


<b>Contact Information</b>	Department of Computer Science Purdue University  <a href="http://www.cs.purdue.edu/homes/mohammas">www.cs.purdue.edu/homes/mohammas</a>	305 N. University St. West Lafayette, IN 47907 USA  +1 (765) 409-1883
<b>Research Areas</b>	Computational Biology, Bioinformatics, Machine Learning, Parallel Computing	
<b>Education</b>	<p><b>Purdue University</b>, West Lafayette, IN USA</p> <p>Ph.D., <a href="#">Computer Science</a>, Jan 2010–Present</p> <ul style="list-style-type: none"><li>• <b>Adviser:</b> <a href="#">Professor Ananth Grama</a></li><li>• <b>Co-Adviser:</b> <a href="#">Professor Wojciech Szpankowski</a></li></ul> <p>M.S., <a href="#">Computer Science</a>, Jan 2010–Dec 2012</p> <ul style="list-style-type: none"><li>• <b>GPA</b> in Plan-of-Study: 3.97</li></ul> <p><b>University of Tehran</b>, Tehran, Iran</p> <p>B.S., <a href="#">Computer Science</a>, Sep 2004–Jun 2008</p> <p><b>Allameh Helli High School</b>, Tehran, Iran</p> <p>High School diploma, Mathematics and Physics, Sep 2000–Jun 2004</p> <ul style="list-style-type: none"><li>• <b>Affiliated with:</b> <a href="#">National Organization for Development of Exceptional Talents (NODET)</a></li></ul>	
<b>Research Experience</b>	<p><b>Visiting Student Researcher</b>, Apr 2014–Aug 2014</p> <p><a href="#">Andrea Goldsmith</a>, <a href="#">Department of Electrical Engineering</a>, Stanford University, Stanford, CA, USA.</p> <p><b>Visiting Graduate Student</b>, Mar 2012–Apr 2012</p> <p><a href="#">Shankar Subramaniam</a>, <a href="#">Bioengineering Department</a>, UC San Diego, San Diego, CA USA.</p> <p><b>Research Assistant</b>, May 2010–Present</p> <p><a href="#">Ananth Grama</a>, <a href="#">Department of Computer Science</a>, Purdue University, West Lafayette, IN USA</p> <p><b>Research Assistant</b>, Jan 2010–May 2010</p> <p><a href="#">Alex Pothen</a>, <a href="#">Department of Computer Science</a>, Purdue University, West Lafayette, IN USA</p> <p><b>Collaborative Researcher</b>, Jan 2008–Apr 2009</p> <p><a href="#">Laboratory of Systems Biology and Bioinformatics</a>, <a href="#">Institute of Biochemistry and Biophysics</a>, University of Tehran, Tehran, Iran.</p>	
<b>Teaching Experience</b>	<p>Teacher, Allameh Helli High School, Tehran, Iran</p> <ul style="list-style-type: none"><li>• <i>Directed Research in Computing</i>, Sep 2008–Jun 2009</li><li>• <i>Advanced C/C++ Programming</i>, Sep 2008–Jun 2009</li></ul> <p>Teaching Assistant, Computer Science Department, University of Tehran, Tehran, Iran</p> <ul style="list-style-type: none"><li>• <i>Computer Architecture</i>, Feb 2007–Jun 2007</li><li>• <i>Numerical Linear Algebra</i>, Feb 2007–Jun 2007</li><li>• <i>Numerical Analysis</i>, Sep 2006–Feb 2007</li></ul>	
<b>Work Experience</b>	<p>- Research Associate Intern, Genapsys Inc., Redwood City, CA, USA. May 2014-Aug 2014. Responsibilities:</p> <ul style="list-style-type: none"><li>• Worked on the noise filtering and base-calling algorithms for the Genapsys sequencing platform.</li></ul> <p>- Project Manager, Techanis Company, Tehran, Iran. Oct 2008-Nov 2009, Accomplished project(s):</p> <ul style="list-style-type: none"><li>• Distributed Obex-based Bluetooth-advertisement system, Tehran Metro System, Tehran, Iran.</li><li>• Automated museum tour guide using an integrated RFID-Bluetooth technology, National Museum of Ancient Iran, Tehran, Iran</li></ul> <p>- Project Manager, Tavanir, Tehran, Iran. Jan 2007–May 2007, Accomplished project(s):</p> <ul style="list-style-type: none"><li>• Predictive models for electrical consumption of the Rafsanjan city.</li></ul>	

## Book Chapters

1. **S. Mohammadi** and A. Grama (2011) [Biological Network Alignment](#). In M. Koyutürk, S. Subramaniam, and A. Grama (eds.), *Functional Coherence of Molecular Networks in Bioinformatics*, Springer, pages 97–136

## Peer Reviewed Articles

1. **S. Mohammadi** and A. Grama (2015) A novel method to enhance the sensitivity of marker detection using a refined hierarchical prior of tissue similarities. *BMC Genomics* (under review, Tech report available at <http://dx.doi.org/10.1101/011858>)
2. **S. Mohammadi**, B. Saberidokht, S. Subramaniam, and A. Grama (2015) Scope and limitations of baker's yeast as a model organism for studying human tissue-specific pathways. *BMC Systems Biology* (accepted, Tech report available at <http://dx.doi.org/10.1101/011858>)
3. **S. Mohammadi**, S. Subramaniam, and A. Grama (2013) [Inferring the Effective TOR-Dependent Network: A Computational Study in Yeast](#). *BMC Systems Biology*, 7(1):84
4. G. Kollias, M. Sathe, **S. Mohammadi**, and A. Grama (2013) [A fast approach to global alignment of protein-protein interaction networks](#). *BMC research notes*, 6(1):35
5. **S. Mohammadi**, G. Kollias, and A. Grama (2012) [Role of Synthetic Genetic Interactions in Understanding Functional Interactions Among Pathways](#). In *Pacific Symposium on Biocomputing (PSB)*
6. G. Kollias, **S. Mohammadi**, and A. Grama (2011) [Network Similarity Decomposition \(NSD\): A Fast and Scalable Approach to Network Alignment](#). *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 24(12):2232–2243
7. Z. R. M. Kashani, H. Ahrabian, E. Elahi, A. Nowzari-Dalini, E. S. Ansari, S. Asadi, **S. Mohammadi**, F. Schreiber, and A. Masoudi-Nejad (2009) [Kavosh: a new algorithm for finding network motifs](#). *BMC bioinformatics*, 10(318)

## Conference Presentations

1. **S. Mohammadi**, B. Saberidokht, and A. Grama (2013) Comparative analysis of yeast interactome versus human tissue-specific networks. Great Lakes Bioinformatics Conference (GLBIO), Pittsburgh, PA, USA
2. **S. Mohammadi** (2013) A Computational Systems Approach to Studying Age-Related Pathologies. Office of Interdisciplinary Graduate Programs (OIGP), Purdue University, West Lafayette, IN, USA
3. A. Grama and **S. Mohammadi** (2013) A Systems Study of Aging and Age-Related Pathologies. CSOI Big Data Workshop, Honolulu, HI, USA
4. **S. Mohammadi**, S. Subramaniam, and A. Grama (2012) Systematic Identification of TOR Downstream Effectors Using Random-Walks on the Yeast Interactome. RECOMB Conference on Systems Biology and Regulatory Genomics, San Francisco, CA, USA
5. **S. Mohammadi**, S. Subramaniam, and A. Grama (2012) Sweet-talking yeast: systematic identification of TOR downstream effectors under dietary restriction. Network Biology SIG, Intelligent Systems for Molecular Biology (ISMB), Long Beach, CA, USA
6. **S. Mohammadi** (2008) A parallel algorithm for finding network motifs. Iranian Conference on Bioinformatics 2008 (ICB08), Tehran, Iran

## Working papers

1. **S. Mohammadi**, N. Zuckerman, A. Golsmith, and A. Grama (2015) Comprehensive review on the choice of loss function, regularization, and data preprocessing on the performance of deconvolution methods. (manuscript under preparation for submission to the Special Issue of Proceedings of IEEE - Foundations & Applications of Science of Information)
2. **S. Mohammadi**, D. Gleich, T. G. Kolda, and A. Grama (2015) Triangular AlignMEnt (TAME): A novel tensor-based approach for global network alignment. (manuscript under preparation for submission to Bioinformatics)

## Patents

1. **S. Mohammadi** (2005) Parallel models for implementing neural networks. IR 30936
2. **S. Mohammadi** (2004) A self-adaptive scheduling algorithm for dynamic networks. IR 29574
3. **S. Mohammadi** (2004) An IPX-based middleware for cluster computing. IR 29575

<b>Awards and Honors</b>	- Semi-finalist for the <b>Data Incubator Fellowship</b>	<i>Oct 2014</i>
	- Nominated for the <b>HHMI International Student Research Fellowship</b> , Purdue University	<i>Nov 2012</i>
	- <b>Outstanding Student Award</b> , School of Mathematics, Statistics and Computer Science, University of Tehran	<i>Jun 2008</i>
	- Recipient of the Grant for Undergraduate Studies from <b>National Elite Foundation</b>	<i>Sep 2004</i>
	- <b>Active and Outstanding Youth</b> in Tehran, <i>National Youth Organization</i> , Tehran, Iran	<i>Feb 2003</i>
	- Top-ranked research project award ( <i>IPX-based framework for cluster computing</i> ), <b>4<sup>th</sup> annual Kharazmi Youth Festival</b> (national competitions), Presented by the Ministry of Education, Tehran, Iran	<i>Dec 2002</i>
<b>Leadership</b>	<ul style="list-style-type: none"> <li>- Founder and president of the <b>Great Lakes Regional Student Group (RSG)</b>, <b>International Society for Computational Biology (ISCB)</b>, Feb 2014-Present</li> <li>- Member of the <b>Computational Science Leadership Team (CSLT)</b>, <b>Computational Science and Engineering (CS&amp;E)</b>, <b>Purdue University</b>, Feb 2014-Present.</li> <li>- Member of the <b>Outreach and Volunteer Committee</b>, <b>Student Council</b>, <b>International Society for Computational Biology (ISCB)</b>, Jan 2013-Aug 2014</li> <li>- Purdue representative, <b>Student Leadership Council (SLC)</b>, <b>Center for Science of Information (CSoI)</b>, Nov 2011-Present</li> <li>- Member (Science&amp; Technology representative), <b>Central Council of Founders</b>, <b>National Youth Assembly (NyA)</b>, Tehran, Iran, Apr 2004–Apr 2005</li> </ul>	
<b>Volunteer Service</b>		
	<b>Review</b>	
	<ul style="list-style-type: none"> <li>• <b>Journal:</b> <ul style="list-style-type: none"> <li>• <b>BMC Bioinformatics</b></li> <li>• <b>Cancer Informatics</b></li> <li>• <b>Internet Mathematics</b></li> <li>• <b>Parallel Computing</b></li> </ul> </li> <li>• <b>Conference:</b> <ul style="list-style-type: none"> <li>• <b>ACM Conference on Bioinformatics, Computational Biology, and Health Informatics (BCB 2012, BCB 2014)</b></li> <li>• <b>International Conference on Research in Computational Molecular Biology (RECOMB 2014)</b></li> <li>• <b>Symposium on Theoretical Aspects of Computer Science (STACS 2014)</b></li> </ul> </li> </ul>	
	<b>Workshop Chair</b>	
	<ul style="list-style-type: none"> <li>• <b>Hands-on workshop on RNASeq data analysis</b>, <b>GLBio 2015 Conference</b></li> </ul>	
<b>Professional Memberships</b>	<b>International Society for Computational Biology (ISCB)</b> <b>American Association for the Advancement of Science (AAAS)</b>	
<b>Previous Research</b>	<b>Robotics:</b>	
	<ul style="list-style-type: none"> <li>• <b>Robocup Soccer Simulation</b>, <b>Allameh Hello Team</b>, 2003, Padova, Italy</li> <li>• <b>Robocup Soccer Middle Size League</b>, <b>Satrap Team</b> (multi-university), 2005, Osaka, Japan</li> <li>• <b>Robocup @Home League</b>, <b>Satrap Team</b> (multi-university), 2006, Bremen, Germany</li> <li>• <b>Robocup @Home League</b>, <b>Satrap Team</b> (multi-university), 2007, Atlanta, GA, USA</li> </ul>	