Name	**: Dr. G. Sathyanarayanan**
Designation	**: Assistant Professor**
Department	**: Mathematics**
Qualification	**: M.Sc., P.hD**
Experience	: Teaching – 4.5 Years | Research – 7 Years |

Specialization: Analysis of networks using hypergraph properties

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Academic Qualifications

Degree	Branch	Institution / University Name	Year
Ph.D.	Mathematics	SASTRA Deemed University, Thanjavur	2024
M. Sc.,	Mathematics	Srinivasa Ramanujan Centre, SASTRA Deemed University, Kumbakonam	2018
B. Sc.,	Mathematics and Computer Science	Srinivasa Ramanujan Centre, SASTRA Deemed University, Kumbakonam	2016

Research Publications

1. Sathyanarayanan Gopalakrishnan, Swaminathan Venkataraman (2024). **Prediction of influential proteins and enzymes of certain diseases using a directed unimodular hypergraph**. Mathematical Biosciences and Engineering (2024), 21(1): 325-345. (SCIE) (IF: 2.6)

2. Sathyanarayanan Gopalakrishnan, Vignesh Ravi, Swaminathan Venkataraman, **Hypergraph Centrality Metrics For Social Networks**, presented at International Conference on Wavelet Analysis and Graph Theory, SASTRA, September 15-16, 2022. (Accepted and published in TWMS Journal of Applied and Engineering Mathematics, Special Issue, No.1, 2023, pp. 445-455.) (SCOPUS)

3. Sathyanarayanan Gopalakrishnan, Supriya Sridharan, Soumya Ranjan Nayak, Janmenjoy Nayak, Swaminathan Venkataraman, **Central hubs prediction for bio networks by**

directed hypergraph-GA with validation to COVID-19 PPI, Pattern Recognition Letters 153 (2022): 246-253. (SCI) (IF: 5.1)

Books/ Book Chapters Publication

1. **Centrality measures in finding influential nodes for the big-data network**, Sathyanarayanan Gopalakrishnan, Supriya Sridharan, and Swaminathan Venkataraman, Handbook of Smart Materials", Technologies, and Devices: Applications of Industry 4.0 (2022): 2393-2409. (Springer).

2. **A Novel Cluster-Based Routing Technique for Reliable Path Selection in VANET V2V Communication in 5G Using Upper Triangular Matrix Lie Algebra**, Supriya Sridharan, Sathyanarayanan Gopalakrishnan, and Swaminathan Venkataraman, Handbook of Smart Materials, Technologies, and Devices: Applications of Industry 4.0. (2022): 2411- 2425. (Springer).

Presentations in Conference/ Seminar

1. **Centrality Measures of Directed Hypergraphs for Social Networks**, International conference on Application of Data Science, Cloud Computing & Computer Vision in Research & Development, , Jain University, Bangalore, 16-17 July 2021.

2. **Directed Hypergraph Centrality Metrics for Social Networks**, International Conference on Wavelet Analysis and Graph Theory, SASTRA Deemed University, Thanjavur, 15-16 September 2022.

3. **Centrality Measures of Hypergraph graph for Social Networks**, International Conference on Discrete Mathematics and Data Sciences, SASTRA Deemed University, Thanjavur. September 2018.

4. **CENTRALITY MEASURES OF HYPERGRAPH FOR SOCIAL NETWORKS**, International Conference on ALGEBRA AND DISCRETE MATHEMATICS, Madurai Kamaraj University, January 2018.

5. **FOOTBALL MATCH RESULT PREDICTION USING HYPERGRAPHS**, National Conference on PURE AND APPLIED MATHEMATICS, Srinivasa Ramanujan Centre, SASTRA UNIVERSITY, November 2017.

Participation in Workshop

1. **"IP Awareness/Training program",** under National Intellectual Property Awareness Mission on March 11,2023 Organized by Intellectual Property Office, Government of India.

2. **"Applied Mathematics and Algorithmic Graph Theory"**, organized by the Department of Mathematics, SASHE, SASTRA Deemed University, Thanjavur from 30th April 2022 to 25 th June 2022.

3. **"Contemoorary Cryptographic Solutions for IoT Based Applications",** organized by E&ICT Academy, NIT Warangal and School of Computing, SASTRA Deemed to be University during 20th and 30th August 2021.

4. **"CSIR Problems Solving Techniques in Algebra and Analysis",** Organised by Department of Mathematics (Shift - II), St. Joseph's College, Tiruchirappalli on 17th and 18th June 2020.

5. **"Graph Theory and Graph Algorithms",** the NCM and ACM - India Summer School on NIT, Calicut during 17 June to 5 July 2019.