

## Education

Ph.D. - Computer Science (GPA: 4.0/4.0), UC Santa Barbara, CA Expected: September 2020  
M.Sc. - Computer Engineering (GPA: 4.0/4.0), Sharif University of Technology, Tehran February 2014  
B.Sc. - Software Engineering (GPA: 3.86/4.0), University of Isfahan, Isfahan July 2011

## Awards

- Awarded 5 Years Fully-Funded Scholarship and Computer Science Fellowship in UC Santa Barbara, September 2015.
- Ranked 1<sub>st</sub> in Bio-Informatics HPN-DREAM Consortium Breast Cancer Network Inference Challenge (the compendium was a joint publication in Nature Methods Journal 2015), February 2014.
- Awarded a Fully-Funded Research Scholarship of Max Planck Institute for Intelligent Systems, Tübingen, Germany, September 2013.
- Ranked 1<sub>st</sub> in B.Sc. within a class of 47, Department of Computer Engineering, July 2011.
- Ranked 4<sub>th</sub> in M.Sc. within a class of 56, Department of Computer Engineering, February 2013.
- Awarded Fellowship of Exceptional Talents for M.Sc. Program in Sharif University of Technology, September 2011.

## Selected Publications

1. M. Jalili, O. AskariSichani, Xinghuo Yu “ **Optimal pinning controllability of complex networks: Dependence on network structure**,” *Journal of Physical Review E*, (PRE), Vol. 91, No. 1, Page 012803, *American Physical Society*, DOI:10.1103/PhysRevE.91.012803, <http://link.aps.org/doi/10.1103/PhysRevE.91.012803>, 2015. ([git](#))
2. SM Hill, LM Heiser, T Cokelear, M Unger, D Carlin, Y Zhang, A Sokolov, E Paull, CK Wong, K Graim, A Bivol, H Wang, F Zhu, B Afsari, LV Danilova, AV Favorov, W Lee, D Taylor, HPN-DREAM Consortium (O. AskariSichani), GB Mills, JW Gray, M Kellen, T Norman, S Friend, EJ Fertig, Y Guan, M Song, J Stuart, H Koepl, PT Spellman, G Stolovitzky, J Saez-Rodriguez, and S Mukherjee “ **Empirical assessment of causal network inference through a community-based effort**”, *Recently accepted and to appear in Nature Methods*, 2015.
3. O. AskariSichani, M. Jalili, “ **Influence Maximization of Informed Agents in Social Networks**,” *Journal of Applied Mathematics and Computation*, (AMC), Vol. 254, Pages 229-239, 3/1/2015, *Elsevier*, <http://dx.doi.org/10.1016/j.amc.2014.12.139>, 2015. ([git](#))
4. O. AskariSichani, M. Jalili, “ **Large-scale Global Optimization through Consensus of Opinions Over Networks**,” *Journal of the Complex Adaptive Systems Modeling*, Springer, 1(1):11, 2013. ([git](#))
5. A. Fatemi, K. Zamanifar, N. Nematbakhsh, O. AskariSichani, “ **A Team-Based Organizational Model for Adaptive Multi Agent Systems**,” in *3rd International Conference on Agents and Artificial Intelligence, ICAART 2011, Rome, Italy*, Volume 2, No. 297, s. 10:30-11:00, 2011. ([git](#))

## Work Experience

- University of California at Santa Barbara, CA  
- *Research Assistant* September 2015 – Present
  - Have been working under supervision of Prof. Ambuj K. Singh and Prof. Francesco Bullo
  - Collaborating with a group of researchers from different universities on a data-driven project under Multidisciplinary University Research Initiative (MURI) grant
  - Implementing codes with C++, Python and MATLAB to analyze real big datasets to mathematically and experimentally show the dynamics of people group formation and evolution
- Hekmat Iranian Bank, Tehran  
- *Full-time Business Intelligence Analyst & Senior Software Architecture* January 2015 - August 2015
  - Analyzed a huge set of financial dataset
  - Designed and managed a team of developers to build a software for computing liquidity risk, credit risk and clustering customers with density estimation
  - Implemented the software using JavaFX, WEKA, Hibernate, Persistence, Oracle Database (PL/SQL) and OLAP data cube technology for computing queries instantly & data-warehouse programming
- Max Planck Institute (MPI) for Intelligent Systems, Empirical Inference Department, Tübingen  
- *Researcher* September 2013 - January 2014
  - Working on two huge datasets, Memetracker and Twitter, to mathematically model information cascades using Hawkes Process

- Developing Stanford Network Analysis Platform (SNAP) toolbox using C++ and learned how to execute parallel codes efficiently on Oracle Grid Engine Server
- Developing MATLAB codes to optimize a convex function using MATLAB CVX toolbox & Mosek.
- International Systems Engineering and Automation Company (IRISA) Company, Isfahan
  - *Intern* June 2011 - September 2012
    - Designed and developed a part of Oracle database in an Enterprise Resource Planning software
    - Used Java Applet, Oracle Forms and PL/SQL Package Programming
    - In another project, developed a plug-in that automated the query generation for mathematical formula computation using PL/SQL development and Oracle Form graphical user
- Rena Technical Services Company, Karaj
  - *Part-time Database Consultant* July 2011 - October 2011

## Projects

Adaptive Multi Agent System Toolbox ([git](#))

- *Software Designer and Developer* 2009 – 2011
  - Learned agent-oriented programming and developed a massive distributed system
  - Simulated a robocup rescue system and implemented a toolbox for attribute-based team cooperation organizational modeling
  - Used Java Agent Development Framework (JADE) for multi-thread programming, Swing, JFrame for graphical user interface and reporting service

Software for Traffic Police Law Enforcement Device

- *Software Designer and Developer* 2008 – 2009
  - Implemented a driver and graphical user interface for the device with C#
  - This project won a silver medal in IENA, International Exhibition “ Ideas-Inventions-Novelties”, November 5-8, 2009, NÜRNBERG, Germany
  - Also won another silver medal in Geneva Inventions, April 21-25, 2010, Geneva, Switzerland

Multi Agent System for City Traffic and Routing Simulation ([git](#))

- *Software Designer and Developer* 2010 – 2011
  - Designed and developed a parallel multi agent system software in JADE for modeling a city traffic system comprises cars, GPS and intelligent lights with an online graphical user interface exhibiting the simulation process, configuration and reporting services

Real Estate Management Software ([git](#))

- *Software Designer and Developer* 2009
  - Developed in C# using Microsoft WPF, SQL Server 2008 Database and Entity Framework
  - Implemented an advanced online query generator to flexibly and efficiently search in huge database of properties, lands and homes

Service-Oriented Recommender System Software with Linked-Data Technology ([git](#))

- *Software Designer and Developer* 2010
  - Developed in C# using Microsoft WCF for service-oriented programming, Microsoft WPF
  - Implemented a linked-data database using dotNetRDF and SPARQL

Time Series Forecasting in Business Intelligence Software ([git](#))

- *Developer* 2011
  - Implemented a time series forecasting model with a hybrid model of SVM, ARMA, ARIMA and ANFIS

## Skills

*Academic Software Packages:*

*Network:* **SNAP**, MATLAB BGL, Gephi, Pajek, NodeXL. *Optimization:* **MATLAB CVX**, **Mosek**, Gurobi. *Multi Agent Development:* **Java Agent Development Framework (JADE)**, Repast Symphony. *Representation:* **L<sup>A</sup>T<sub>E</sub>X**, Microsoft Word, VIM, EMacs. *Parallel Task Handling Services:* **Oracle (Sun) Grid Engine on Oracle Solaris**. *Machine Learning and Data-mining:* **WEKA**, Rapid Miner, Clementine. *Linked Data & Semantic Web:* **RDF**, **SPARQL**, **OWL** Ontology, Jena, **dotNetRDF**, Protégé.

*Programming Languages:*

**JAVA**, C, **C++**, **C#**, **MATLAB**, Python, SQL, **PL/SQL**, TSQL, ASP.NET, PHP, JSP, Prolog, Ruby, Visual Basic, Pascal, R.

*Operating Systems:* Windows, **Linux**, **Linux Server**, Windows Server.

*Development Software Packages:*

**Microsoft Visual Studio**, Microsoft .Net, **Windows Presentation Foundation (WPF)**, **Windows Communication Foundation (WCF)**, Microsoft Entity Framework, Java Hibernate, Java Persistence, Java JFrame, Swing, Applet, C++ Graphical Design with **MFC**, Qt, Oracle Development Kit, Oracle Form, Android Software Programming, **Eclipse**, **Netbeans**, IntelliJ IDEA, **PyCharm**.

*Programming Paradigms:*

**Object-Oriented Programming**, **Agent-Oriented Programming**, **Service-Oriented Programming**.

*Subversion Softwares:* **Git**, TortoiseSVN.

*Database Management Systems (DBMS):*

**Oracle**, **Microsoft SQL(MSSQL)**, PostgreSQL, MySQL, Microsoft Access.

## Scientific Activities

*Reviewer for:*Journal of ACM Transactions on Knowledge Discovery from Data — 2014 - Present

*Reviewer for:*Journal of Complex Networks, Oxford University Press — 2013 - Present

*Elected President:*Scientific Society of University of Isfahan Computer Sciences Students — 2013

*Founder and Director of:*Java Agent Development Framework (JADE) Facebook Page — 2010 - Present

*Researcher in:*Isfahan Math House (IMH) — 2010 - 2011

## References

- **Ambuj K. Singh**, *Professor and Chair in Computer Science Department, UCSB*, Main department phone: (805) 893 3236, office: 3119 Harold Frank Hall, E-mail: **ambuj@cs.ucsb.edu**
- **Manuel Gomez Rodriguez, PhD**, *Tenure-track Research Group Leader, Max Planck Institute for Software Systems (MPI-SWS)*, Phone: +49 (7071) 601 - 541, office: Paul-Ehrlich-Strasse, 67663 Kaiserslautern, DE, E-mail: **manuelgr@mpi-sws.org**
- **Mahdi Jalili, PhD**, *Assistant Professor, Department of Computer Engineering, Sharif University of Technology*, Phone: (+98) 21 - 66166 - 6636, E-mail: **mjalili@sharif.edu**

*Modified in: January 3, 2016*