

Joseph J. Nalluri

CONTACT INFORMATION	305 Carson St Richmond Virginia 23225 USA	818-571-3728 joseph.nalluri@gmail.com Linkedin profile www.josephnalluri.com
WORK PERMIT	USA, Germany and India	
RESEARCH INTERESTS	Network modeling and simulation, biological network analysis and inference of regulatory networks, network optimization, bioinformatics in large data sets	
EDUCATION	Virginia Commonwealth University (VCU) , Richmond, Virginia, USA Ph.D., Computer Science, <i>Expected</i> : Aug. 2017 <ul style="list-style-type: none">• Dissertation Title: <i>Network analytics for miRNA regulome and miRNA-disease interactions</i>• Advisor: Preetam Ghosh, Ph.D Texas A &M University- Corpus Christi (TAMUCC) , Corpus Christi, Texas, USA M.S., Computer Science, Aug. 2012 <ul style="list-style-type: none">• Thesis Title: <i>Parallel computing for hyperspectral imaging in multiprocessor architecture</i>• Advisors: Ahmed M. Mahdy, Ph.D and Mehrube Mehrubeoglu, Ph.D. University of Pune , Pune, India B.S., Computer Science, May 2009	
SOFTWARE PROFICIENCY	Programming: R, Matlab, C/C++, Python, GMPL, bash, OpenMP, MPI Web technologies: PHP, Javascript, JQuery, d3.js, JSON, cURL. Apache Databases and OS: MySQL, Oracle, Neo4j and Linux/cluster framework, Windows	
RESEARCH EXPERIENCE	Graduate Research Assistant Department of Computer Science, VCU Supervisor: Preetam Ghosh, Ph.D <ul style="list-style-type: none">• Develop networks scientific and graph theoretic analytics for biological interaction networks• Simulation and modeling of biological networks• Network inference of miRNA network models, miRNA-disease networks, miRNA-gene-TF and drug networks• Integration of heterogeneous datasets and development of bioinformatics tools and pipelines Projects <ul style="list-style-type: none">• <i>miRfluence: an influence diffusion approach to predict influential miRNAs among diseases</i> To simulate the cascading flow of information/influence diffusion among miRNA networks in diseases and identify critical miRNAs (<i>in progress</i>) <hr/> <i>Technologies: Matlab, GLPK, C, mySQL, PHP, Javascript, JQuery, bash</i> <ul style="list-style-type: none">• <i>miRsig: Network inference of disease specific miRNA-miRNA interaction networks</i> A consensus-based network-inference approach to predict miRNA-miRNA signature networks across multiple disease categories <hr/> <i>Technologies: Matlab, R, JavaScript, JQuery, d3.js, mySQL, PHP, Apache, bash</i> <ul style="list-style-type: none">• miRNA data sharing collaboration with Philip Morris International research group A RESTful web service for external data extraction of miRNA-related data and development of R packages in collaboration with Philip Morris International research group (<i>ongoing</i>) <hr/>	Aug. 2012 - Aug. 2017 (<i>Expected</i>)

Technologies: cURL, json, PHP, mySQL, R

- *iMiR: Visual analytics tool to study interaction networks of miRNAs*
A consolidated database of miRNA networks with diseases, TFs, genes, drugs, chemical and pathways with visual analytics for discovery

Technologies: JavaScript, JQuery, d3.js (data visualization), mySQL, PHP, html, Apache

- *DISMIRA: miRNA-disease network discovery using maximum-weighted matching model and motif-based analysis*
Two network theoretic approaches to determine crucial miRNA-disease associations and network structures

Technologies: GLPK, Python, JavaScript, JQuery, d3.js (data visualization), mySQL, PHP, html, Apache

- *miRegulome*
An integrated online repository of entire regulatory modules of miRNA with data analytics

Technologies: JavaScript, JQuery, mySQL, PHP, html, Apache

WORK
EXPERIENCE

- Webmaster** Jan. 2016 - Aug. 2016
VCU Center for Clinical and Translation Research
Richmond, Virginia
- Programming Intern** Jun. 2015 - Aug. 2015
ZMT Zürich MedTech AG, Zürich, Switzerland
Supervisors: Manuel Guidon and Stefan Schilds
- Implemented a web based user interface around an existing server application used in the simulation platform Sim4Life to process and manage large simulations and their results
 - The web user interface facilitated the administration of all control job queues; implemented using C++ web toolkit called 'Wt'
- SQL Report Writer** Sept. 2010 - Jan. 2012
Bursar Office, TAMUCC
Corpus Christi, Texas
- Design and writing PL/SQL scripts for recordkeeping
 - Perform generation and automation of reports

PUBLICATIONS:
JOURNALS

1. **Nalluri, Joseph J.**, Debmalya Barh, Vasco Azevedo, and Preetam Ghosh. "miRsig: a consensus-based network inference methodology to identify pan-cancer miRNA-miRNA interaction signatures." *Scientific Reports* 7 (2017). [IF: 5.5]
2. **Nalluri, Joseph J.**, Debmalya Barh, Vasco Azevedo, and Preetam Ghosh. "Towards a comprehensive understanding of miRNA regulome and miRNA interaction networks." *Journal of Pharmacogenomics & Pharmacoproteomics* 7, no. 160 (2016): 2153-0645. [IF: 1.55]
3. **Nalluri, Joseph J.**, Bhanu K. Kamapantula, Debmalya Barh, Neha Jain, Antaripa Bhattacharya, Sintia Silva de Almeida, Rommel Thiago Juca Ramos, Artur Silva, Vasco Azevedo, and Preetam Ghosh. "DISMIRA: Prioritization of disease candidates in miRNA-disease associations based on maximum weighted matching inference model and motif-based analysis." *BMC Genomics* 16, no. 5 (2015): 1. [IF: 3.86]
4. Barh, Debmalya, Bhanu Kamapantula, Neha Jain, **Joseph Nalluri**, Antaripa Bhattacharya, Lucky Juneja, Neha Barve et al. "miRegulome: a knowledge-base of miRNA regulomics and analysis." *Scientific Reports* 5 (2015). [IF: 5.5]

- PUBLICATIONS: CONFERENCES
1. **Nalluri Joseph**, Bhanu Kamapantula, Preetam Ghosh, Debmalya Barh, Neha Jain, Lucky Juneja, and Neha Barve. "Determining mirna-disease associations using bipartite graph modelling. In *Proceedings of the International Conference on Bioinformatics, Computational Biology and Biomedical Informatics*, p. 672. ACM, 2013. [Acceptance rate: 29%]
 2. **Nalluri Joseph**, Pratip Rana, Vasco Azevedo, Debmalya Barh, and Preetam Ghosh. "Determining influential miRNA targets in diseases using influence diffusion model. In *Proceedings of the 6th ACM Conference on Bioinformatics, Computational Biology and Health Informatics*, pp. 519-520. ACM, 2015. [Acceptance rate: 29%]
- PUBLICATIONS: BOOK CHAPTERS
1. **Nalluri Joseph J.**, Debmalya Barh, Vasco Azevedo and Preetam Ghosh, Bioinformatics and systems biology in bio-engineering, *Omics Technologies and Bio-engineering: Towards Improving Quality of Life*. Ed. D. Barh. Academic Press, 2017. Print.
- PUBLICATIONS: IN PREPARATION
1. **Nalluri Joseph**, Pratip Rana, Vasco Azevedo, Debmalya Barh, and Preetam Ghosh. "Determining influence propagation among miRNAs in diseases via an influence diffusion model" (*Expected submission: March 31st, 2017*)
- PRESENTATIONS
- Poster presentation, ACM BCB Conference & Health Informatics, Sept. 2013
 - **J. Nalluri** and M. Mehrubeoglu, "Investigation of Hyperspectral Images of Biological Media through Parallel/Cluster Computing," *9th Annual Pathways Student Research Symposium*, Texas A&M University, College Station, Texas, November 2011 [**Awarded**]
 - **J. Nalluri**, "Deciphering patterns of miRNA-disease interactions via network science" *Science Luncheon*, Zürich Med Tech, Zürich, Switzerland, 2015 (as part of summer internship)
- AWARDS
- Doctoral Dissertation Fellowship, School of Engineering, VCU 2016-2017
- Awarded to most accomplished final year Ph.D. candidates to complete the dissertation within the academic year by devoting full-time effort for research work
 - Outstanding Early Career Student Researcher, Dept. of Comp. Sci., VCU Oct. 2014
 - NSF Travel Award, ACM BCB Conference Sept. 2013
 - Top 1% Superior Research Poster Presentation Nov. 2011
- 9th Annual Pathways Student Research Symposium at Texas A&M University, College Station
- This award was presented to only 2 students among 186 applicants. Research poster was based on the research work done in the Master's Thesis.
 - Graduate Student Scholarship Jan. 2010 - May 2012
- TEACHING EXPERIENCE
- Graduate Teaching Assistant** Jan. 2012 - Aug. 2012
COSC 2437.201 - Data Structures with Dr. [Michael Scherger](#)
College of Science and Engineering, TAMUCC
- Taught and supervised a class of 25-30 students on course material and labs
- Graduate Teaching Assistant** Jan. 2010 - May 2010
CHEM 4402 - Biochemistry II with Dr. [Patrick Larkin](#)
College of Science and Engineering, TAMUCC
- Taught and supervised a class of 60 students on course materials and labs
- REFERENCES
- Preetam Ghosh, Ph.D.**
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Associate Chair and Undergraduate Director
Department of Computer Science
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- Ahmed Mahdy, Ph.D.**
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