iran, 2003.(in Persian)

18. A. A. Safaei, *"MPLS Networks Supporting Differentiated Services"*, in proc. of National Computer Conference (NCC2002), Mashhad, Iran, Fall 2002. (in Persian)

## **Tutorial and Workshops:**

- *"Quality of Service in the Internet"*, In the 8th Annual CSI Computer Conference (CSICC2003), Ferdowsi University of Mashhad, Mashhad, Iran (February 2003).

## **PROJECTS:**

- *Integration of national HPC clusters*
  - For MSRT, 2016 (Project administrator)
- *"Sea port Scheduling Software"*
  - For MSRT, 2016 (Project administrator)
- *"National Software Security Evaluation Methodology"*
  - for SAFAVA, 2013 (project manager).
- *"Desktop DBMS development"*
  - for ISIRAN company, 2013 (development team member).
- *"DBMS Security Architecture Design"*
  - for ISIRAN company, 2012 (project manager).
- *"National DBMS Specification and Conceptual Architecture Design"*
  - for Ministry of Science, Research and Technology and ISIRAN company, 2011
- *"Evaluating insurance companies in information technology employment"*
  - for Central Insurance of Iran, 2010 (project administrator).
- *"Upgrading IRIMO's Information Systems"*
  - for Iran Meteorological Organization, 2009 (member of project management team).
- *"IT Road-map"*
  - for Haj-o-Ziarat Organization, 2009.
- *"Evaluating insurance companies in information technology employment"*
  - for Central Insurance of Iran, 2008 (project manager).