

Dr. M. VIMALA SUGANTHI. M.Sc.,M.Phil.,Ph.D.- Mathematics

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OBJECTIVE

To be associated with a progressive organization which can provide me with a dynamic work sphere to extract my inherent skills as a Professional, to learn and improve as a good teacher and also attain my career targets in the progress.

ACADEMIC PROFILE

- **Area of Interest:** Graph Theory, Real Analysis.

EDUCATIONAL CHRONICLE

Ph.D(full-time)	Gandhigram rural institute (Deemed to be University), Ministry of Education, Government of India, Gandhigram.	2019- 2023
M.Phil	Fatima College , Madurai.	2016-2017
M.Sc	Lady Doak College, Madurai.	2014-2016.
B.Sc	Fatima College, Madurai.	2011-2014.
HSLC	St.Joseph's Mat Hr.Sec School,Madurai.	2010-2011.
10th	St.Joseph's Mat Hr.Sec School,Madurai.	2008-2009.

WORKING EXPERIENCE

- Fatima College (Autonomous), Madurai (18th July, 2022- 12th Dec,2022)
- The American College (23rd August 2023- till date)

ACADEMIC PROJECTS

- **U.G-Level Project Title :** A study on Signed Domination of Graphs.
- **P.G-Level Project Title :** A study on Sparse Graphs.

- **M.Phil-Dissertation Title** : A study on a-Local Function And Ra Operator In Ideal Topological Space.
- **Ph.D-Thesis Title**: Innovation of a Systematic Analysis of Various Domination Parameters with Applications.

PERSONAL ACTIVITIES

- Undergone English Training skills on English roots and pronunciation.

TRAININGS AND CONFERENCE

- Participated in **Special lecture** on “*Should we discard lebesgue integral?-a review of integration*“ conducted by the Department of Mathematics , The American college, Madurai-625002 on 16th December 2015.
- **Advanced training in Mathematics** : *Group Theory And Ring Theory*, held at the school of Mathematics , Madurai kamaraj University, Madurai during January 4-9, 2016.
- Attended the **National Conference** on “*Recent Trends in Graph Theory*” held at Fatima college , Madurai-625018 on January 18,2017.
- Participated on **National Conference** on “*Modern Mathematics & It’s Applications*”(NCMMA-2018) held at The American College, Madurai during January 22nd & 23rd 2018.
- Presented a paper entitled “Restrained step domination number of a Graph” in the **International Conference on Advances in Pure & Applied Mathematics 2018** at school of Mathematics, Madurai Kamaraj University, Madurai, Tamil Nadu , India During Sep 06-08,2018.
- Presented a paper entitled “Exploration of the possible Benifitions for The complementary perfect matching Models with Applications” in **2018 International Conference on Computational Vision and Bio Inspired Computing (ICCVBIC)**, Organized by Inventive Research Organization and RVS Technical Campus, Coimabatore, India During 29-30, November 2018.
- Presented a paper entitled “Restrained Step Triple Connected Domination Number of a Graph” in the **International Conference on Discrete and Computational Mathematics (ICDCM-18)** organized by the Department of Mathematics and Ramanujan Center for higher Mathematics, Alagappa University, Karaikudi, during 20-21, December 2018.
- Presented a paper on the topic “Restrained step domination number for derived and grid graphs ” in the 3-day **International Conference on Novel Trends in Pure And Applied**

Mathematics, organized by the Department of Mathematics, University of Kerala, Kariavattom, Thrivananthapuram from January 22nd to 24th 2019.

- Presented a paper entitled “Analysis on product graphs along with the utilization of restrained step triple connected domination parameter” in the ***International Conference on Dynamical Systems, Mathematical Modelling and Computing Techniques (ICDSMMCT-2019)*** held during Feb. 14-16, 2019 Organized by the Department of Mathematics, The Gandhigram Rural Institute(Deemed to be University), Gandhigram, Dindigul, Tamil Nadu.
- Presented a paper entitled “Discovering atmost twin outer perfect domination number for general 2-array tree and some special graphs” in the ***International Conference on Dynamical Systems, Mathematical Modelling and Computing Techniques (ICDSMMCT-2019)*** held during Feb. 14-16, 2019 Organized by the Department of Mathematics, The Gandhigram Rural Institute(Deemed to be University), Gandhigram, Dindigul, Tamil Nadu.
- Participated in one day ***International conference on “Tremendous Application of Graphs in recent Technical Era- ICOTAG-19”*** organized by the Department of Mathematics on 27th July held at Annai Women’s College, Karur.
- Presented a paper entitled “Complementary Independent Twin Paired Domination Number of a graph” in the ***34th Annual Confernce of the Ramanujan Mathematical Society(RMS)*** held at Department of Mathematics, Pondicherry University during Augus 1-3, 2019.
- Presented a paper entitled “Investigation of Complementary Independent twin paired domination number of product and some special types of graph” in the ***International Conference on Mathematical Modeling and Computational Intelligence (ICMMCI-2019)*** Organized by Department of Mathematics and Ramanujan Center for Higher Mathematics, Alagappa University, Karaikudi during 3rd and 4th September 2019.
- Participated in the ***International Workshop on Mathematical Modelling and Scientific Computing*** held during 04th -05th September 2019 Organized by the Department of Mathematics, The Gandhigram Rural Institute(Deemed to be University), Gandhigram, Dindigul, Tamil Nadu.
- Presented a paper entitled “Investigation of Complementary independent twin paired dominating number for product and network related graphs” in the ***International Conference on Graph Theory and its Applications (ICGTA-2019)*** held during November 20-21, 2019 organized by the Department of Mathematics, SSN College of Engineering, Chennai, Tamil Nadu, India.
- Virtually Presented a paper entitled “Exploring atmost twin outer perfect domination number for General Binary Tree and Some Special Graphs” in ***2nd International Conference on Mathematical Modelling and Computational Methods in Science and Engineering***

(*ICMMCMSE-2020*) during January 22-24, 2020 organized by School of Mathematics, Alagappa University, Karaikudi, Tamil nadu, India.

- Presented a paper entitled “Discovering Complementary Independent Twin Paired Domination Number for Some Product Related Graphs” in *International Conference on Innovations in Graphs and its Alliances in Digital Era-2020* organized by the Department of Mathematics, University of Kerala, Kariavattom, Thrivananthapuram from January 22nd to 24th 2020.
- Presented a paper entitled “Twin Paired Domination Number of a Graphs” in the 3rd *International Conference Scenario in Pure and Applied Mathematics* held at Kongunadu Arts and Science College (Autonomous), Coimbatore, Tamil nadu, India during 30-31, January 2020.
- Presented a paper entitled “CITD- number for product related graphs and some special type of graphs” in the *International Conference On Mathematical Modelling and Scientific Computing (ICMMSC-2020)* held during Feb. 19-21, 2020 Organized by the Department of Mathematics, The Gandhigram Rural Institute(Deemed to be University), Gandhigram, Dindigul, Tamil Nadu.
- Presented a paper entitled “Corona Domination Number of Graphs” in the *International Conference On Mathematical Modelling and Computational Intelligence Techniques (ICMMCIT-2021)* held during Feb. 10-12, 2021 Organized by the Department of Mathematics, The Gandhigram Rural Institute(Deemed to be University), Gandhigram, Dindigul, Tamil Nadu.
- Participated in two-day *international conference on “Exploration of Contemporary Mathematical Sciences-2022 (ICECMS-2022)”* held on 17th and 18th march 2022 at Mannar Thirumalai Naicker College, Madurai-4.
- Participated in the three-day *International Conference on Analysis and Applied Mathematics(ICCAA-2022)* held at Ayya Nadar Janaki Ammal College (Autonomous) Sivakasi during 26th -28th of April 2022.
- Participated in one week National level Faculty Development Programme on Application of Mathematics in Multi disciplinary Domains from 01.02.2024-08.02.2024 jointly conducted by A.C.T academy kerala Unit and Department of Mathematics (SF) , The American College, Madurai.
- participated in the Two - Day Workshop on “Mathematical Tools for Data Science and Machine Learning”, organized by the Department of Applied Mathematics and Computational Science, Thiagarajar College of Engineering held between 02nd December 2024 and 03rd December 2024.

LIST OF PUBLICATIONS

1. Mahadevan .G, Iravithul Basira. A and **M. Vimala Suganthi**, Restrained step domination number of a graph, *Advances in pure & Applies Mathematics*, ISBN 978-93-86435-54-5, pp 31-40.(2018)
2. G. Mahadevan and **M. Vimala Suganthi**, Restrained step domination number for some derived and grid related graphs, *International Journal of Applied Engineering Research* ISSN 0973-4562 Volume 14, Number 8,pp 7-11, 2019.
3. G. Mahadevan, **M. Vimala Suganthi** and A. Selvam Avadayappan, Exploration of the possible benefits for the complementary perfect matching models with applications, *Springer Lecture notes, ICCVBIC-2019*, pp-1061-1071.
4. G. Mahadevan and **M.Vimala Suganthi**, Restrained Step Domination Number for Some Amusing Product Graph of Paths and Cycle, *International Journal of Recent Technology and Engineering (IJRTE)* ISSN: 2277-3878, Volume-8 Issue-4S5,pp.24-28, December 2019
5. G. Mahadevan, **M. Vimala Suganthi** & A. Iravithul Basira (2019) Restrained step triple connected domination number of a graph, *Journal of Discrete Mathematical Sciences and Cryptography*, 22:5, 731-744.
6. G. Mahadevan and **M.Vimala Suganthi**, Discovering complementary independent twin paired domination number for some product related graphs, *Advances in Mathematics: Scientific Journal* **9** (2020), no.6, 4261–4270.
7. **M.Vimala Suganthi** and G. Mahadevan, complementary independent twin paired domination number of a graph, *Advances in Mathematics: Scientific Journal* **9** (2020), no.11, 9659–9668.
8. G. Mahadevan and **M.Vimala Suganthi**, Creating a Pond Network to Reduce the Water Scarcity and other Issues Using Domination Parameter, *Environmental Pollution and Climate Change*, Discovery Publishing House Pvt. Ltd., New Delhi (India), ISBN: 978-93-88854-30-6 2020, Chapter 12, pp.222-225.
9. G. Mahadevan and **M.Vimala Suganthi**, Twin Paired Domination number of a graph, *Journal of Physics: Conference Series* **1543** (2020) 012012, IOP Publishing doi:10.1088/1742-6596/1543/1/012012.
10. **M.Vimala Suganthi** and G. Mahadevan, CITD-number for some graph operations, *Journal of Physics: Conference Series* **1724**(2021) 012019, IOP Publishing doi:10.1088/1742-6596/1724/1/012019.

11. **M.Vimala Suganthi** and G. Mahadevan , Restrained step triple connected domination polynomial, Design Engineering, issue 6, (2021), pp 4145-4151.
12. **M.Vimala Suganthi** and G. Mahadevan, Equality on restrained step domination number of a Graph, AIP Conference proceedings, 2364 issue:1, 020007, 2021.
13. G. Mahadevan, **M. Vimala Suganthi** & A. Iravithul Basira, Analysis on product graphs along with the utilization of Restrained step triple connected domination parameter, Accepted in International journal of Dynamical systems and differential equations.
14. G. Mahadevan, **M. Vimala Suganthi**, and C. Sivagnanam, Corona Domination Number of Graphs, Mathematical Modelling and Computational Intelligence Technique, Springer Proceedings in Mathematics and Statistics, Vol 376, 255-265,2021.

ADDITIONAL PROFICIENCY

- Done certification course in Programming in C and C++.