

# Curriculum Vitae



**Dr. T. Kavaskar**

**Assistant Professor**

**Department of Mathematics**

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## Educational Qualifications

1. **Ph.D.**, Mathematics (2011): SASTRA University.
2. **M.Phil.**, Mathematics (2007): Annamalai University, Annamalai Nagar.
3. **M.Sc.**, Mathematics (2005): Annamalai University, Annamalai Nagar.
4. **B.Sc.**, Mathematics (2003): Periyar Arts College (University of Madras), Cuddalore.

**Area of Interest** : Graph theory and Algebra

**Specialization** : Graph Coloring and Algebraic Combinatorics

## Work experience (both Research and Teaching)

1. **Assistant Professor**, Central University of Tamil Nadu, since 24-10-2017.
2. **Assistant Professor**, Thiruvalluvar University College of Art's and Science, Thennangur, Vandavasi (14-08-2015 to 23-10-2017).
2. **Assistant Professor**, SRM University, Kattankulathur, Chennai. (6-8-2014 to 23-7-2015).
3. **Post-Doctoral Fellow**, The Institute of Mathematical Sciences (IMSc) (24-1-2014 to 5-8-2014).
4. **UGC-Dr. D.S. Kothari Post-Doctoral Fellow**, Bharathidasan University (9-12-2011 to 23-1-14).
5. **Assistant Professor**, B. S. Abdur Rahman University, Chennai-600 048. (15-7-10 to 29-11-11).
6. **Senior Research Scholar**, Department of Mathematic, Bharathidasan University, Tiruchirappalli. (1-4-2009 to 14-07-2010).
7. **Senior Research Fellow (SRF)** in a Project under Department of Science and Technology, India at Srinivasa Ramanujan Center, SASTRA University, Kumbakonam, India. (9-10-08 to 31-03-09)
8. **Junior Research Fellow (JRF)** in a Project under Department of Science and Technology, India at Srinivasa Ramanujan Center, SASTRA University, Kumbakonam, India. (9-10-06 to 08-10-08)

## Honours & Awards

1. Received **NBHM**-Research project
2. Received **UGC-Start up grant**.
3. Received **DST-Fast Track young scientist award (SERB)**.
4. Received **Post-Doctoral Fellowship** at **National Taiwan University, Taiwan**.
5. Received **IMSc-Post Doctoral Fellowship**.
6. Cleared **UGC-CSIR-NET (Lectureship)** exam.
7. Cleared **SET (State Eligibility Test for Lectureship)** exam.
8. Received **Dr. D.S. Kothari UGC-Postdoctoral** Fellowship.
9. Received Senior Research Fellow (**SRF**) in a Project under Department of Science and Technology.
10. Received Junior Research Fellow (**JRF**) in a Project under Department of Science and Technology.
11. Received the Ramasamy Padayachiyar Endowment Award for **first rank in M.Phil**.
12. The paper "**Fall Coloring of Graphs-I**" published in *Discussiones Mathematicae Graph Theory* has been placed in the list of Top twenty **HOTTEST** articles published in that journal over the period **September 2010 to June 2014**.

## Research Project

1. NBHM-Research project (Ongoing).  
Sanction amount: **Rs. 16,96,400/-**  
Title of the project: "Problems on Zero-divisor graph of a Commutative ring with unity"
2. UGC-Start up grant (No. F.30-464/2019(BSRF)).  
Sanction amount: **Rs. 10,00,000/-**  
Title of the project: "Coloring Problems on Zero-divisor graphs of a ring"  
Duration: 27-03-2019 to 26-03-2022.
3. SERB-Research project (No. SB/FTP/MS-029/2013).  
Sanction amount: **Rs. 11,28,000/-**  
Title of the project: "Some Problems on Equitable coloring and indicated coloring"  
Duration: 30-10-2014 to 30-10-2015.

## List of Publications

1. S. Balamoorthy and T. Kavaskar, Irreducibility and spectra of eccentricity matrix of graph products, *Discrete Mathematics*, 2026. (doi.org/10.1016/j.disc.2026.115015).
2. S. Balamoorthy and T. Kavaskar, Spectra of eccentricity matrix of graphs, “*Studia Scientiarum Mathematicarum Hungarica: Combinatorics, Geometry and Topology*” (2025)  
DOI: 10.1556/012.2025.04340
3. T. Kavaskar, Bounds for boxicity of circular clique graphs and zero-divisor graphs, *Discrete Applied Mathematics*, 365 (2025) 260-269.
4. S. Balamoorthy and T. Kavaskar, Spectra of eccentricity matrices of product of graphs, in *CALDAM, 2024, Lecture Notes in Computer Science (LNCS)*, 2025, 38–49.
5. T. Kavaskar and Sreelakshmi Sukumaran, Total Coloring of Generalized Corona Product Graphs, “*Studia Scientiarum Mathematicarum Hungarica: Combinatorics, Geometry and Topology*”, (2025) Pages 1-6 ( DOI: 10.1556/012.2025.04326).
6. S. Balamoorthy, T. Kavaskar and K. Vinothkumar, Harary and hyper-Wiener indices of some graph operations, *J. Inequal. Appl* 2024, 34 (2024). (DOI.org/10.1186/s13660-024-03112-6).
7. T. Kavaskar and Sreelakshmi Sukumaran, Total Coloring of Some Graph Operations, *Lecture Notes in Computer Science*, 14508 Springer, Cham, 2024, 302–312.
8. S. Balamoorthy T. Kavaskar and K. Vinothkumar, Wiener index of an ideal-based zero-divisor graph of commutative ring with unity, *AKCE International Journal of Graphs and Combinatorics*, (DOI: 10.1080/09728600.2023.22630402023).
9. T. Kavaskar and Vinothkumar K, Padmakar-Ivan Index of Some families of graphs, *Discrete Mathematics, Algorithms and Applications*, 16(5), 2350064 (2024).
10. G. Arunkumar, Peter J. Cameron, T. Kavaskar and T. Tamizh Chelvam, Induced subgraphs of zero-divisor graphs, *Discrete Mathematics* 346 (2023) 113580.
11. T. Kavaskar, Perfectness of G-generalized Join of Graphs, *LNCS*, 13947, 172-183, 2023.
12. T. Kavaskar, Beck's coloring of finite product of commutative ring with unity, *Graphs Combinatorics*. 38 (2022), 1-9.
13. S. Francis Raj and T. Kavaskar, On two conjectures on b-coloring of Product Graphs, *Studia Scientiarum Mathematicarum Hungarica*, 54 (1) 2017 141-149.
14. R. Balakrishnan, S. Francisraj and T. Kavaskar, b-coloring of Cartesian product of odd graphs, *ARS Combinatoria*, 131 (2017) 285-298.
15. R. Balakrishnan, S. Francis Raj and T. Kavaskar, b-coloring of Cartesian product of trees, *Taiwanese Journal of Mathematics*, Volume 20, Number 1 (2016), 1-11.
16. R. Balakrishnan, S. Francisraj and T. Kavaskar, b-chromatic number of Cartesian product of some family of graphs, *Graphs and Combinatorics*, (2014) 30:511–520.
17. R. Balakrishnan, T. Kavaskar, Interpolation Theorem for Partial Grundy coloring, *Discrete Mathematics*, 313(2013) 949–950.
18. T. Kavaskar, Further Results on the Mycielskian of Graphs, *Lecture Notes in Computer Science*, 7643, (2012) 73-75.
19. R. Balakrishnan, T. Kavaskar and Wasin So, The Energy of the Myceilskian of a Regular Graph, *Australasian Journal of Combinatorics*, 52 (2012), 163-171.

20. R. Balakrishnan, and T. Kavaskar, b-coloring of Kneser Graphs, Discrete Applied Mathematics, 160 (2012) 9-14.
21. R. Balakrishnan, T. Kavaskar, Color chain of a graph, Graphs and Combinatorics 27 (4): 487-493 (2011).
22. R. Balakrishnan, T. Kavaskar, Fall Coloring of Graphs-II, J. Combin. Math. and Combin. Comput. 76, (2011) 21-31.
23. R. Balakrishnan, T. Kavaskar, Fall Coloring of Graphs-I, Discussiones Mathematicae Graph Theory 30, (2010) 47-52.

### **List of Papers Communicated**

1. T. Kavaskar, Perfectness of zero-divisor graphs, **Submitted.**
2. T. Kavaskar and Sreelakshmi Sukumaran, Total Coloring Conjecture for join of Graphs and G-join of graphs, **Submitted.**
3. T. Kavaskar and Sreelakshmi Sukumaran, A short proof of the Mycielski graph is Class-1, **Submitted.**
4. T. Kavaskar and Sreelakshmi Sukumaran, Type 1 Generalized Mycielski Graphs, **Submitted.**
5. T. Kavaskar, Vizing's conjecture for zero-divisor graph of finite commutative ring, **to be Submitted.**
6. S. Francis Raj and T. Kavaskar, Equitable  $\Delta$ -coloring conjecture for generalized Mycielskian of Graphs, **to be Submitted.**
7. T. Kavaskar, Paired Domination Number of the Mycielskian of graphs, **to be Submitted.**

### **List of students guidance**

**Ph.D. Students:** Completed-1; Ongoing: 3.

**M.Sc. Students:** Completed-3.

### **Invited/ Contributed Talks/ Special Invitee**

Delivered more than 50 invited talks at national and international conferences and workshops.