

## PROFILE

**Name****DR. G. KALAIMURUGAN****Address**

Assistant Professor  
Department of Mathematics  
Thiruvalluvar University  
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**Date of birth**

June 2, 1980

**Academic Qualifications**

Ph.D (Mathematics)	Manonmaniam Sundaranar University, Tirunelveli	2012
M.Sc. (Mathematics)	Anna University, Chennai	2003 First class

**Employment Details**

April 26, 2013 to till date	Assistant Professor, Department of Mathematics, Thiruvalluvar University, Vellore-632115.
Nov. 5, 2012 to April 25, 2013	Assistant Professor, School of Advanced Sciences (SAS) VIT University, Vellore - 632 014.
July 16, 2012 to Nov. 4, 2012	Assistant Professor [Junior], School of Advanced Sciences(SAS) VIT University, Vellore - 632 014.
July 1, 2005 to Nov. 5, 2009	Lecturer, Department of Mathematics, Adhiparasakthi Engineering College, Melmaruvathur- 603 319.

**Title of Research Dissertations**

Ph.D Dissertation: A Study on Domination in Cayley graphs

M.Sc Dissertation: Effect of atmospheric drag on polar low earth orbit micro satellites

## Research Placement

University Grants Commission -Basic Science Research Fellowship (UGC-BSRF):  
Nov. 2009 to June 2012.

## Research Interests

Algebra, Graph Theory and Algebraic Graph theory.

## Research Project Ongoing:

Title	Funding Agency	Duration	Amount Sanctioned
A study on graphs associated with vector spaces	SERB SURE	36 months 16-Oct-23 to 15-Oct-2026	Rs..16,97,790 /-

## Research Publications (International)

1. **Kalaimurugan, G.**, Vignesh, P., Tamizh Chelvam, T, Genus two nilpotent graphs of finite commutative rings, J. Algebra Appl., Vol. 22, No. 06, 2350123 (2023).  
<https://doi.org/10.1142/S0219498823501232>.
2. Raúl M. Falcón, S. Gopinath, **G. Kalaimurugan**, Set-independence graphs of vector spaces and partial quasigroups, J. Algebra Comb. Discrete Appl., 10(3) 161-173 (2023).
3. **G. Kalaimurugan** , S. Gopinath. and T. Tamizh Chelvam, Cayley subspace sum graph of vector spaces, International Electronic Journal of Algebra, Volume 33 (33) (2023)1-17.  
DOI:10.24330/ieja.1195466.
4. **G. Kalaimurugan**, P. Vignesh, M. Afkhami and Z. Barati, Planar index and outerplanar index of Zero-divisor graphs of commutative rings without identity, International Electronic Journal of Algebra, 1-16 (2022). <https://doi.org/10.24330/ieja.1152714>.
5. **G. Kalaimurugan** and P. Vignesh, The Book Thickness of Nilpotent Graphs, Rocky Mountain Journal of Mathematics, 52 (1), 127-132. <https://doi.org/10.1216/rmj.2022.52.127>.
6. **G. Kalaimurugan** , S. Gopinath. and T. Tamizh Chelvam, Genus of non – zero component union graph of vector space, Hacettepe journal of mathematics and statistics, Volume 50 (6) (2021), 1595 – 1608. <https://doi.org/10.15672/hujms.754535>
7. M. R. Alfuraidan, **G. Kalaimurugan**, P. Vignesh, On the Genus of the Inverse Graphs of Finite Abelian Groups, RUNDSCHAU, 119(10 ), 2021. <http://www.dlr-journal.com/index.html>
8. Z. Barati, M. Afkhami, **G. Kalaimurugan** & P. Vignesh, On the annihilator graph of a commutative ring, Indian Journal of Pure and Applied Mathematics , Volume 53, pages 923–931, (2022). <https://doi.org/10.1007/s13226-021-00198-2>.
9. K. Mageshwaran, Ali Ahmad , Bundit Unyong, **G. Kalaimurugan** and S. Gopinath, On 232  $char(\varphi, \varphi - 1, \dots, 1)$  Labelings of Circulant Graphs, Journal of Mathematics, Volume 2021(2021), <https://doi.org/10.1155/2021/6578478>.
10. **G. Kalaimurugan** and S. Gopinath., Topological Indices Of Graph Associated With Vector Space, GIS Science Journal, 8 (5), 2021. #262-267, DOI: 20.18001.GSJ.2021.V8I5.21.37091.
11. **G. Kalaimurugan** and S. Gopinath., Subset Based Non-Zero Component Union graphs of Vector, Advances in Mathematics: Scientific Journal ,2021,10 no.5,2561–2569.  
<https://doi.org/10.37418/amsj.10.5.20>

12. K Mageshwaran, **G Kalaimurugan**, Bussakorn Hammachukiattikul, VEDIYAPPAN GOVINDAN, ISMAIL NACI CANGUL, On-(L,K) Labeling Index of Inverse Graphs Associated with Finite Cyclic Groups, *Journal of Mathematics*, <https://doi.org/10.1155/2021/5583433> (2021).
13. S Magi, **G Kalaimurugan**, Prime Edge Domination number of Graphs, *European Journal of Molecular & Clinical Medicine*, 7(6)(2020), 2630-2635.
14. **G. Kalaimurugan**, S.Gopinath, On Total Graph of Module, *Journal of Xi'an University of Architecture & Technology*, Volume XII, Issue III (2020), 4541- 4546.  
<https://doi.org/10.37896/JXAT12.03/4042020>.
15. **G. Kalaimurugan**, P. Vignesh and T. Tamizh Chelvam, Toroidal zero-divisor graphs of decomposable commutative rings without identity, *Boletín de la Sociedad Matemática Mexicana*, 28 March 2020. <https://doi.org/10.1007/s40590-020-00282-3>.
16. **Kalaimurugan, G.**, Vignesh, P., Tamizh Chelvam, T.: On zero-divisor graphs of commutative rings without identity. *J. Algebra Appl.* (2019). <https://doi.org/10.1142/S0219498820502266>.
17. **Kalaimurugan, G.**, Mageshwaran, K., The Zk-Magic Labeling On Inverse Graphs from Finite Cyclic Group, *American International Journal of Research in Science, Technology, Engineering & Mathematic*, 23(1) (2018), 199-201.
18. **Kalaimurugan, G.**, Mageshwaran, K., Strongly Multiplicative Cayley Graphs, *International Journal of Advanced Research in Computer Science*, 8(6) (2017), 172-174.
19. **Kalaimurugan, G.**, Edge-Odd Gracefull Labeling on Circulant graphs, *Journal of Computer and Mathematical Sciences*, 6(3) (2015), 155-158.
20. **Kalaimurugan, G.**, and Jayakumar, R., Signed edge domination in circulant graphs, *International Journal of Applied Engineering Research*, 10(3) (2015), 7569-7573.
21. T TamizhChelvam, T., Mohammed Rilwan, N., and **Kalaimurugan, G.**, :Antimagic and magic labeling in Cayley digraphs, *Australasian Journal of Combinatorics*, 55(2013), 65-71 ([www.ajc.maths.uq.edu.au](http://www.ajc.maths.uq.edu.au)).
22. TamizhChelvam, T., **Kalaimurugan, G.**, and Well Y. Chou.,: Signed star domination number of Cayleygraphs, *Discrete Mathematics, Algorithms and Applications*, 4(2)(2012), 1250017 [10pages](DOI: 10.1142/S1793830912500176).
23. TamizhChelvam, T., **Kalaimurugan, G.**, Bounds for Domination Parameters in Cayley graphs on Dihedral Group, *Open Journal of Discrete Mathematics*, 2(1) (2012), 5-10.

### Research Guidance

Name of Degree	Awarded	Thesis Submitted	Ongoing
M.Phil	19	-	0
Ph. D	4	1	4

### Membership in Professional Bodies

Life Member of the Indian Society for Technical Education

Life Member of Association of Discrete Mathematics and its Applications (ADMA)

### Additional Responsibilities:

1. Technical and Personal officer to VC, TVU, 31<sup>st</sup> Mar 2023 to till date.

2. Member in Academic Council of Thiruvalluvar University, 12<sup>th</sup> Jan. 2022 to till date.
3. Member of the Board of Research Studies of Thiruvalluvar University, Mar. 2024 to till date
4. Member in scrutiny of Ph.D thesis Committee, TVU, 30 Aug 2019 to till date.
5. Squad Member in Anti Ragging Committee, TVU, 26 Dec 2017 to till date.
6. Member of the Board of Studies in PG (CBCS) Mathematics of Thiruvalluvar University, Jan. 2014 to till date.
7. Faculty in charge of Controller of Examinations, TVU, 01 July 2020 to 20 Dec 2021.

**Number of Conference (National/International): 25**

**Number of Invited /Special Lecture delivered: 12**

**Number of Summer Schools, Orientation Course and Refresher course attended: 6**