Vikram Ravindra, Ph.D.
Assistant Professor
Department of Computer Science
University of Cincinnati

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EDUCATION

Purdue University, West Lafayette, USA — 2022
Ph.D., Computer Science

Technical University Munich, Munich, Germany — 2014
M.Sc., Informatics

Visvesvaraya Technological University, Belgaum, India — 2011
B.E., Computer Science and Engineering

EXPERIENCE

University of Cincinnati — Aug 2022 - Present
Assistant Professor

Lawrence Livermore National Labs — Feb 2020 - Jul 2020
Graduate Scholar

Purdue University — Aug 2015 - Jun 2022
Graduate Research Assistant

National Instruments R & D — Jan 2015 - Jun 2015
Research Engineer

German Aerospace Center — Oct 2013 - Sep 2014
Research Assistant

TU Munich — Oct 2012 - Sep 2013
Research Assistant

Indian Institute of Science — Jun 2011 - Jun 2012
Project Assistant

BOOK CHAPTERS

Hasan Aktulga, **Vikram Ravindra**, Ananth Grama, and Sagar Pandit, *Machine Learning Techniques in Reactive Atomistic Simulations*, Lecture Notes in Energy: Machine Learning and its Application to Reacting Flows, Springer Open, 2024

JOURNAL PAPERS

Vikram Ravindra, Chih-Hao Fang, and Ananth Grama, *May I see what you see? Predicting Visual Features from Neuronal Activity*, Cell iScience, 2024 (Presented in ACM-BCB '23) [IF: 5.08]

Chih-Hao Fang, **Vikram Ravindra**, Salma Akhter, Mohammad Adibuzzaman, Paul Griffin, Shankar Subramaniam, and Ananth Grama, *Analyzing Sepsis States: A Retrospective Study on Patients with Sepsis in ICUs*, PLOS Digital Health, 2022.

Vikram Ravindra, Huda Nassar, David F. Gleich, and Ananth Grama, *Aligning Spatially Constrained Graphs*, IEEE Transactions on Knowledge and Data Engineering, 2022 [IF: 9.2]

Vikram Ravindra, Petros Drineas, and Ananth Grama, *Constructing compact signatures for individual fingerprinting of brain connectomes*, Frontiers in Neuroscience, 2021. [IF: 5.2]

Shahin Mohammadi, **Vikram Ravindra**, David F. Gleich, and Ananth Grama *A Geometric Approach to Characterize the Functional Identity of Single Cells*, Nature Communications, 2018 [IF: 17.7]

Vikram Ravindra and Claudio Castellini *A comparative analysis of three non-invasive human-machine interfaces for the disabled* Frontiers in Neurorobotics, Oct 2014 [IF: 3.4]

CONFERENCE PAPERS (* indicates student advisee)

Lewis Thelen* and **Vikram Ravindra** *Practical Comparisons of Reservoir Topology Performance and Input Distribution in Digital Reservoir Computers*, International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2025) [Accepted as Extended Abstract]

Vikram Ravindra, Geoffrey Sanders and Ananth Grama *Identifying Coherent Subgraphs in dynamic correlation brain networks*, IEEE International Conference on Image Processing 2021 (ICIP '21)

Vikram Ravindra and Ananth Grama, *De-anonymization Attacks on Neuroimaging Datasets*, SIGMOD/PODS International Conference on Management of Data, 2021 (SIGMOD '21)

Vikram Ravindra and Ananth Grama, *Characterizing Similarity of Visual Stimulus from Associated Neuronal Response*, International Joint Conference in Artificial Intelligence, July 2020 (IJCAI '20)

Vikram Ravindra, David F. Gleich, Huda Nassar and Ananth Grama, *Rigid Graph Alignment*, Eighth International Conference on Complex Networks and their Applications 2019 (ComplexNets '19)

Thomas Runkler and **Vikram Ravindra** *Fuzzy Graph Clustering based on Non-Euclidean Relational Fuzzy c-Means*, The 16th World Congress of the International Fuzzy Systems Association and the 9th Conference of the European Society for Fuzzy Logic and Technology 2015 (IFSA-EUSFLAT '15)

Claudio Castellini and **Vikram Ravindra** *A wearable low-cost device based upon Force-Sensing Resistors to detect single-finger forces* 5th IEEE RAS & EMBS International Conference on Biomedical Robotics and Biomechatronics 2014 (BIOROB '14)

PREPRINTS/IN REVIEW (* indicates student advisee)

Lewis Thelen* and **Vikram Ravindra**, In Double Blind Review 2025

Monireh Taimouri* and **Vikram Ravindra**, *Characterizing Changes to Individual-Specific Brain Signature with Age*, Frontiers in Aging, 2025 [In Revision]

Monireh Taimouri* and **Vikram Ravindra**, In Double Blind Review, 2025

Bhaskar Gurram* and **Vikram Ravindra**, *A Comprehensive Survey of Multimodal Data Science for Neuroimaging*, 2024 [In Review]

Abrar Ahmed Mohammed* and **Vikram Ravindra**, *Integration of Multi-Modal MRI and Clinical Data for Enhanced Brain Tumor Segmentation*, 2024 [In Review]

MISC PUBLICATIONS

[Doctoral Thesis] **Vikram Ravindra** *Computational Methods to Analyse Functional Connectomes*

[Masters Thesis]**Vikram Ravindra** *Comparison of Human Machine Interfaces for Advanced Hand Prosthetics*, DLR-IB 572-2014/19, 2014

[Workshop] **Vikram Ravindra**, Aditya Prakash, SVR Anand, and Malati Hegde *Implementation of throughput enhancing client-AP association scheme On a WLAN controller*, COMSNETS-WISARD 2011.

TALKS

2024 – *Computational Methods to Analyse Functional Connectomes*, Cincinnati Children's Hospital Medical Center

2023 – *May I see what you see? Predicting Visual Features from Neuronal Activity, ACM Conference on Bioinformatics, Computational Biology, and Health Informatics*, ACM-BCB, Houston

2022 – *Computational Methods to Analyse Functional Connectomes*, NEC Laboratory, Purdue University, University of Cincinnati, University of Kentucky, Montana State University, Procter and Gamble

2020 – *Discriminating Human Connectomes*, Amazon

2021 – *Characterizing Similarity of Visual Stimulus from Associated Neuronal Response*, IJCAI 2020

2019 – *Discriminating Human Connectomes*, Regentrief Center for Healthcare Engineering

2014 – Seminar *Human Machine Interfaces for Advanced Hand Prosthetics* in German Aerospace Center, Munich

SERVICE

Session Chair – ACM Bioinformatics, Computational Biology and Health Informatics, 2023 (ACM BCB '23)

Proposal Reviewer – NSF Panel for Smart Connected Health (SCH) 2022

Program Committee: SIAM Symposium on Data Mining (SIAM SDM) 2023

Conference Reviewer: International Conference on Parallel Processing (ICPP) 2019, 2021, 2022; International Conference on Robotics and Automation (ICRA) 2023; IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2025.

Journal Reviewer: Human Brain Mapping (Wiley Press), Parallel Computing (Elsevier), Neuroscience Informatics (Elsevier), Neural Networks (Elsevier), Network Neuroscience (MIT Press), Frontiers in Neuroinformatics, Schizophrenia Bulletin.

Editorial Board: Frontiers in Neuroimaging (Review Editor)

Panel Member: SIGMOD/PODS Conference on Management of Data (SIGMOD) 2021

Workshop Attendee: CRA-I Sharing Healthcare Data Workshop 2024

PROFESSIONAL MEMBERSHIP

Senior Member – Institute of Electrical and Electronics Engineers (IEEE)

Full Member – Sigma Xi

Member – Association for Computing Machinery (ACM)

Member – American Association for Advancement of Science (AAAS)

PROFESSIONAL CERTIFICATES

Leadership Council: Board Orientation and Leadership Development (BOLD)

Google Project Management: Professional Certificate

Professional Scrum Master (PSM I, PSM II)

Professional Scrum Product Owner (PSPO I, PSPO II)

QPR Institute Suicide Prevention Training

STUDENTS: CURRENT

Ph.D.: Monireh Taimouri (Fa '22 - Present), Sara Moshtaghi Largani (Sp '24 - Present, co-advising with Raj Bhatnagar), Tawsik Jawad (Sp '25 - Present)

M.S.: Lewis Thelen (Su '23 - Present), Saad Ur Rehman (Sp '25 - Present)

STUDENTS: PAST

Graduate (M.S.): Rukmini Pisipati (Su '24), Bhaskar Gurram (Fa '24), Abrar Ahmed Mohammed (Fa '24)

Undergraduate: Xingyu Chen, Xianren Zhang, Fanyi Kong , Tianxing Ma (Fa '22 - Sp '23), Taylor Daugherty (Protege Scholar, Su '23)

Graduate (M.Eng.): Lakshay Aggarwal (Sp '24), Hemanth Mutytala (Sp '24)

TEACHING

CS 5152/6052 Intelligent Data Analysis (Sp '23, '24)

CS 5172/6072 Network Science (Fa '23, 24)

CS 7072 Matrix Methods for Data Science (Sp '25)

THESIS COMMITTEE

Akshata Upadhye (M.S., Fa '22), Shih Hanniel (M.S., Su '23), Lakshmi Poojitha Madamshetty (M.S., Fa '23), Prithvi Jami (M.S., Fa '23), Rohit Singh (Ph.D., Fa'24), Anurag Yadav (M.S., Sp '24), Alissa Zhang (Ph.D., Proposal Fa'24), Sina Eghbal (Ph.D Fall '25), Balaji Iyer (Ph.D., Proposal Sp '25)