CURRICULUM VITAE

GIRI NARASIMHAN

ADDRESS:

Distinguished University Professor, [**On Leave** since Jan 2025]
Knight Foundation School of Computing and Information Sciences,
INV 202, Florida International University, Miami, FL 33199.

Current: CEO & Founder, Euleris Inc.

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❑ EDUCATION

DEGREE	DISCIPLINE	INSTITUTION	YEAR
B. Tech.	Electrical Engineering	Indian Institute of Technology, Bombay, India	1982
Ph. D.	Computer Science	University of Wisconsin - Madison	1989

❑ EXPERIENCE

RANK/POSITION	DEPARTMENT/DIVISION	INSTITUTION	PERIOD
CEO & Founder		Euleris LLC	2025 onward
CEO		GRaiL 2024 LLC	Jan-Oct 2025
Professor	Knight Foundation School of Computing & Information Sciences (KFSCIS)	Florida International Univ	2004 onward
Distinguished University Professor	KFSCIS	Florida International Univ	2024 onward
Ryder Endowed Prof	KFSCIS	Florida International Univ	2023-26
Director	Academy for CS Education, KFSCIS	Florida International Univ	2018 onward
Curriculum Innovation Academic Lead	KFSCIS	Florida International Univ	2022 onward
Courtesy Appointment	Dept. of Public Policy & Admin., Steven J. Green School of International & Public Affairs	Florida International Univ	2023-25
Courtesy Appointment	Dept. of Human and Molecular Genetics, HW College of Medicine	Florida International Univ	2021-23
Visiting Professor	Institute for Data Engg. & Science	Georgia Tech Univ	Spring 2018
Visiting Professor	Computational Biology Dept.	Carnegie Mellon Univ	Fall 2017
Assoc. Dean, Res. and Grad Studies	College of Engineering & Computing	Florida International Univ	2009-2015
Visiting Scholar	Next Generation Sequencing	Strand Life Sciences	Jan-Apr 2009

Visiting Professor	Microbiology & Molecular Genetics	Harvard Medical School	Fall 2006
Visiting Researcher	IMAGEN-NICTA	National ICT Australia (NICTA)	Feb 2006
Associate Prof	School of Computer Science	Florida International Univ	2001-2004
Professor	Mathematical Sciences Department	Univ of Memphis	2001
Associate Prof	Mathematical Sciences Department	Univ of Memphis	1995-2001
Visiting Professor	Computer Science Department	Univ Copenhagen, Denmark	Sum 2000
Visiting Professor	Computer Science Department	Lund University, Sweden	Sum 1999
Visiting Professor	Inst. for Advanced Comp. Studies	U of Maryland, College Park	Fall 1997
Visiting Professor	Applied Mathematics Department	Univ at StonyBrook, NY	Fall 1997
Visiting Professor	Computer Science Department	Univ of Magdeburg, Germany	July 1997
Visiting Professor	Computer Science Department	Univ of Copenhagen,Denmark	May 1997
Assistant Professor	Mathematical Sciences Department	Univ of Memphis	1989 – 1995
Graduate Assistant	Computer Science Department	Univ of Wisconsin - Madison	1982 – 1989

❑ RESEARCH AREAS

- AI and Machine Learning
- Data Science and Big Data Analytics
- Computational Biology and Bioinformatics
- Design and Analysis of Algorithms; Computational Geometry
- Graph Theory and Combinatorics
- Computer Science Education

❑ PROFESSIONAL HONORS

- **CEO & Founder,** Euleris LLC, Since Oct 2025.
- **CEO & Founder,** GRaiL 2025 LLC, Since Oct 2025.
- **CEO,** GRaiL 2024 LLC, Jan to Oct 2025.
- **Distinguished University Professor,** FIU, 2024-.
- **Google Cloud Research Innovator**, 2024.
- **Ryder Endowed Professor,** Knight Foundation School of Computing & Information Sciences, 2023-24.
- **Stanford University's List of World's Top 2% Scientists**, 2023 & 2024.
- **FIU Top Scholar,** Engagement Beyond the Classroom, 2023.
- **KFSCIS Faculty Task Force, 2023:** Tasked with responding to External Reviewers' Report**.**
- **Courtesy Faculty Appointment,** Department of Public Policy and Administration, Steven J. Green School of International and Public Affairs, FIU, 2023-25.
- **Courtesy Faculty Appointment,** Department of Human and Molecular Genetics, Herbert Wertheim College of Medicine, FIU, 2021-23.
- **FIU Faculty Senate Award for Excellence in Advising and Mentorship,** 2022.
- **Curriculum Innovation Academic Lead,** KFSCIS, 2022-23.

- **Best Poster Award,** "Microbiome Maps: Hilbert Curve Visualizations of Metagenomic Profiles," BioVIS, ISMB, 2022.
- **FIU Top Scholar,** Dedicated Mentoring, 2021.
- **Advisory Board Member,** Quality Enhancement Program, FIU, 2020-23.
- **Co-Chair,** Data Literacy Badge, Quality Enhancement Program, FIU, 2020-23.
- **Director, Academy for CS Education, FIU,** 2018-
- **Co-Director, Academy for CS Education, FIU,** 2016-18.
- **Steering Committee, Biomedical Sciences Institute, FIU,** 2015-.
- **Coach, Programming Team, FIU,** 2007-.
- **Coordinator, MS degree program in Data Science, KFSCIS,** 2017-.
- **Advisory Board, Biomedical Sciences Institute, Florida International University,** 2013-15**.**
- **Board of Directors, FIU Research Foundation, Inc.,** 2010-15.
- **FIU School of Computer Science "Best Research" Award,** 2007.
- **FIU Faculty Senate Award for Excellence in Research,** 2004.
- **FIU School of Computer Science "Best Research" Award,** 2004.
- **Superior Performance in University Research Award**, **University of Memphis**, 1995.
- **Editor, International Journal of Bioinformatics Research & Applications,** since 2007.
- **Past Editor, International Journal of Bioinformatics and its Applications (IJBA)**, 2017
- **Past Editor, Journal of Discrete Algorithms**
- **Past Editor, Journal of Bionanoscience,** 2005.
- **Past Editor, International Journal of Experimental Algorithms**, 2010.
- **Conference Program Committee Memberships (**Over 60**).**
- **Invited & Keynote Speakerships (**Over 100**)**; **Invited Tutorial Sessions** (4)**.**
- **Best Paper Prize**: "Anatomical Society Aging Cell Joint Runner Up Best Paper Prize 2024" by Council of the Anatomical Society. For: Hamsanathan, et al., *Aging Cell*, **23**(4):e14104, April 2024. [Publication]

❑ OUTREACH and DIVERSITY EFFORTS

- **Microcredential badges designed (for Quality Enhancement Program @ FIU).**
  - *Thinking and Communicating with Data*, 2019: 364 badges awarded (6/23); 13 existing courses.
  - *Data Science for Public Policy,* 2021: 100+ badges awarded (as of August 2023).
  - *Data Science for K-12 Teachers,* 2023: Under design
- **BTT Guild Curriculum:** designed to introduce computing & soft skills to female/minoritized students.
  - *Guild Workshop*, 2022: 167 students trained. Collaboration with Ms. Nimmi Arunachalam.
- **Academy Workshops organized**:
  - *CS Fundamentals, CS Discoveries, CS Principles, and CS A*: 500+ teachers from S Florida trained using nationally recognized curriculum from Code.org over a period of over 7 years.
  - 200+ K-12 teachers trained in programming, robotics, microbit, cybersecurity, and more.
  - Over 10,000 K-12 students impacted by this training.

- **Minecraft-based Cybersecurity designed and implemented**:
  - *Cybersecurity*: 3 Minecraft-based modules were designed in 22-23 for K-12 students
  - 42 K-12 teachers from South Florida were trained on the material using the modules.
  - Over 1000 minoritized and disadvantaged K-12 students are expected to be impacted.
- **ADVANCE Institutional Transformation at FIU (AWED)**:
  - *Early discussions & program design*: Participated (2015-17) on a panel to bring meaningful institutional transformation by promoting successful career paths for female faculty members.

❑ EXTERNAL FUNDING SUPPORT

FUNDED EXTERNAL GRANTS	AGENCY	AMOUNT	PERIOD
Research Initiation Award (**Sole PI**) *Title*: Sparse Geometric Spanner	NSF	$ 60,000	1994-98
Research Grant (**PI**) *Title*: Graph-Theoretic Approaches to VLSI Design	Cadence Design Systems, Inc.	80,000	1996-97
Travel Grant, W. Europe Program (**CoPI**) *Title*: Cycles, Paths, and Communication Networks	NSF	14,000	1993-95
Research Grant (**Sole PI**) *Title*: Algorithms for Eye Laser Surgery	F.E.O. Medical, Inc.	10,000	1999
Pre-NPEBC: Bioinformatics Center Planning Grant (**CoPI**) *Title*: Bioinformatics for Mouse Phenotype Analysis	NIH (Subcontract)	1,800,000 (49,963)	2003-05
CREST: Center for Research Excellence in S&T (**Co-I**) *Title*: Center of Emerging Tech for Advanced Information Proc	NSF	4,500,000	2003-08
Curricular Suppls in MARC-U*STAR (**Participant**) *Title*: Quantifying Biology in the Classroom	NIH	49,259	2004
MBRS-SCORE Program (**PI**) [S06 GM008205] *Title*: Integrated Genomic Databases & Microarray Analysis	NIH	370,000	2006-08
MBRS-SCORE Program (**Coll.**) (PI: Mathee) *Title*: Role of *P. aeruginosa* ß-lactamase genes	NIH	415,205	2005-08
(**PI** on Subcontract from Harvard Medical School) *Title*: *Vibrio Cholerae* pan genome microarray	NIH/Harvard	18,200	2009
(**PI** on Subcontract) *Title*: Airway Microbiome in COPD Patients	FDOH	314,408	2010-11
(**Participant**) (PI: Weeks) *Title*: Quantifying Biology in the Classroom (Q'BIC)	NIH	1,200,000	2008-13
(**Co-PI**) (PI: Rangaswami) *Title*: Energy-Proportional Storage Systems	NSF	472,163	2010-14
(**Participant**) (PIs: Rishe and Mathee): CREST-I/UCRC	NSF	800,000	2012-14
(**Co-PI**) (PIs: Campos & Mathee) *Title*: Airways Microbiome of Alpha-One Subjects	Alpha-One Foundation	100,000	2014-15
(**Co-PI**) (PI: Tsoukias) Title: Integrative modeling	NIH	423,680	2014-17
Endowment (**PIs**: Narasimhan and Irvine)	Ultimate Software	1,000,000	2015-25
(**Co-PI**) (PI: Rangaswami): NVM-enabled Host-side Caches	NSF	831,605	2016-20
(**PI**): [W911NF-16-1-0494] *Title:* Multi-Disciplinary High Performance Computing and STEM Education	ARO	498,420	2016-17
(Participant) (PI: Furton) *Title*: ADVANCE Institutional Transformation at FIU	NSF	1,336,483	2016-21
(**Co-I**) (**PI**: Madhivanan) *Title*: Longitudinal Study of Vaginal Microbiota	NIH	439,500	2017-20

(**Co-I**) (**PI**: McCord) [2017-NE-BX-0001]: PCR-based multiplex for age and body fluid identification	NIJ	368,512	2017-20
(**Collaborator**) (**PI**: Villalona) *Title*: Assessment of Efficacy of Immunotherapy	FDOH		2019-20
(**Co-PI**) (**PI**: Ganapati) [OAC-1924154: Advanced CyberInfrastructure Training in Policy Inform.	NSF	1,000,000	2019-24
(**PI**): TechSpark	Microsoft Philanthropies	195,000	2020-21
(**PI**) [CNS- 2037374]: RAPID: Bioinformatic Search for Epitope-based Molecular Mimicry in the SARS-CoV-2 Virus using Chameleon	NSF	199,000	2020-21
(**PI**): Machine Learning to identify mycotoxins in US Wines	USDA	66,198	2020
(**Co-PI**) (**PI**: Rangaswami) [CNS-1956229] *Title*: Generalized Caching-As-A-Service *Supplement*: REU	NSF	633,131 16,000	2020-24
(**PI**) [CNS- 2037374]: Supplement RAPID	NSF	38,800	2021-22
(Site **PI**) (Overall PI: Wang) [2118329]: HDR Inst: Geospatial Understanding through Integrative Discovery Environment	NSF/UIUC	499,891 (of $15M)	2021-26
(**Co-I**) (PI: Dickerson) [2144374]: Harnessing Multiscale Biophysical Cues for Engineering Adult Heart Tissue	NSF	697,545	2022-27
(**Co-PI**) (PI: Akkaya) [3910-1016-00-O]: Minecraft-based Cybersecurity Professional Development for K-12 Teachers	CyberFlorida / USF / FDoEd	250,000	2022-23
(**Co-PI**) (PI: Weiss) Break Through Tech	BTT / Cornell U	6,477,091	2022-27
(**PI**) [23A01]: Microbial DNA in Blood in Alzheimer's Disease Subjects as Potential Biomarkers & the Role of Microbiome	FDOH (Ed & Ethel Moore Award)	99,783	2023-25
(**Co-PI**) (PI: Schürer) Next-Gen Biomed Big Data Platform for Cancer Research and Collaboration Across Florida	FDOH (Bankhead Cooley Program)	59,520 (of $1.5M)	2023-26
(**Co-PI**) (PI: Jha) Mobilizing the Emerging Diverse AI Talent (MEDAL) through Design and Automated Control of Autonomous Scientific Laboratories	DoE / ASCR-RENEW	600,000 (of $5.4M)	2023-26
(**Co-PI**) (PI: Jha) [HR00112420004] Next-Gen Biomed Big Data Platform for Cancer Research and Collaboration Across Florida	DARPA / AI-CRAFT	53,772 (of $4.5M)	2023-26
(**PI**) [P23AC00474]: CESU (SOFL) – Integrative Forecasting for Everglades Water Levels: A Machine Learning Approach	DoI / NPS	50,000	2024-25

❑ PUBLICATIONS & PRODUCTS

Patents & IP Disclosures

1. Cickovski, **Narasimhan**, Mathee; Systems and methods of assessing significance of metabolites in diseases, United States Patent Application 20220415520, 2022.
2. Cickovski, Campos, Manuel, Mathee, **Narasimhan**; Invention Disclosure; Significance of Glutamine in Lung Microbiome of Alpha-1 Antitrypsin Deficiency (A1AD) and Chronic Obstructive Pulmonary Disorder (COPD) Patients, August 2020.
3. **Narasimhan,** Vietri, Martinez; *Systems and methods for managing cache replacement with machine learning*. US Patent 10,558,583. February 2020. [http://www.freepatentsonline.com/10558583.html]

Books

1. **Bioinformatics Research and Applications.** Editors: Zhipeng Cai, Ion Mandoiu, **Giri Narasimhan,** Pavel Skums, and Xuan Guo; *Springer Verlag*. *Lecture Notes in Bioinformatics* Series, Vol. 12304, 2020. [978-3-642-01550-2]
2. **Computational Advances in Bio and Medical Sciences.** Editors: Ion Mandoiu, T. M. Murali, **Giri Narasimhan,** Sanguthevar Rajasekaran, Pavel Skums, Alexander Zelikovsky. *Springer Verlag*. *Lecture Notes in Bioinformatics* Series, Vol. 12029, 2019. [978-3-030-46164-5 & 978-3-030-46165-2]
3. **Bioinformatics Research and Applications.** Editors: Ion Mandoiu, **Giri Narasimhan,** Yanqing Zhang; *Springer Verlag*. *Lecture Notes in Bioinformatics* Series, Vol. 5542, April 2009. [978-3-642-01550-2]
4. **Geometric Spanner Networks,** Research Monograph. Authors: **Giri Narasimhan** and Michiel Smid; *Cambridge University Press*, 2007. [ISBN: 0521815134]; Also appeared in eBook format.
5. **Advances in Bioinformatics and its Applications.** Editors: Matthew He, **Giri Narasimhan,** Sergei Petoukhov. *World Scientific Press*, June 2005. [ISBN: 981256148X]

Taped Lecture Series

1. **Narasimhan**, "Pattern Discovery in Bioinformatics," *Henry Stewart Lecture Series*, 2006. [http://www.hstalks.com/bioinfo/index.htm]

Book Chapters

1. Buendia, El-Gazzar, Delzoppo, **Narasimhan**, "Three Public Health Use Cases the Blockchain Can Solve," In *Blockchain in Healthcare: Innovations that Empower Patients, Connect Professionals and Improve Care* (HIMSS Book Series), Chapter 19, pages 267-295, Editors: Metcalf, Bass, Hooper, Cahana, Chillon, CRC Press, 2019. ISBN-13: 978-0367031084.
2. Gudmundsson, **Narasimhan**, Smid, "Planar Geometric Spanners," In *Encyclopedia of Algorithms*, Ed.: M. Kao, Springer, pp 1570-74, ISBN: 978-3-642-27848-8, 2016.
3. Gudmundsson, **Narasimhan**, Smid, "Geometric Spanners," In *Encyclopedia of Algorithms*, Ed.: M. Kao, Springer, pp 846-52, ISBN: 978-3-642-27848-8, 2016.
4. Gudmundsson, **Narasimhan**, Smid, "Applications of Geometric Spanners," In *Encyclopedia of Algorithms*, Ed.: M. Kao, Springer, pp 86-90, ISBN: 978-3-642-27848-8, 2016.
5. Fernandez, Aguiar-Pulido, Riveros, Huang, Segal, Zeng, Campos, Mathee, **Narasimhan**, "Microbiome Analysis: State-of-the-Art and Future Trends," In *Computational Methods for Next Generation Sequencing Data Analysis*, Chapter 18, Wiley, Ed.: Mandoiu and Zelikovsky, John Wiley and Sons, p333-351, 2016.
6. Aguiar-Pulido, Suarez-Ulloa, Eirin-Lopez, Pereira, **Narasimhan**, "Computational Methods In Epigenetics," In *Personalized Epigenetics*, Springer, Ed.: T. Tollefsbol, Chapter 6, p153-180, 2015.
7. Balasubramanian, Murugapiran, Silva-Herzog, Schneper, Yang, Tatke, **Narasimhan**, Mathee, "Transcriptional Regulatory Network In *Pseudomonas aeruginosa*," In *Bacterial Gene Regulation and Transcriptional Networks*, Caister Academic Press, Ed.: M. Babu, Chapter 13, p199-221, 2013.
8. Zeng, Ding, Mathee, Schneper, **Narasimhan**, "Gene function prediction and functional network: the role of gene ontology," In *DATA MINING: Foundations and Intelligent Paradigms*, Eds. Dawn E. Holmes and Lakhmi C. Jain, Springer, Chapter 7, p123-162, 2012.
9. Gudmundsson, **Narasimhan**, Smid, "Geometric Spanners," In *Encyclopedia of Algorithms*, Ed. M. Kao, p360-364, Springer, 2008.

10. Gudmundsson, **Narasimhan**, Smid, "Plane Geometric Spanners," In *Encyclopedia of Algorithms*, Ed. M. Kao, p653-656, Springer, 2008.
11. Gudmundsson, **Narasimhan**, Smid, "Applications of Geometric Spanners," In *Encyclopedia of Algorithms*, Ed. M. Kao, p40-43, Springer, 2008.
12. Yang, Zeng, Mathee, **Narasimhan**, "PlasmoTFBM: An Intelligent Queriable Database for Predicted Transcription Factor Binding Motifs in *Plasmodium falciparum*," In *Methods of Microarray Data Analysis V*, McConnell, Lin, and Hurban (Eds.), Springer, 121-136, 2007.
13. Renugopalakrishnan, Wei, **Narasimhan**, Verma, Li, and Anumanthan, "Enhancement of Protein Thermal Stability: Toward the Design of Robust Proteins for Bionanotechnological Applications," In *Bionanotechnology: Proteins to Nanodevices*, 117-139, Springer Press, 2006.
14. Zheng, George, **Narasimhan**, "Microarray Data Analysis using Neural Network Classifiers and Gene Selection Methods," In *Methods of Microarray Data Analysis IV*, Shoemaker and Lin (Eds.), Springer, 207-222, 2005.
15. Manber, **Narasimhan**, "A Generalization of Lovász's Θ Function," in *Polyhedral Combinatorics*, Eds. W. Cook and P. D. Seymour, DIMACS Series, AMS **1**, 19-27, 1990.

Refereed journal publications

1. Shirali, Govindasamy, Stebliankin, Mathee, **Narasimhan**, "BiMba: Predicting Protein Binding Sites using Vision Mamba," *Bioinformatics*, **42** (Suppl 1), btag243, July 2026.
2. Govindasamy, Cho, J. Yang, B. Yang, Kim, Lee, Choe, Lee, E-G Kim, Mathee, **Narasimhan**, Shin. "Alternative to Invasive Bronchoscopy: Validating Tracheal Aspirates for Microbiome Profiling in Intensive Care Unit Pneumonia Patients," *Sci. Reports*, 2026. DOI:10.1038/s41598-026-60691-8
3. Mehta**,** Stebliankin, Mathee, **Narasimhan**, **"**MEditome: Computational Detection of RNA Edit Sites Using *de novo* Assembly in Microbiomes," **33**(5-6), p643-659, *J. Computational Biology*, 2026
4. Stebliankin, Baral, Balbin, Nunez-Castilla, Sobhan, Cickovski, Mondal, Siltberg-Liberles, Chapagain, Mathee, **Narasimhan**, "EMoMiS: A Pipeline for Epitope-based Molecular Mimicry Search in Protein Structures with Applications to SARS-CoV-2," **31**, p462-474, *Computational and Structural Biotechnology*, 2026; *bioRxiv*, DOI: 10.1101/2022.02.05.479274, 2022.
5. Shariful, Weathers, Ghosh, **Narasimhan**, "Engineering an algorithm for constructing low-stretch geometric graphs with near-greedy average degrees," *Computational Geometry*, **130**, 2026. DOI: 10.1016/j.comgeo.2025.102201
6. Shi, Yin, Myana, Ishtiaq, John, Oberysekara, Leon, **Narasimhan**, "Deep Learning Models for Water Stage Predictions in South Florida," *Journal of Water Resources Planning and Management*, **151**(10), 05025013, 2025. DOI: 10.1061/JWRMD5/WRENG-6194
7. Shirali, Stebliankin, Karki, Shi, Chapagain, **Narasimhan**, "A Comprehensive Survey of Scoring Functions for Protein Docking Models." *BMC Bioinformatics*, **26**(1):25, 2025. DOI: 10.1186/s12859-024-05991-4
8. Ruiz-Perez, Gimon, Sazal, Mathee, **Narasimhan**. "Unfolding and de-confounding: biologically meaningful causal inference from longitudinal multi-omic networks using METALICA." *mSystems*, 9:e01303-23, 2024. DOI: 10.1128/msystems.01303-2
9. Hamsanathan, Anthonymuthu, Prosser, Lokshin, Greenspan, Resnick, Perera, **Narasimhan**, Gurkar. "A Molecular Index for Biological Age identified from the Metabolome and Senescence-associated Secretome in Humans." *Aging Cell*, **23**(4):e14104, 2024. DOI: 10.1111/acel.14104

10. Nayman, Schwartz, Polanco, Firek, Gumabong, Hofstee, **Narasimhan**, Cickovski, Mathee, "Microbiome Depiction Through User-Adapted Bioinformatic Pipelines and Parameters." *Journal of Molecular Microbiology*, **72**(10), 001756, 2023.
11. Clarke, Garba, Barbieri, Acuna, Baum, Rodriguez, Frias, Saldarriaga, Stefano, Mathee, **Narasimhan**, Brown. "Detection of SARS-CoV-2 in High-Efficiency Particulate Air (HEPA) Filters of Low-Cost Air Purifiers in Community-Based Organizations." *Environmental Monitoring and Assessment,* **195**(11), 1320, 2023.
12. Stebliankin**,** Shirali, Baral, Chapagain, Mathee, **Narasimhan**. "Evaluating Protein Binding Interfaces with Transformer Networks," *Nature Machine Intelligence*, **5**:1042–1053, 2023.
13. Cickovski, Mathee, Aguirre, Tatke, Hermida, **Narasimhan**, Stolstorff, "Attention Deficit Hyperactivity Disorder (ADHD) and the gut microbiome: An ecological perspective," *PLoS ONE*, **18** (8), e02738902023.
14. Valdes, Stebliankin, Ruiz-Perez, Park, Lee, **Narasimhan**. "Microbiome maps: Hilbert curve visualizations of metagenomic profiles." *Frontiers in Bioinformatics*. **3**:1154588, 2023.
15. Balbin, Nunez-Castilla, Stebliankin, Baral, Sobhan, Cickovski, Mondal, **Narasimhan**, Chapagain, Mathee, and Siltberg-Liberles, "Epitopedia: identifying molecular mimicry between pathogens and known immune epitopes." *Immunoinformatics,* **9** (2023) 100023.
16. Bose, Cickovski, Saha, Trivedi, Stebliankin, Roy, Mathee, **Narasimhan**, Tuteja, Chatterjee, "Microbiome dysbiosis show strong association of gut-derived altered metabolomic profile in Gulf War Chronic Multisymptom Illness symptom persistence following Western Diet feeding and development of obesity." *International J of Molecular Sciences*, **24**(4):4245, 2023.
17. Martin, Martinez, Stebliankin, Tamargo, Campa, **Narasimhan**, Hernandez, Rodriguez, Teeman, Johnson, Sherman, and Baum, "Diet Quality and Liver Health in People Living with HIV in the MASH Cohort: A Multi-Omic Analysis of the Fecal Microbiome and Metabolome." *Metabolites*, **13**(2):271, 2023.
18. Campos, Cickovski, Fernandez, Jaric, Wanner, Holt, Donna, Mendes, Silva-Herzog, Schneper, Segal, Moraga Amador, Riveros, Aguiar-Pulido, Banerjee, Salathe, Mathee, **Narasimhan**. "Lower respiratory tract microbiome composition and community interactions in smokers." *Access Microbiology*, **5**(3):000497.v3, 2023.
19. Martinez, Stebliankin, Hernandez, Martin, Tamargo, Rodriguez, Teeman, Johnson, Seminario, Campa, **Narasimhan**, Baum. "Multiomic analysis reveals microbiome-related relationships between cocaine use and metabolites." *AIDS*, **36**(15):2089-2099, 2022. 10.1097/QAD.0000000000003363.
20. Cheng, Ganapati, **Narasimhan**, Yusuf. A machine learning-based analysis of 311 requests in the Miami-Dade County. *Growth and Change*. **53**(4):1627-1645, 2022. doi: 10.1111/grow.12578
21. Saha, Bose, Stebliankin, Cickovski, Seth, Porter, Brooks, Mathee, **Narasimhan**, Colwell, Scott, Chatterjee, "Prior exposure to microcystin alters host gut resistome and is associated with dysregulated immune homeostasis in translatable mouse models," *Nature Scientific Reports*, **12**(1):1-19, 2022.
22. Nuñez-Castilla, Stebliankin, Baral, Balbin, Sobhan, Cickovski, Mondal, **Narasimhan**, Chapagain, Mathee, Siltberg-Liberles, "Potential autoimmunity resulting from molecular mimicry between SARS-CoV-2 Spike and human proteins," *Viruses*, **14**(7):1415, 2022; In the news.
23. Shi, Jain, **Narasimhan**, "Time Series Forecasting Using Various Deep Learning Models," *International Journal of Computer and Systems Engineering*, **16**(6):224-232, 2022.
24. Cai, **Narasimhan,** Skums, "Guest Editors' Introduction to the Special Section on Bioinformatics Research and Applications," *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, **19**(1):207-208. 1 Jan.-Feb. 2022, doi: 10.1109/TCBB.2021.3121736.

25. Baral, Bhattarai, Hossen, Stebliankin, Gerstman, **Narasimhan**, Chapagain. “Changes in the receptor-binding interface may cause immune evasion by the SARS-CoV-2 delta variant B.1.617.2.,” *Biophysical Journal*. Feb 2022, **121**(3):44a.
26. Stebliankin, Sazal, Valdes, Mathee, **Narasimhan**. “A novel approach for combining the metagenome, metaresistome, metareplicome and causal inference to determine the microbes and their antibiotic resistance gene repertoire that contribute to dysbiosis.” *Microbial Genomics*. 2022. **8**(12):000899.
27. Al Mamun, Tanvir, Sobhan, Mathee, **Narasimhan**, Holt, Mondal. Multi-Run Concrete Autoencoder to Identify Prognostic lncRNAs for 12 Cancers. *International Journal of Molecular Sciences*. 2021; **22**(21):11919. doi: 10.3390/ijms222111919. PubMed PMID: 34769351.
28. Baral, Bhattarai, Hossen, Stebliankin, Gerstman, **Narasimhan**, Chapagain, “Mutation-induced Changes in the Receptor-binding Interface of the SARS-CoV-2 Delta Variant B.1.617.2 and Implications for Immune Evasion,” *Biochem. Biophys. Res. Commun.*, **574**:14-19, 2021. doi: 10.1016/j.bbrc.2021.08.036. Epub 2021 Aug 15. PubMed PMID: 34425281
29. Madhivanan, Krupp, Coudray, Colbert, Ruiz-Perez, Cui, Bokulich, **Narasimhan**, Mathee, Cook, Schwebke, “Longitudinal assessment of nonavalent vaccine HPV types in a sample of sexually active African American women from ten US Cities,” *Vaccine*, **39**(34):4810-4816, 2021 Jul 20. doi: 10.1016/j.vaccine.2021.07.026. Epub 2021 Jul 20. PubMed PMID: 34294478
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103. Das, **Narasimhan**, "Geometric Searching and Rectilinear Link Distances," *Algorithms and Data Structures,* Lecture Notes in Computer Science, Eds. F. Dehne, J.-R. Sack, and N. Santoro, Springer Verlag **519**, 261-272, 1991.

Unrefereed Archival Publications

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2. Stebliankin V, Baral P, Balbin C, Nunez-Castilla J, Sobhan M, Cickovski T, Mondal AM, Siltberg-Liberles J, Chapagain P, Mathee K, and **Narasimhan** G. "EMoMiS: A Pipeline for Epitope-based Molecular Mimicry Search in Protein Structures with Applications to SARS-CoV-2". BioRxiv/2022/479274. DOI: https://doi.org/10.1101/2022.02.05.479274
3. Hamsanathan S, Anthonymuthu T, Prosser D, Lokshin A, Greenspan S, Resnick N, Perera S, **Narasimhan** G, Gurkar A. A Molecular Index for Biological Age identified from the Metabolome and Senescence-associated Secretome in Humans. ResearchSquare DOI: https://doi.org/10.21203/rs.3.rs-62559/v1
4. Cheng, Ganapati, **Narasimhan**, Yusuf, "Understanding Equity in Public Service Coproduction through Machine Learning: An Analysis of 311 Service Requests of Miami-Dade County," 2021.
5. Yusuf FB, Valdes C, Stebliankin V, Vietri G, **Narasimhan** G. EXP4-DFDC: A Non-Stochastic Multi-Armed Bandit for Cache Replacement. arXiv preprint arXiv:2009.11330. 2020 Sep 23.

6. Stebliankin V, Sazal MR, Valdes C, Mathee K, **Narasimhan** G. Novel Approach for Microbiome Analysis Using Bacterial Replication Rates and Causal Inference with Applications. BioRxiv. 2020 DOI: 10.1101/2020.05.21.108514.
7. Sazal, Stebliankin, Mathee, **Narasimhan**. Causal Inference in Microbiomes Using Intervention Calculus. BioRxiv. 2020. DOI: 10.1101/2020.02.28.970624
8. Sazal, Mathee, Ruiz-Perez, Cickovski, **Narasimhan**. Inferring directional relationships in microbial communities using signed Bayesian networks. BioRxiv. 2020. DOI: 10.1101/2020.02.18.955344
9. Ruiz-Perez D, Lugo-Martinez J, Bourguignon N, Mathee K, Lerner B, Bar-Joseph Z, **Narasimhan** G. Dynamic Bayesian networks for integrating multi-omics time-series microbiome data. BioRxiv. 2019 Jan 1:835124.
10. Ruiz-Perez, and **Narasimhan**. "So you think you can PLS-DA?." *bioRxiv* (2018): DOI: 10.1101/207225.
11. Lugo-Martinez J, Ruiz-Perez D, **Narasimhan** G, Bar-Joseph Z. Dynamic interaction network inference from longitudinal microbiome data. BioRxiv. 2018 Oct 1: DOI:10.1101/430462.
12. Consuegra, Martinez, Rangaswami, **Narasimhan,** Shao, Vietri, "Analyzing adaptive cache replacement strategies," *arXiv:1503.07624v2,* 2017.

Published Poster Abstracts

1. Shirali, Stebliankin, Baral, Chapagain, Mathee **Narasimhan**, "PIsToN: Evaluating Protein Binding Interfaces with Transformer Networks." Poster, CAPRI Competition @ CASP16, Dominican Republic, Dec 2024.
2. Stebliankin, Shirali, Baral, Chapagain, **Narasimhan**, "PIsToN: Evaluating Protein Binding Interfaces with Transformer Networks." Poster and Abstract, Center for Translational Science, FIU, March 2023.
3. Gumabong, Nayman, Cickovski, Narasimhan, Mathee, "Quality Control In 16S-Based Microbiota Compositional Analysis". Poster and Abstract, *NCUR 2023*, 2023.
4. Nayman, Polanco, Hofstee, Schreiner, Firek, Cickovski, Narasimhan, Mathee, Microbial Compositions Derived from 16S rRNA Sequencing Reads – Arriving at More Medically Meaningful Results. Poster and Abstract, *ASM Microbe*, 2022.
5. Nayman, Schwartz, Firek, Polanco, Gumabong, Cickovski, Narasimhan, Mathee, Bias in 16S-Based Microbiota Compositions: Improving Inference. Poster and Abstract, *Targeting Microbiota*, October 2022, Paris.
6. Zhang B, Wdowinski S, Lin C, Chavez S, Narasimhan G, Smith K, Jingchao J. American Geophysical Union (AGU) Meeting Abstracts, https://ui.adsabs.harvard.edu/abs/2021AGUFM.B45H1718Z/abstract, New Orleans, Dec 2021.
7. Martin H, Martinez SS, Stebliankin V, Tamargo J, Campa A, Narasimhan G, Baum M. Dietary Components and Metabolites Are Associated with Liver Fibrosis in People Living with HIV (PLWH) in the MASH cohort. Current Developments in Nutrition. 2020 Jun;4(Supplement_2):1574.
8. Madhivanan P, Bokulich NA, Coudray M, Colbert B, Ruiz-Perez D, Krupp K, Mathee K, Narasimhan G, Caporaso JG. Composition of the Vaginal Microbiome Associated with High Risk HPV Infection and Increased Risk for Cervical Cancer. Cancer Epidemiology and Prevention Biomarkers. 2020 Mar 1;29(3):696.
9. Madhivanan P, Coudray M, Ruiz-Perez D, Colbert B, Krupp K, Kumar H, Narasimhan G, Mathee K. P373 Co-occurrence of bacterial vaginosis and *Trichomonas vaginalis* among young African American women. *Sexually Transmitted Infections*, **95**(Suppl 1), 2019.
10. Madhivanan P, Coudray M, Ruiz-Perez D, Colbert B, Krupp K, Kumari H, Mathee K, Narasimhan G. P372 Bacterial vaginosis and high-risk human papillomavirus coinfection among African American women in the United States. *Sexually Transmitted Infections*, **95**(Suppl 1), 2019.

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12. Coudray M, Ruiz-Perez D, Colbert B, Krupp K, Kumari H, Narasimhan G, Mathee K, Madhivanan P. Effect of metronidazole on microbiomes associated with asymptomatic bacterial vaginosis. Access Microbiology. 2019 Mar 1;1(1A):827. https://doi.org/10.1099/acmi.ac2019.po0531
13. Martinez S, Campa A, Narasimhan G, Portuando D, Seminario L, Jasmin J, Baum M. Pilot Study on the Effect of Cocaine Use on the Intestinal Microbiome and Metabolome and Inflammation in HIV-Infected Adults in the Miami Adult Studies in HIV (MASH) Cohort (P13-027-19). *Current developments in nutrition*. 2019 Jun;3(Supplement_1):nzz036-P13. https://doi.org/10.1093/cdn/nzz036.P13-027-19.
14. Stebliankin V, Valdes C, Mathee K and Narasimhan G. Adapting Flint for calculating bacterial replication rates in Microbiomes [version 1; not peer reviewed]. *F1000Research* 2019, **8**(ISCB Comm J):1476 (poster) (doi: 10.7490/f1000research.1117382.1)
15. Narasimhan M, Vietri, Mehta**,** Rajabli, Aguiar-Pulido, Mathee, **Narasimhan**, "Predicting Symptom Severity and Contagiousness of Respiratory Viral Infections," *F1000Research 2016*, **5**(ISCB Comm J):1663 (poster) (DOI: 10.7490/f1000research.1112564.1). **Best Poster Award ISMB-SCS**.

Software Packages

1. **Cyber Expert Badge** (*Cryptic Cyphers***,** *Daring Defense***,** *Malware Mayhem)***:** Akkaya, Uluagac, **Narasimhan,** Bulman, Gerlach, Mulholland**.** *Minecraft Education Edition,* **September 2023.** (Developed in collaboration with Minecraft/Microsoft.)
2. **PIsToN:** ML model for scoring pairs of protein interfaces for binding [http://biorg.cis.fiu.edu/piston/], 2023
3. **EMoMiS:** Epitope-based Molecular Mimicry Search Pipeline [https://biorg.cs.fiu.edu/emomis/], 2023.
4. **MeRRCI:** Pipeline for Calculating Bacterial Replication Rates (PTRs) on a cluster [http://biorg.cis.fiu.edu/MeRRCI/], 2022
5. **PALM**: Dynamic Bayesian Network Tool for Longitudinal, Multi-omics data sets [http://biorg.cis.fiu.edu/palm/], 2020
6. **Jasper**: Visualizing Microbiome Profiles [http://biorg.cis.fiu.edu/jasper/], 2020
7. **Flint**: Large Scale Microbiome Profiling in the Cloud, [http://biorg.cis.fiu.edu/flint/], 2019
8. **PluMA**: Plugin-Based Microbiome Analysis, [http://biorg.cis.fiu.edu/pluma/], 2017
9. **MATria:** Improved software to compute the centrality of nodes in a correlation network, 2017.
10. **ATria:** Software to compute the centrality of nodes in a correlation network, 2016.
11. **AmpliQué:** Web application that uses data resulting from LH-PCR experiments to determine the putative presence of known microorganisms in biological samples, 2010. [http://biorg.cs.fiu.edu/AmpliQue]
12. **PoIRe:** An algorithm for robust point-based image registration, 2009. Joint work with N. Andres Parra [http://biorg.cis.fiu.edu/PoIRe/]
13. **PseudoNEXUS:** A comprehensive database of comparative genomics information on the bacterium *Pseudomonas aeruginosa*, 2008. Joint work with C. Valdes, and M. Robinson. [http://biorg.cis.fiu.edu/pseudonexus]
14. **IEM:** An Algorithm for Iterative Enhancement of Motifs Using Comparative Genomics Data, 2007. Joint work with E. Zeng. [http://biorg.cis.fiu.edu/IEM/]
15. **Sliding MINPD:** Program to reconstruct ancestor-descendant relationships among serially-sampled sequences, 2007. Joint work with P. Buendia. [http://biorg.cis.fiu.edu/SlidingMinPD/]

16. **Serial NetEvolve:** Program to generate serially-sampled sequences evolved along a randomly generated coalescent tree or network, 2006. Joint work with P. Buendia. [http://biorg.cis.fiu.edu/SNE/]
17. **GCC:** Generalized constrained clustering algorithm to cluster genes by exploiting constraints generated from incomplete heterogeneous data sources, 2007. Joint work with E. Zeng, C. Yang, T. Li. [http://biorg.cis.fiu.edu/GCC/]
18. **MSC:** Multi-source clustering algorithm to cluster genes by integrating information from two or more heterogeneous sources of data, 2006. Joint work with C. Yang, E. Zeng, and T. Li. [http://biorg.cis.fiu.edu/MSC/]
19. **DePiCt 2.0:** Web-based version of the BioPerl software for designing degenerate PCR primers using clustering; Joint work with students X. Wei, C. Archer and J. Farrow, 2005. [http://www.cs.fiu.edu/~giri/bioinf/DePiCt1.0/WebVersion/2depict.htm] [http://www.cs.fiu.edu/~giri/bioinf/DePiCt/]
20. **PlasmoTFBM:** Interactive database to search for transcription factor binding motifs in *Plasmodium falciparum* genome. [http://biorg.cs.fiu.edu/TFBM/] and [http://biorg.cs.fiu.edu/TFBM/tfbm.php], 2004.
21. **ASOM:** Adaptive Self-Organizing Maps software in Java; Joint work with Y. Wang, 2003. [http://biorg.cis.fiu.edu/ASOM/]
22. **μ-NP:** Microarray Data Analysis software in Java using non-parametric statistical analysis for comparison of drugs and for clustering of genes; Joint work with G. Zheng, 2001.
23. **BIP:** *Biofilm Image Processing* (BIP) package (Visual C++); Software available over the internet at [http://www.cs.fiu.edu/~giri/BIP]; Joint work with Li, Ji, Heydorn, Molin, and Mathee, 2000.
24. **GeoMST:** Computing *Minimum Spanning Trees* of a set of points in higher dimensional space under arbitrary Euclidean metrics (C++); Software available on request; Fastest available software for this problem for input points from three or higher dimensional space, 2000.
25. **GYM 2.0:** Improved HTH motif detection (C++). Work with C. Bu and K. Mathee, 1999. Java/CGI Version usable over the internet at [http://www.cs.fiu.edu/~giri/bioinf/GYM2/welcome.html]. Earlier C++ version was done by Y. Gao, K. Mathee, and X. Wang, 1998.

❑ INTERNAL FUNDING SUPPORT

FUNDED INTERNAL GRANTS	SOURCE	AMOUNT	PERIOD
Research Initiation Award Matching Funds	U Memphis	$ 8,500	1994
Faculty Research Grant *Title*: Problems on Graphs	U Memphis	3,000	1990
Faculty Research Enhancement Award *Title*: Software for Designing Degenerate Primers to Amplify Resistance Gene Homologues from *T. Cacao*	ABR, FIU	3,500	2003
Faculty Research Enhancement Award *Title*: Integrated Genomic Databases	ABR, FIU	3,500	2006
FIU Technology Fee Award *Title:* Engineering E-Books for the Library	FIU	141,720	2009-10
FIU Technology Fee Award *Title:* iREMOTE	FIU	172,697	2010-11
FIU Technology Fee Award *Title:* DILL: Data Science Learning Lab	FIU	194,225	2022-23

SUPPORT FOR COLLABORATIONS	SOURCE	PERIOD
Student Research Assistantship (X. Wei)	BMEI Department	2003-04
Student Research Assistantship (A. Parra)	Radiation Oncology, St. Jude Hosp.	2000, 2001-04
Student Research Assistantship (X. He)	Feinstone Center	2000-01
Student Internship (J. Liu)	UT Memphis	2000-01
Student Research Fellowship (P. Dimitrov)	Feinstone Center	Spring 2000
Student Co-Op Fellowship Program (Y. Gao)	IBM TJ Watson Center	1998-99
Student Support (J. Zhou, G. He, L. Liu)	F. E. O. Medical Inc.	Summer 1999
Student Co-Op Program (Milledge, Zheng)	IBM Supercomputing Center	2006

❑ STUDENT MENTORING

- **Post-doctoral Fellows:** Vitalii Stebliankin (2023; First Employment: Amazon Inc.); Vanessa Aguiar-Pulido (2014-16; Employment: Asst Prof., U Miami); Deepak Balasubramanian (2013; First Employment: Post-doctoral Fellow, Harvard University; Now at UCF); Rajnish Kumar (2012-13; Employment: U Belfast, N. Ireland)
- **Past PhD Students**:
  1. Arpit Mehta (2025; First Employment: Unify LLC)
  2. Jimeng Shi (2025; First Employment: U Illinois – Urbana Champaign)
  3. Vitalii Stebliankin (2023; First Employment: Amazon Inc.)
  4. Raihanul Bari Tanvir (Co-advised, 2023; Boehringer Ingelheim)
  5. Farzana Yusuf (2021; First Employment: Amazon Inc.)
  6. Daniel Ruiz Perez (2020; First Employment: Meta Inc.)
  7. Musfiqur Sazal (2020; First Employment: Microsoft Corp.)
  8. Camilo Valdes (2020; First Employment: Lawrence Livermore National Labs)
  9. Melita Jaric (2013; Posthumous Degree)
  10. Nestor Andres Parra (2009; First Employment: U Miami and Moffitt Cancer Center);
  11. Erliang Zeng (2008; Current Employment: U Iowa);
  12. Patricia Buendia (2007; Current: BioTeam Inc.; Founder & CEO, Lifetime Omics);
  13. Gaolin Zheng (2007; First Employment: Assoc. Prof., North Carolina Central University);
  14. Chengyong Yang (2006; First Employment: Applied Biosystems; Current: Co-Founder, Ascendas Genomics);
  15. Yuan Gao (2001; First Employment: IBM Watson Research Center; Current: Chairman & Co-Founder, Singlera Genomics);
  16. Dimitri Kaznachev (1998; First Employment: Fannie Mae);
- **Current Ph.D. Students:** Arpit Mehta, Jimeng Shi, Azam Shirali, Parshatd Govindasamy, Saad Alqarni, Rahuul Rangaraj;
- **Past MS Thesis/Project Students**: Satish Gannu, Yuan Gao, Kalyan Vavilapalli, Jianlin Zhu, Dr. Pascal Bedrossian, Dr. Rao Li, German Hernandez, Changsong Bu, Dr. Zhou Ji, Ning Xu, Dr. Xiao-rui He, Junmin Liu, Gaolin Zheng, Meera Krishnan, Yong Wang, Xintao Wei, Minchi Hu, Daniel Medvin, Mario Consuegra, Misael (Mitch) Fernandez, Juan Daniel Riveros, Andrius Bubelis, Wenrui Huang, Shamsed Mahmud, Camilo Valdes, Giuseppe Vietri, Haibin Guan, Vitalii Stebliankin, Mattias Galliano, Ricardo Ruiz, Yash Mundra, Prasad Bhoite, Ricardo Ruiz, Rukmangadh Sai Myana.

- **Undergraduate Students**: Mu Yang, Ruskin Miller, Roxana Ordonez, Camilo Valdes, Gisela Gonzalez, Mario Consuegra, Juan Duarte, Jesus Ramos, Eduardo Tibau, Samuel Barrios, Jandry Guerra, Stanislaw Khabinsky, Rene Garcia, Camilo Payan, Jonathan Choukroun, Pablo Salazar, Elvis Hernandez, Raul Preval, Oscar Guilarte, Jiovanni Alvarado, Leo Shao, Tram Ta, Misael (Mitch) Fernandez, Wendy Aleman Martinez, Giuseppe Vietri, Jesus Cabrera, Elizabeth Puente, Kierstin Matsuda, Gabriella Drummond, Emily Costa, Yasmine Abdrabo, Trent Alonzo, Eysler Paz, Isabella Gimon, Anne Nguyen, Zackary Schreiner, Fantaysia Palanco, Mahek Jain
- **Recent Collaborators:** M. Abreu (U Miami), Z. Bar-Joseph (CMU, Sanofi), L. Bulman (Microsoft), M. Campos (Miami, VA), S. Chatterjee (UC Irvine), R. Duara (Mt. Sinai), A. Ghosh (UNF), J. Gudmundsson (Sydney), A. Gurkar (Pittsburgh), U. Lall (ASU), B. Lerner (Argentina), B. Li (UIUC), S. Lory (Harvard), P. Madhivanan (U Arizona), I. Mandoiu (U Conn), R. Paudel (NPS), J. Pereira (A Coruna), S. Rajasekaran (U Conn), S. Schürer (U Miami), M. Stolstorff (Toronto), Suarez-Ulloa (Belgium), Szczesna-Cordary (U Miami), M. Villalona (Baptist), S. Wang (UIUC), A. Wanner (Miami), M. Ward (Purdue), D. Yoder-Himes (Kentucky), A. Zelikovsky (GSU), E. Zeng (S. Dakota), M. Zhao (ASU).
- **Recent FIU Collaborators:** K. Akkaya, M. Baum, J. Berry, P. Chapagain, S. Cheng, T. Cickovski, A. Deoraj, D. Dickerson, C. Dimitroff, J. Eirin-Lopez, N. Garba, S. Ganapati, B. Gerstman, H. Gu, S. Jha, A. Leon, J. Liberles, J. Liu, S. Lunn, S. Martinez, K. Mathee, D. Mills, A. Mondal, J. Obeysekera, R. Rangaswami, K. Tieu, S. Uluagac, M. Weiss, W. Wu, C. Yoo .
- **Visiting Students**: Luiz Barboza (2023; First Employment: U Memphis); Mahek Jain (2020); Medhini Narasimhan (2016)

▫ DISSERTATION COMMITTEES

Degree	Name	Year	Area of Dissertation	Department/University
Doctoral	George Connor	1993	Statistics	Math Sciences / U Memphis
Doctoral	Anita Burris	1993	Graph Theory	Math Sciences / U Memphis
Doctoral	Firasath Ali	1994	Combinatorics	Math Sciences / U Memphis
Doctoral	Lubomir Soltes	1995	Graph Theory	Math Sciences / U Memphis
Doctoral	Jiaxiang Zhao	1997	Differential Equations	Math Sciences / U Memphis
Doctoral	Dimitri Kaznachev	1998	Neural Networks	Computer Science / U Memphis
Doctoral	Rao Li	1999	Graph Theory	Math Sciences / U Memphis
Doctoral	Fernando Niño	2000	Evolutionary Algorithms	Computer Science / U Memphis
Doctoral	German Hernandez	2000	Evolutionary Algorithms	Computer Science / U Memphis
Doctoral	David Weinreich	2000	Graph Theory	Math Sciences / U Memphis
Doctoral	Congjun Yang	2001	Databases	Computer Science / U Memphis
Doctoral	Jun Deng	2001	Computat. Chemistry	Chemistry / U Memphis
Doctoral	Anna Østlin	2001	Computational Biology	Comp Science / Lund U, Sweden
Doctoral	Daniel Cazalis	2007	Automata Theory	Computer Science / FIU
Doctoral	Wei Peng	2008	Data Mining	Computer Science / FIU
Doctoral	Jason Somarelli	2009	Genetics	Biology / FIU
Doctoral	D. Balasubramanian	2013	Molecular Biology	Biology / FIU
Doctoral	Jiali Wang	2009	Biomedical Engineering	Biomedical Engineering / FIU
Doctoral	Ahmed Elshahat	2008	Finance Optimization	Business / FIU

Doctoral	Medha Bhadkamkar	2009	Storage Layout	Computer Science / FIU
Doctoral	Selim Kelayci	2010	Software Engineering	Computer Science / FIU
Doctoral	Ricardo Koller	2012	Storage Systems	Computer Science / FIU
Doctoral	Luis Useche	2012	Storage Systems	Computer Science / FIU
Doctoral	Ricardo Gasparini	2015	Scientific Computation	Mechanical Engineering / FIU
Doctoral	Emily Warshefsky	2017	Genetics of Mangoes	Biology / FIU
Doctoral	Daniel Campello	2016	Storage Systems	Computer Science / FIU
Doctoral	V. Ulloa-Suarez	2017	Transcriptomics	Biology / FIU
Doctoral	Gabriel Lizarraga	2018	Machine Learning	Computer Science / FIU
Doctoral	Joseph Ahrens	2018	Bioinformatics	Biology/FIU
Doctoral	Md. Chowdhury	2018	Storage Systems	Computer Science / FIU
Doctoral	Steven Lyons	2021	Storage Systems	Computer Science / FIU
Doctoral	Kyoko Nakamura	2025	Protein Evolution	Biology / FIU
Doctoral	Makella Coudray	2020	Public Health	Epidemiology / FIU
Doctoral	Raihanul Bari Tanvir	2023	Bioinformatics	Computer Science / FIU
Doctoral	Abdullah Al Mamun	2022	Bioinformatics	Computer Science / FIU
Doctoral	Victor Potopenko	Current	ML	Computer Science / FIU
Doctoral	Victor Yarlott	2022	NLP	Computer Science / FIU
Doctoral	Zachary Nickell	Current	Marine Biology	Biology / FIU
Doctoral	Mustafa Ocal	2022	CS	Computer Science / FIU
Doctoral	Haitham Mohamed	Current	Civil Engineering	Civil Engineering / FIU
Doctoral	Srikanth Namuduri	Current	Signal Processing	Electrical Engineering / FIU
Doctoral	Boyuan Zhao	2024	Public Administration	PPA/ SIPA / FIU
Doctoral	Maryna Veksler	2025	Machine Learning	Electrical Engineering / FIU
Doctoral	Usman Tariq	2024	Proteomics	Computer Science / FIU
Doctoral	German Mejia	Current	Biochemistry	Chemistry / FIU
Doctoral	Masrur Sobhan	Current	Bioinformatics	Computer Science / FIU
Doctoral	Ngoc Buong Nguyen	Current	Machine Learning	Computer Science / FIU
Doctoral	Arpit Mehta	Current	Bioinformatics	Computer Science / FIU
Doctoral	Jimeng Shi	Current	Environmental AI	Computer Science / FIU
Doctoral	Azam Shirali	Current	Bioinformatics	Computer Science / FIU
Doctoral	Parshatd Govindasamy	Current	Bioinformatics	Computer Science / FIU
Doctoral	Saad Alqarni	Current	Data Science	Computer Science / FIU
Doctoral	Rahuul Rangaraj	Current	Environmental AI	Computer Science / FIU
Doctoral	Enshi Zhang	Current	Bioinformatics	Computer Science / FIU

▫ INVITED TALKS AND PRESENTATIONS

1. *Optimal 3-dimensional Spanners*, SUNY Stonybrook, March 1993.
2. *Graph Spanners*, L.R.I., Université de Paris - Sud, Orsay, France, June 1993.
3. *Graph Spanners*, Vanderbilt University, Nashville, February 1995.
4. *Graph Spanners*, Kent State University, Kent, March 1995.
5. *Geometric Networks,* University of Missouri, Kansas City, March 1997.
6. *Geometric Networks*, Otto-von-Guericke-Universität, Magdeburg, Germany, July 1997.

7. *PTAS for Geometric Optimization Problems*, Otto-von-Guericke-Universität, Magdeburg, Germany, 1997.
8. *Geometric Networks and Fault-tolerant Spanners*, State University of New York, StonyBrook, NY, 1997.
15. *Geometric Networks and Fault-tolerant Spanners*, University of Maryland, College Park, MD, 1997.
16. *Resource Constrained Geometric Network Optimization,* Lund University, Sweden, May 1998.
17. *Resource Constrained Geometric Network Optimization,* University of Copenhagen, Denmark, May 1998.
18. *Fault-Tolerant Spanners*, Lund University, Sweden, June 1998.
19. *Fault-Tolerant Spanners*, Otto-von-Guericke-Universität,Magdeburg, Germany, June 1998.
20. *Resource Constrained Geometric Network Optimization,* University of Maryland, College Park, MD, 1998.
21. *Geometric Networks*, Special Seminar for GAs, Math Sciences Dept., University of Memphis, Oct 1998.
22. *Computational Methods for Motif Detection,* Chemistry Department, University of Memphis, Oct 1998.
23. *Geometric Networks*, Simon Fraser University, Canada, March 1999.
24. *Geometric Networks*, University of British Columbia, Canada, March 1999.
25. *Geometric Spanners,* Talk for the **Theory Pearls** lecture series, Lund University, May 1999.
26. *Approximating Stretch Factors of Euclidean Graphs,* University of Copenhagen, July 1999.
27. *Motif Detection in Protein Sequences,* SPIRE '99 Conference, Cancun, September 1999.
28. *Experiments with Geometric Minimum Spanning Trees,* ALENEX'00 Conference, San Francisco, 2000.
29. *Motif Detection in Protein Sequences,* Talk for the **Theory Pearls** lecture series, Lund University, 2000.
30. *Experiments with Geometric MSTs,* ARCO Workshop, **Invited Talk**, Copenhagen, May 2000.
31. *Experiments with Geometric MSTs and Spanners,* Dagstuhl Workshop, Germany, September 2000.
32. *Geometric Spanner Networks: A Survey,* **Invited Speaker,** ARCO'01, Lund, Sweden, May 2001.
33. *Pattern Discovery Applications in Bioinformatics,* **Invited Speaker,** CIT '01, India, December 2001.
34. *Open Problems in Geometric Networks,* **Invited Lecture,** First Utrecht-Carleton Workshop, March 2002.
35. *Detection of Helix-Turn-Helix Motifs in Protein Sequences,* ACT-VII, Malaysia, July 2002.
36. *Pattern Discovery Applications in Bioinformatics,* University of Alabama, Birmingham, April 2003.
37. *Degenerate Primer Design via Clustering,* Stanford University, CSB'03, August 2003.
38. *Bioinformatics for CS,* **Invited Lecture,** Universidad Nacional de Colombia, Bogota, November 2003.
39. *Pattern Discovery and its Applications to Bioinformatics,* Tutorial Session, ICISIP 2004, Chennai, 2004.
40. *Microarray Data Analysis using Neural Network Classifiers,* **Invited Talk,** ICISIP 2004, Chennai, 2004.
41. *Bioinformatics Research at FIU*, University of Miami Medical Center, Miami, FL, March 2004.
42. *Microarray Data Analysis*, University of Florida College of Dentistry, Gainesville, FL, April 2004.
43. *Bioinformatics Research at FIU*, USDA Subtropical Horticulture Research Station, Miami, May 2004.
44. *Shortest Path Queries using Spanners*, KWCG'04, Schloss Dagstuhl, Germany, July 2004.
45. *Transcription Regulation: A Computational Perspective*, University of Miami Medical Center, Apr 2005.
46. *Pattern Discovery*, **Tutorial**, IEEE CSB Conference, Stanford, CA, Aug 2005.
47. *Pattern Discovery in Bioinformatics*, **Invited Talk**, DaMN'05, Bertinoro, Italy, October 2005.
48. *Computational Tools for Ecoinformatics*, SSSAJ05 (Soil Sciences), Invited Speaker, Salt Lake City, 2005.
49. *Predicting TF Binding Sites Using Structural Knowledge*, U Miami, April 2006.
50. *Informatics Aproaches to Analyzing Complex Biomedical Data*, Harvard Medical School, Dec 2006.
51. *Searching for Recombinant Donors in a Phylogenetic Network of Serial Samples*, ISBRA, Atlanta, 2007.
52. *Motif Prediction using Comparative Genomics Data*, U Miami, June 2007.
53. *Comparative Genomics*, **Invited Speaker**, ISBRA Conference, Atlanta, May 2008.
54. *Comparative Genomics*, Strand Life Sciences, Bangalore, India, March 2009.
55. *Open Problems in Computational Geometry*, **Invited Speaker**, Bellairs Workshop, Barbados, Jan 2011.
56. *Comparative Microbial Genomics*, **Invited Speaker**, Proceedings of the 1st IEEE International Conference on Computational Advances in Bio and Medical Sciences (ICCABS), Orlando, FL, 2011.
57. *Spanners: Toward Designing Efficient Communication Networks,* SCIS, FIU, Sep 2011.
58. *Geoinformatics Genome Database Project,* **Invited Speaker,** Materials Genome Workshop, Miami, 2013
59. *Smoker's Microbiome,* **Invited Talk,** Pulmonology Dept, U Miami, May 2013.
60. *Better Primer Design for Metagenomics Applications,* GLBIO Conference, Pittsburgh, May 2013
61. *Smoker's Microbiome,* **Invited Talk,** GangaGen Ltd., Bangalore, India, July 2013.
62. *Computational Thinking,* **Invited Talk,** TAPESTRY Workshop, Miami, July 2013.
63. *Computational Thinking I and II,* **Invited Talk,** STEM Workshop, Miami, July 2013.
64. *Bioinformatics @ FIU,* !st FIU-UM Computational Biology Research Day, FIU, Oct 2013.
65. *Degenerate Primers for PCR*, **Invited Talk,** U North Texas, Oct 2013.
66. *Mining Biomedical Datasets,* **Invited Talk,** International STATISTICS Conference, Hyderabad, Dec 2013.

67. *Geometric Avatar Problems,* FSTTCS Conference, Guwahati, India, Dec 2013.
68. *Geometric Networks and Avatars,* **Invited Talk,** Indian Statistical Institute, Kolkata, India, Dec 2013.
69. *Introduction to Computational Molecular Biology*, **Invited Talk,** The Nobel Lecture Series, FIU, Jan 2014.
70. *Don't Know Much About Statistics …,* **Invited Talk,** Conf on Statistical Methods & Mentoring, FIU, 2014.
71. *Next Generation Microbiome Studies,* Indian Science Congress, Mysuru, India Jan 2015
72. *The Smokers' Microbiome,* **Invited Talk,** U Miami, FL, Apr 2015.
73. *Next Generation Microbiome Analysis,* **Invited Talk,** ICCABS Conference, Miami, FL Oct 2015
74. *Next Generation Microbiome Analysis,* CAMBIO Presentation, Miami, FL Nov 2015
75. *Problem Solving & Computational Thinking,* FIU, June 2016
76. *State-of-the-Art Microbiome Data Analysis,* ASMSE Conference, St. Petersburg, FL, Nov 2017
77. *Microbial "Social Networks",* Carnegie-Mellon University, Pittsburgh, PA Dec 2017
78. *Microbial "Social Networks",* University Central Florida, Orlando, FL Dec 2017
79. *Biomedical Applications: Through the ML Looking Glass,* ICMLDS Conference, Delhi, India, Dec 2017
80. *Microbial "Social Networks",* King's College, London, UK Apr 2018
81. *Microbial "Social Networks",* Georgia Tech University, Atlanta, GA Apr 2018
82. *Longitudinal Microbiome Studies with DBNs,* SMBE Conference, Manchester, UK, July 2019
83. *Materials Genome Database,* MESH Symposium, FIU, Nov 2019
84. *The Social Network of Microbiomes*, Biomolecular Sciences Institute Symposium, FIU, September 2020
85. *Paradoxes & Fallacies*, MITRE GenAI Meetings, FIU, October 2020
86. *Overview of Data Science,* NASPAA Workshop, October 2020
87. *Overview of Machine Learning Data Science,* Sea Level Rise Meeting, FIU, October 2020
88. *The Social Network of Microbiomes*, Amrita University, India, December 2020
89. *Data Science for Policy Studies,* ASPA Conference, Feb 2021
90. *Lessons Learned from creating the QEP: AI, Data, and EI: Critical Skills for the 21st Century,* FISSS 2021
91. *The Social Network of Microbiomes*, SKC Science and Technology Seminar Series, Apr 2021
92. *Improving Performance of Computers Using ML,* FIU Machine Learning Group, FIU, April 2021
93. *The Social Network of Microbiomes,* University of the West Indies, 2022
94. *The Social Network of Microbiomes,* Biomolecular Sciences Institute, 2022
95. *The Social Network of Microbiomes,* Statistics Minisymposium, FIU, 2023
96. *Challenges in Teaching CS,* Inaugural Keynote address to CSTA, India Chapter, Aug 2023
97. *The Social Network of Microbiomes,* College of Medicine, Florida Atlantic University, Sep 2023

❑ PROFESSIONAL HONORS (Detailed)

- **Conference Program Committee Memberships:**
  - **BIBM '22**: Conference Co-Chair, Las Vegas, December 2022;
  - **BIBM '18 – '21, '07:** IEEE Conference on Bioinformatics and Biomedicine, Seoul, Dec 2020; Niagara, NY, Nov 2019; Madrid, Spain, Dec 2018; Silicon Valley, November 2007;
  - **BioKDD '20 –** Intl. Workshop on Data Mining in Bioinformatics, San Diego, CA, Aug 2020; Anchorage, AK, Aug 2019;
  - **ISBRA '20 – Co-Chair:** Intl. Workshop on Bioinformatics Res. and Appln., Moscow, Russia, Dec 2020; Storrs, CT, May 2010; **Co-Chair:** Ft. Lauderdale, FL, 2009; **'07, '08:** Atlanta, GA, May 2008; Atlanta, GA, May 2007;
  - **ICCABS '19 –** Co-Chair, IEEE Intl. Conference on Computational Advances in Bio and Medical Sciences, Miami, FL, Nov 2019; **'12 – '18:** Intl. Workshop on Bioinformatics Res. and Appln., Beijing, China, June 2018; Honolulu, Hawaii, May 2017; Minsk, Belarus, Jun 2016; Norfolk, VA, Jun 2015; Zhangjiajie, China, Jun 2014; Charlotte, NC, May 2013; Dallas, TX, May 2012; **'11 – Publicity Chair:** Orlando, FL, February 2011;

- **StringBio '19 –** Co-Chair, Intl. Workshop on String Algorithms in Bioinformatics, Miami, FL, 2019; http://www.cs.ucf.edu/stringbio2019/organizingTeam.html
- **ICMLA '19, '09, '08, '07, '06 –** Intl. Conference on Machine Learning and Applications, Boca Raton, FL, Dec 2019; Miami, FL, Dec 2009; San Diego, CA, Dec 2008; Cincinnati, OH, Dec 2007; Orlando, FL, Dec 2006;
- **BICoB '11 –** Intl. Conference on Bioinformatics and Computational Biology, New Orleans, LA, March 2011; Honolulu, March 2010; New Orleans, 2009;
- **BIOINFORMATICS 2011 –** Bioinformatics, Rome, Italy, January 2011;
- **BIOT 2010 –** Annual Biotechnology and Bioinformatics Conference, Lafayette, LA, October 2010;
- **CBB '08** The IASTED Intl. Symp. Comput. Biology and Bioinformatics, Orlando, FL, Nov 2008;
- **AAIM '08 –** Algorithmic Aspects in Information and Management, Shanghai, China, June 2008;
- **BIBE '07 –** 7th IEEE Symposium on Bioinformatics and Bioengineering, Boston, MA, October 2007;
- **BLSC07 –** IEEE Intl. Symp. on Bioinformatics & Life Science Computing, Niagara Falls, 2007;
- **WEA 2007 –** 6th Workshop on Experimental Algorithms, Rome, Italy, June 2007;
- **ICISTM'07 –** Intl. Conf. in Information Systems, Technology and Management, India, March 2007;
- **ISAAC'06 –** Intl. Symposium on Algorithms and Computation**,** Kolkatta, India, December 2006;
- **Geometric Networks and Metric Embeddings – Organizing Co-Chair;** Dagstuhl Workshop, Germany, November 2006;
- **IWBRA '06, '05 –** International Workshop on Bioinformatics Research and Applications, Reading, 2006; Atlanta, 2005;
- **HiPCoMB'05 –** First IEEE Workshop on High Perf Computing in Medicine & Biology, Fukuoka, 2005;
- **ICBA 2004 – Co-Chair;** Intl. Conference on Bioinformatics & Applications**,** Ft Lauderdale, 2004;
- **WADS 2003 –** Workshop on Algorithms & Data Structures, 2003**;**
- **ALENEX '02 –** Algorithm Engineering & Experiments, San Francisco, Jan 6-8, 2002;
- **SPIRE '99 & '00 –** String Processing and Inform. Retrieval Conf., Sep, Mexico & Spain;

- **Invited & Keynote Speaker:**
  - **BSI Annual Symposium 2021 –** (INVITED)
  - **SMBE 2019 –** (INVITED) Annual Society for Molecular Biology and Evolution Conference, Manchester, UK, July 2019;
  - **CANGS 2018 –** (INVITED) IEEE International Conference on Computational Advances in Bio and medical Sciences (ICCABS), October 2018, Orlando, FL;
  - **ICMLDS 2017 –** (INVITED) ICMLDS Conference, Delhi/Noida, India, Dec 2017
  - **CANGS-2017 –** (INVITED) IEEE International Conference on Computational Advances in Bio and medical Sciences (ICCABS), October 2017, Orlando, FL;
  - **ICCABS-2015 & 2016 –** (INVITED) IEEE International Conference on Computational Advances in Bio and medical Sciences (ICCABS), October 2015 & 2016, Miami & Atlanta;
  - **ICCABS-2014 & CANGS-2014 –** (KEYNOTE) IEEE International Conference on Computational Advances in Bio and medical Sciences (ICCABS), June 2014, Miami Beach, FL;
  - **ICCABS-2011 –** 1st IEEE International Conference on Computational Advances in Bio and medical Sciences (ICCABS), February 2011, Orlando, FL;

- **Bellairs Workshop –** Workshop on Computational Geometry, Barbados, Jan 2011;
- **ICISIP-2004 –** The Intl. Conf. on Intelligent Sensors & Info. Processing, Jan 2004, Chennai, India;
- **CIT-2001 –** The 4th Intl. Conference on Information Technology, Dec 2001, Gopalpur-on-Sea, India;
- ***Theory Pearls* Lecture Series**: 1999 (Computational Geometry), Lund University, Sweden;
- ***Theory Pearls* Lecture Series**: 2000 (Computational Biology), Lund University, Sweden;
- ***Keynote speaker*: Utrecht workshop on Geometric Spanners**, Feb 2002, Netherlands;

- **Invited Tutorial Session** (Bioinformatics)**:**
  - **ISBRA 2008 –** "Comparative Genomics," May 2008, Atlanta;
  - **Invited Lecture Series:** National University of Colombia, Bogota, 2007;
  - **CSB-2005 –** "Pattern Discovery in Sequences and Structures," August 2005, San Francisco;
  - **ICISIP-2004 –** The Intl. Conf. on Intelligent Sensors & Info. Processing, Jan 2004, Chennai;
  - **Invited Lecture Series & Tutorial Sessions:** National University of Colombia, Bogota 2003.