

# SINUMOL S

## Assistant Professor and Head Department of Mathematics

**International Conferences – 11**

**National Conference -1**

**Faculty Development Programs—6**

**Workshops—4**

**National Webinars--14**

**International Webinars – 4**

**Publications--5**

### ADMINISTRATIVE DISTINCTION

- Mentor of the Walk With a Scholar Programme in 2016-17.
- Member in the Three-day Workshop on Syllabus Revision organized by the Board of Studies (Pass), University of Kerala in connection with the revision of the Syllabus of First Degree Programme in Mathematics under CBCSS, held under the auspices of the University of Kerala at Government College for Women, Thiruvananthapuram on 8-10 March 2017.
- Member in the Admission Committee 2017-2018.
- Coordinator of ASAP during 2017-18 and 2018-19.
- Member in Entrepreneurship Club, Career Guidance Cell, Health Club, Tourism Club, Human Rights Awareness Club, Energy Conservation Club, Dance and Theatre Club and Publication Committee.
- Convener of the National Mathematics Day celebrations 2019-20 & 2020-21.
- Convener of the Legal Literacy Club during 2019-20, 2020-21, 2021-22, 2022-23 & 2023-24.
- Convener of the Nature Club during 2019-20, 2020-21 & 2021-22.
- An organizing committee member of the webinar on 'On Some Visual Mathematics' conducted on June 5th, 2020.
- Coordinator of the National webinar on 'An Introduction to Mathematical Optimal Control Theory' conducted on 11th February, 2021.
- An organizing committee member of the International webinar on 'Outcome- Based Education: How to Measure Learning Objectives' conducted on February 15-2021.
- An organizing committee member of the National webinar on 'Importance of Data Analysis' conducted on 12th March, 2021.
- Coordinator of the webinar on 'Sanskrit and Indian Mathematics' conducted on 19th March, 2021 as the part of Pi Day Celebrations 2021.
- Coordinator of the webinar on 'Fundamental Rights: Protection of Dignity of an Individual' conducted on 22nd January, 2021.
- The Chief Superintendent of University / PSC Examinations during the Academic year 2021-22.



Sathyamadom

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### QUALIFICATIONS:

M.Sc., M.Phil., B.Ed., SET,  
NET.

### DATE OF JOINING:

17.10.2012

### EXPERIENCE IN YEARS:

13 years

### AREA OF RESEARCH:

Algebraic Graph Theory  
Algorithmic Graph Theory  
Centrality Measures  
Neural Networks  
Network Analysis

- Admission committee member during the academic year 2024-2025.
- Convener of Darshan Multidisciplinary Seminar (Mathematics) during 2024-2025.
- Admission committee co-convener during the academic year 2025-26.
- Head of the department of Mathematics (2025-26).

## PUBLICATIONS

1. Sinumol Sukumaran and Sunil Kumar Raghavan Unnithan, Mathematical Perspectives of Leverage Centrality: A Review, Indian Journal of Science and Technology, Vol.16(39), 2023, pp. 3325-3331.
2. Sinumol Sukumaran and Sunil Kumar Raghavan Unnithan, Leverage Centrality on Barycentric Subdivision of Some Graphs, Creat.Math.Inform., Volume 33 (2024), No. 1, pp. 77 – 93.
3. S Sinumol and R Sunil Kumar, Leverage Centrality Analysis on Generalized Transformation of Path Graph, Ganita, Vol. 74(2), 2024.
4. Sukumaran Sinumol and Raghavan Unnithan Sunil Kumar, Leverage Centrality in Corona Product of Cycle with some Graphs, Creat.Math.Inform, Volume 34 (2025).
5. S Sinumol and R Sunil Kumar, Leverage Centrality of Several Products of Paths and Cycles, Proceedings of the International Conference on Semigroups, Algebras, Discrete Structures, and Applications (ICSADA-2024), Springer (Accepted).

## PAPERS PRESENTED IN INTERNATIONAL CONFERENCES

1. ‘A Survey on the Mathematical Perspectives of Leverage Centrality’: Sinumol S and Sunil Kumar R. International Conference on Recent Strategies in Mathematics and Statistics (ICRSMS 2022) organized by the Department of Mathematics, Stella Maris College in Collaboration with the Department of Mathematics, IIT Madras from 19-21 May, 2022.
2. ‘Leverage Center of Some Graphs’: Sinumol S and Sunil Kumar R. International Conference on Dynamical Systems, Control and their Applications (ICDSCA 2022) organized by the Department of Mathematics, IIT Roorkee from July 01-03, 2022.
3. ‘Leverage Centrality on Barycentric Subdivision of Some Graphs’: Sinumol S and Sunil Kumar R. International Conference on Recent Advancements in Graph Theory (ICRAGT-2022) organized by the Department of Mathematics, Gujarat University held during September 10 -11, 2022.
4. ‘Leverage Centrality Analysis on Certain Graph Products’: Sinumol S and Sunil Kumar R. International Conference on Evolution in Pure & Applied Mathematics (ICEPAM-2022) organized by the Department of Mathematics, Akal University, Talwandi Sabo, Bathinda, Punjab during November 16 -18, 2022.
5. ‘Leverage Centrality on Corona Product of Some Graphs’: Sinumol S and Sunil Kumar R. 16<sup>th</sup> International Online Conference of IMBIC on Mathematical Sciences for Advancement of Science and Technology (MSAST 2022) held during December 21-23, 2022.
6. ‘The Bounds of Leverage Centrality for Some Product Graphs’: Sinumol S and Sunil Kumar R. International Conference on Graphs, Networks and Combinatorics (ICGNC 2023) held during January 10-12, 2023.
7. ‘Leverage Centrality Analysis on Complement of Some Graphs’: Sinumol S and Sunil Kumar R. International Conference on Recent Advances in Graph Theory and Allied Areas (ICRAGAA 2023) held during February 02-04, 2023.
8. Leverage Centers on Lexicographic Product of Paths at the National Conference on Applied Mathematics and Numerics (NCAMN 2022) jointly organized by the Department of Mathematics, Mar Ivanios College (Autonomous), Trivandrum in association with the Department of Mathematics, Indian Institute of Space Science and Technology (IIST), Trivandrum held during March 8-10, 2023.

9. Analyzing Leverage Centrality Across Graph Products at the International Conference on Semigroups, Algebras, Discrete Structures and Applications (ICSADA-2024) organized by the Department of Mathematics and Statistics, Mar Ivanios College (Autonomous), Thiruvananthapuram in association with Institute of Mathematics Research and Training (IMRT), Thiruvananthapuram and co-sponsored by Kerala State Council for Science Technology and Environment (KSCSTE), Government of Kerala held from February 15- 17, 2024.
10. Leverage Centrality in Generalized Transformation of Path Graph at the International Conference on Algebra and Discrete Mathematics (ICADM-2024) organized by the Department of Mathematics, Government College, Kattappana and is sponsored by the Directorate of Collegiate Education, Government of Kerala, DST(SERB), Co-sponsored by KSCSTE with the Academic Support of Institute of Mathematics Research and Training (IMRT) held during February 20- 22, 2024.
11. Presented a paper titled Leverage Centrality in Join of Some Graphs at the International Conference on Graph Theory and its Applications (ICGTA-2024) organized by the Postgraduate and Research Department of Mathematics, Christ College (Autonomous), Irinjalakuda in collaboration with Kerala State Higher Education Council (KSHEC) and Kerala Mathematical Association (KMA) held from October 03- 05, 2024.
12. Presented a paper titled Analyzing Leverage Centrality in the Join Structure of Paths and Cycles at the Second International Conference on Evolution in Pure and Applied Mathematics (ICEPAM-2024) organized by the Department of Mathematics, Akal University, Talwandi Sabo, Bathinda, Punjab held during November 20- 22, 2024.

#### ORIENTATION/REFRESHER COURSES ATTENDED

1. Participated in the RUSA sponsored Orientation Programme conducted by the UGC-HRDC, Academic Staff College, University of Kerala, Kariavattom, Thiruvananthapuram from 02-11-2017 to 29-11-2017 and obtained 'A' grade.
2. Participated in the UGC sponsored Refresher Course in 'Higher Education and Women Managers' conducted by the UGC-HRDC, Academic Staff College, University of Kerala, Kariavattom, Thiruvananthapuram from 26.06.2018 to 16.07.2018 and obtained 'A' grade.
3. Participated in the UGC sponsored Online Refresher Course in Mathematics conducted by the UGC-HRDC, Academic Staff College, University of Kerala, Kariavattom, Thiruvananthapuram from 03/12/2020 to 16/12/2020 and obtained 'A' grade.
4. Participated in the UGC sponsored Online Refresher Course in 'Disaster Management' conducted by the UGC-HRDC, Academic Staff College, Madurai Kamaraj University from 08/12/2021 to 21/12/2021 and obtained 'A' grade.
5. Participated in the Online NEP 2020 orientation and sensitization programme under MM-TTP of UGC organized by UGC-MMTTC, University of Kerala, Kariavattom, from 02/12/2024 to 12/12/2024.