Stanford



Suhas Srinivasan, Ph.D.

Principal Bioinformatics Scientist, Dermatology

Bio

BIO

I develop computational algorithms including AI/ML and statistical methods to discover insights at various resolutions of the biological hierarchy i.e., molecules, cells, tissues, organs, organism and population-scale.

In my current role in the laboratories of Paul Khavari and Howard Chang I conduct bioinformatics research to study the molecular mechanisms of tissue development, cancers, autoimmunity and chronic diseases using multiomics, with a focus on the non-coding genome.

I have ten years of academic research experience and received my Ph.D. in Data Science specializing in AI/ML development for diverse topics in biomedicine.

My research interests include artificial intelligence to identify novel patterns in multiomics data, psychometrics and neuroimaging data; structural bioinformatics and computational epidemiology. Additionally, I have conducted research in anomaly detection, and community detection in biological networks.

I am the co-inventor of a patented anomaly detection method for real-time streaming data.

Prior to graduate training and academic research, I was a full-stack software engineer in industry for three years.

HONORS AND AWARDS

- HHMI AI Accelerator Award (Howard Chang Lab), Stanford University (2024)
- AWS Cloud Computing Award (Paul Khavari Lab), Stanford University (2023)
- GCP Computing Research Award (Howard Chang Lab), Stanford University (2023)
- Oracle for Research Award (Paul Khavari Lab), Stanford University (2022)
- Academic Excellence Award, Data Science Program, Worcester Polytechnic Institute (2020)
- 2nd Place Award in CS, DS and Cybersecurity, Graduate Research and Innovation Exchange, Worcester Polytechnic Institute (2019)
- 1st Place Award in CS, DS and Cybersecurity, Graduate Research Innovation Exchange, Worcester Polytechnic Institute (2018)
- Conference Grant, Gordon Research Conferences (2018)
- Graduate Student Travel Grant, Worcester Polytechnic Institute (2018)
- Exceeded Expectations Commendation, Oracle (2013-15)
- Graduate Merit Scholarship, Birla Institute of Technology and Science, Pilani (2011-13)

EDUCATION AND CERTIFICATIONS

- Ph.D., Data Science, Worcester Polytechnic Institute, MA, USA (2022)

- M.E., Software Systems, Birla Institute of Technology and Science, Pilani, India (2013)
- B.E., Computer Science, Visvesvaraya Technological University, Bangalore, India (2010)

SERVICE, VOLUNTEER, AND COMMUNITY WORK

- Journal Reviewer
- Conference Reviewer
- Institutional Committees
- Curriculum Reviewer

PATENTS

- Lou Zhang, Suhas Srinivasan. "United States Patent 11,181,899 System and method for monitoring machine anomalies via control data", Machinemetrics Inc, Nov 23, 2021

Professional

PROFESSIONAL INTERESTS

Data Science

Artificial Intelligence

Machine Learning

Bioinformatics

Computational Biology

Multiomics

Systems Biology

Structural Biology

Epidemiology

WORK EXPERIENCE

- Senior Bioinformatics Scientist - Stanford School of Medicine (2022 - 2022)
- Graduate Research Assistant - Worcester Polytechnic Institute (2016 - 2022)
- Graduate Teaching Assistant - Worcester Polytechnic Institute (2015 - 2018)
- Data Scientist Intern - MachineMetrics (2018 - 2018)
- Member Technical Staff - Oracle (2013 - 2015)
- Software Engineer Intern - Dell EMC (2013 - 2013)
- Graduate Teaching Assistant - Birla Institute of Technology and Science (2011 - 2012)
- Software Quality Engineer - SAP Labs (2011 - 2011)

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

- Member, Association for Computing Machinery
- Member, International Society for Computational Biology

Publications

PUBLICATIONS

- **Autoantibody hotspots reveal origin and impact of immunogenic XIST ribonucleoprotein complex.** *bioRxiv : the preprint server for biology*

Yan, B., Lee, J., Srinivasan, S., Shi, Q., Dou, D. R., Davuluri, S., Nandyala, S., Woods, A., Leatherman, G., Zhao, Y., Reggiardo, R. E., Sawant, M., Thiam, et al
2025

- **DDX50 cooperates with STAU1 to effect stabilization of pro-differentiation RNAs.** *Cell reports*
  Miao, W., Porter, D. F., Siprashvili, Z., Ferguson, I. D., Ducoli, L., Nguyen, D. T., Ko, L. A., Lopez-Pajares, V., Srinivasan, S., Hong, A. W., Yang, Y. Y., Cao, Z., Meyers, et al
  2025; 44 (1): 115174

- **irCLIP-RNP and Re-CLIP reveal patterns of dynamic protein associations on RNA.** *bioRxiv : the preprint server for biology*
  Ducoli, L., Zarnegar, B. J., Porter, D. F., Meyers, R. M., Miao, W., Riley, N. M., Srinivasan, S., Jackrazi, L. V., Yang, Y. Y., Li, Z., Wang, Y., Bertozzi, C. R., Flynn, et al
  2024

- **Mitochondrial Raf1 Regulates Glutamine Catabolism.** *bioRxiv : the preprint server for biology*
  Shanderson, R. L., Ferguson, I. D., Siprashvili, Z., Ducoli, L., Li, A. M., Miao, W., Srinivasan, S., Velasco, M. G., Li, Y., Ye, J., Khavari, P. A.
  2024

- **Xist ribonucleoproteins promote female sex-biased autoimmunity.** *Cell*
  Dou, D. R., Zhao, Y., Belk, J. A., Zhao, Y., Casey, K. M., Chen, D. C., Li, R., Yu, B., Srinivasan, S., Abe, B. T., Kraft, K., Hellström, C., Sjöberg, et al
  2024; 187 (3): 733-749.e16

- **The Extent of Edgetic Perturbations in the Human Interactome Caused by Population-Specific Mutations.** *Biomolecules*
  Cui, H., Srinivasan, S., Gao, Z., Korkin, D.
  2023; 14 (1)

- **Unravelling psychiatric heterogeneity and predicting suicide attempts in women with trauma-related dissociation using artificial intelligence** *EUROPEAN JOURNAL OF PSYCHOTRAUMATOLOGY*
  Srinivansan, S., Harnett, N. G., Zhang, L., Dahlgren, M., Jang, J., Lu, S., Nephew, B. C., Palermo, C. A., Pan, X., Eltabakh, M. Y., Frederick, B. B., Gruber, S. A., Kaufman, et al
  2022; 13 (2)

- **Computational protein modeling and the next viral pandemic** *NATURE METHODS*
  Narykov, O., Srinivasan, S., Korkin, D.
  2021; 18 (5): 439-440

- **Structural Genomics and Interactomics of SARS-COV2: Decoding Basic Building Blocks of the Coronavirus** *Virus Bioinformatics*
  Gao, Z., Lu, S., Narykov, O., Srinivasan, S., Korkin, D.
  Chapman and Hall/CRC.2021; 1: 121-139

- **A hybrid deep clustering approach for robust cell type profiling using single-cell RNA-seq data** *RNA*
  Srinivasan, S., Leshchyk, A., Johnson, N. T., Korkin, D.
  2020; 26 (10): 1303-1319

- **Structural Genomics of SARS-CoV-2 Indicates Evolutionary Conserved Functional Regions of Viral Proteins** *VIRUSES-BASEL*
  Srinivasan, S., Cui, H., Gao, Z., Liu, M., Lu, S., Mkandawire, W., Narykov, O., Sun, M., Korkin, D.
  2020; 12 (4)

- **Enriching Human Interactome with Functional Mutations to Detect High-Impact Network Modules Underlying Complex Diseases** *GENES*
  Cui, H., Srinivasan, S., Korkin, D.
  2019; 10 (11)

- **Assessment of network module identification across complex diseases** *NATURE METHODS*
  Choobdar, S., Ahsen, M. E., Crawford, J., Tomasoni, M., Fang, T., Lamparter, D., Lin, J., Hescott, B., Hu, X., Mercer, J., Natoli, T., Narayan, R., Aicheler, et al
  2019; 16 (9): 843-+

PRESENTATIONS

- Multigranular AI approaches for biological discovery (January 2023)
- Transistors to transcription factors: Bioinformatics reimagined - Stanford Research Computing Center (August 2022)

- Unraveling tumor heterogeneity in triple-negative breast cancer at single-cell resolution - Human Cell Atlas General Meeting (June 2021)
- Structural genomics and interactomics of SARS-CoV-2 - ASBMB PDB50 Symposium (May 2021)
- In-silico edgetic profiling of population-specific variation in human genome - CSHL Biology of Genomes (May 2019)
- Real-time simulation of intelligent agents to study epidemiological outcomes - WPI Graduate Research Innovation Exchange (April 2019)
- Robust cell type profiling in single-cell RNA sequencing data through a de novo deep clustering approach - GRC Human Genetic Variation and Disease (June 2018)
- A hybrid deep clustering approach for robust cell type profiling - WPI Graduate Research Innovation Exchange (April 2018)