

## Curriculum Vitae

**Dr. T. Kavaskar**  
**Assistant Professor**  
**Department of Mathematics**  
**Central University of Tamil Nadu**  
**Neelakudi, Kangalacherry, Thiruvavur**  
**Tamil Nadu, India**



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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 **UGC-Start up grant**.
2. I got **DST-Fast Track young scientist award (SERB)**.
3. Received **Post-Doctoral Fellowship at National Taiwan University, Taiwan**.
4. Received **IMSc-Post Doctoral Fellowship**.
5. Cleared **UGC-CSIR-NET (Lectureship)** exam.
6. Cleared **SET (State Eligibility Test for Lectureship)** exam.
7. Received **Dr. D.S. Kothari UGC-Postdoctoral Fellowship**.
8. Received **Senior Research Fellow (SRF)** in a Project under Department of Science and Technology.

9. Received Junior Research Fellow (**JRF**) in a Project under Department of Science and Technology.
10. Received the Ramasamy Padayachiyar Endowment Award for **first rank in M.Phil.**
11. 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. 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.
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.

## **List of Publications**

1. T. Kavaskar and Vinothkumar K, Padmakar-Ivan Index of Some families of graphs, accepted for publication in *Discrete Mathematics, Algorithms & Applications* (DOI: 10.1142/S17793830923500647).
2. G. Arunkumar, Peter J. Cameron, T. Kavaskar and T. Tamizh Chelvam, Induced subgraphs of zero-divisor graphs, *Discrete Mathematics* 346 (2023) 113580.
3. T. Kavaskar, Perfectness of G-generalized Join of Graphs, *LNCS*, 13947, 172-183, 2023.
4. T. Kavaskar, Beck's coloring of finite product of commutative ring with unity, *Graphs and Combinatorics*. 38 (2022), 1-9.
5. S. Francis Raj and T. Kavaskar, On two conjectures on b-coloring of Product Graphs, *Studia Scientiarum Mathematicarum Hungarica*, 54 (1) 2017 141-149.
6. R. Balakrishnan, S. Francisraj and T. Kavaskar, b-coloring of Cartesian product of odd graphs, *ARS Combinatoria*, 131 (2017) 285-298.
7. 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.
8. 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.
9. R. Balakrishnan, T. Kavaskar, Interpolation Theorem for Partial Grundy coloring, *Discrete Mathematics*, 313(2013) 949–950.
10. T. Kavaskar, Further Results on the Mycielskian of Graphs, *Lecture Notes in Computer Science*, 7643, (2013) 73-75.
11. R. Balakrishnan, T. Kavaskar and Wasin So, The Energy of the Myceilskian of a Regular Graph, *Australasian Journal of Combinatorics*, 52 (2012), 163-171.
12. R. Balakrishnan, and T. Kavaskar, b-coloring of Kneser Graphs, *Discrete Applied Mathematics*, 160 (2012) 9-14.
13. R. Balakrishnan, T. Kavaskar, Color chain of a graph, *Graphs and Combinatorics* 27 (4): 487-493 (2011).
14. R. Balakrishnan, T. Kavaskar, Fall Coloring of Graphs-II, *J. Combin. Math. and Combin. Comput.* 76, (2011) 21-31.
15. 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 some families of graphs, **Submitted.**
2. T. Kavaskar, Vizing's conjecture for zero-divisor graph of finite commutative ring, to be **Submitted.**
3. T. Kavaskar, Boxicity of G-generalized join of graphs and Zero-divisor graph of a ring of integer modulo  $Z_n$ , **Submitted.**
4. S. Balamoorthy, T. Kavaskar and Vinithkumar K, Wiener Index of an Ideal-Based Zero-Divisor Graph of a Finite Commutative Ring with Unity, **Submitted.**
5. S. Balamoorthy, T. Kavaskar and Vinithkumar K, Harary index and Hyper-Wiener Index of Some graph operations, **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.**

**Ph.D. Students:** 2 ongoing.

## Invited/ Contributed Talks/ Special Invitee

1. **Delivered an invited talk** on "An innovative Approach in Graph Coloring" in the special lecture, Thiagarajar College, Madurai on 22.02.2023.
2. **Delivered an invited talk** on "Interpolation Theorems in vertex coloring of graphs" in the National Conference on Algebraic Graph Theory, Graph Theory and Analysis, Manonmaniam Sundaranar University, Tirunelveli, during February 23-24, 2023.
3. **Delivered an invited talk** on "Properties of Zero-Divisor Graphs of a Commutative Ring with Unity" in the International Conference on Mathematics and its Applications in Technology, SASTRS University, Kumbakonam, during March, 24-24, 2023.
4. Gave a lecture on "Graph Theory and its Applications" the special lecture at Department of Education and Training, Central University of Tamil Nadu on 21.04.2023.
5. Gave a lecture on "**Beck's Coloring of rings**", in the Prof. R. Balakrishnan and Prof. P. Paulraja endowment lecture at Periyar University, Salem on 14-10-2023.
6. **Delivered an invited talk** on "Perfect Zero-divisor graphs of Posets and reduced semigroups" in 18<sup>th</sup> Annual Conference of ADMA and Graph Theory during 09-06-2022 to 10-06-2022 at Vellalar College for Women, Erode, Tamil Nadu.
7. **Delivered an invited talk** on "Some application of Graph Theory and Number theory" in One day State level seminar at Dharmapuram Gnanambigai Government Arts College (W), Mayiladuthurai, Tamil Nadu on 11-05-2022.
8. **Delivered an invited talk** on "The Course Module-Importance of Teaching Skills" in Service Teacher Training Program during 05-05-2022 to 06-05-2022 at Government Arts and Science College, Jayankondam, Ariyalur, Tamil Nadu.
9. **Delivered an invited talk** (2 sessions) on "Graph Theory" Virtual Refresher programme on Applied Mathematics on 19.03.2021.
10. **Delivered an invited talk** at one day seminar at A.D.M. COLLEGE FOR WOMEN (Autonomous), NAGAPATTINAM on 01-03-2021. (**Title: Application of Sylow's Theorems**)
11. **Delivered an invited talk** in the eve of 133<sup>rd</sup> birth Anniversary of Srinivasa Ramanujan on 22<sup>nd</sup>, December 2020. (**Title: Euclid's 1<sup>st</sup> Theorem**)
12. **Delivered an invited talk** in the Recent trends in Pure and Applied Mathematics during 17-18, July 2019. (**Title: Some Application of Graph Theory**)

13. **Delivered an invited talk** in the 23rd Ramanujan Symposium-National Conference on Graph Theory and its Applications” during 4th - 6th March, 2020. (**Title: Boxicity of Graphs**)
14. **Delivered an invited talk** in the “Recent Trends in Mathematics” on June 29, 2020 (**Title: Coloring of Rings**)
15. **Delivered an invited talk** in the International Conference on Graph Theory and its applications during 04-06, Jan. 2019. (**Title: Equitable of Coloring of Graphs**)
16. **Delivered an invited talk** in the Ramanujan Day Celebration on 20-12-2018.
17. **Delivered an invited talk** in the National Workshop on Graph coloring and Algebraic graph theory during 06-10, March 2018. (**Title: Graphs and Homomorphisms**)
18. **Delivered an invited talk** in the DBT Sponsored Workshop on Discrete Mathematics and its applications during 21-22, February 2018. (**Title: Types of Colorings in Graphs**)
19. **Delivered an invited talk** in the National Mathematics Day Endowment Lectures at ST. Joseph’s College, Trichy on 20<sup>th</sup> December 2017. (**Title: Graph coloring and interpolation Theorem**)
20. **Delivered an invited talk** on Recent Development in coloring, Domination and Distinguishing Codes in Graphs was held at Government Arts College, Melur, Madurai, during 6-8, August, 2015. (**Title: Fall Coloring of Graphs**)
21. **Delivered an invited talk** on International Conference on Graph Theory and its applications was held at **Pondichery University, Puducherry**, during 15-16 July 2015. (**Title: A survey on Interpolation Theorem on Graph Coloring**)
22. **Delivered an invited talk** on 3<sup>rd</sup> India-Taiwan Conference on Discrete Mathematics was held at **National Chiao Tung University, Taiwan**, during 18-22, November, 2013. (**Title: Interpolation Theorem and Equitable Delta conjecture**)
23. Gave an **invited talk** at State Level Seminar on New Trends in Graph Theory, Ayya Nadar Janaki Ammal College, Sivakasi, Tamil Nadu, 13<sup>th</sup> September 2013. (**Title: Coloring of Graphs**)
24. Gave an **invited talk** at National Seminar on Recent Trends in coloring of graphs and Digraphs, Sethupathy Government Arts College, Ramanathapuram, 24-25, August 2012. (**Title: Equitable  $\Delta$ -coloring conjecture**)
25. Gave an **invited talk** at the Eight Annual Conference of the ‘Academy of Discrete Mathematics and Applications’ and Graph theory day VIII held at the V.V. Vanniaperumal College for Woman, Virudhanagar during 8-10, June 2013. (**Title: A Survey on b-coloring of graphs**)
26. **Was a special invitee for the Second India-Taiwan Conference** on Discrete Mathematics which was organized at the Amrita University, Coimbatore during 8-11, September 2011.
27. Gave an **invited talk** at the International Workshop on Graph Coloring and its Applications held at Bharathidasan University, Tiruchirappalli during 7-9, August 2010. (**Title: Grundy and partial Grundy colorings in graphs**)

## Papers presented in Conferences

1. **Equitable Delta coloring conjecture for generalized Mycielskian of graphs**, 79th Annual Conference of the Indian Mathematical Society, Rajagiri School of Engineering & Technology, Kochi, Kerala, December 28-31, 2013.
2. **b-chromatic number of Strong Product of graphs**, International Conference on Discrete Mathematics (ICDM-2013), Karnatak University, Dharwad, India. June 10-14, 2013.
3. **On b-continuity of Cartesian product of odd graphs**, Indo-Slovenia Conference on Graph Theory and Applications (Indo-Slov-2013), University of Kerala, Trivandrum, India. February 22-24, 2013.
4. **Further Results on the Mycielskian of Graphs**, IWOCA-International Workshop on Combinatorial Algorithms, Kalasalingam University, Anand Nagar, Krishnankoil, Tamil Nadu, India, July 19-21, 2012.
5. **Some results in b-coloring of Kneser graphs**, ICRTGC-International Conference on Recent Trends in Graph theory, Cochin University of Science & Technology, Kerala, 12-15, August 2010.
6. **b-chromatic number of Kneser graphs**, Platinum Jubilee 75th Annual conference of the Indian Mathematics Society (IMS), Kalasalingam University, Krishnankoil, 27-30, December 2009.
7. **All odd graphs are b-continuous**, Fifth Annual Instructional Conference of ADMA and Graph Theory Day-V, Periyar University, Salem, 10-13 June 2009.
8. **Color Chain of Graphs**, Jubilee conference on Discrete Mathematics, Banasthali University, Jaipur, 11-13 January 2009.
9. **Fall Coloring of Graphs**, International conference on Discrete Mathematics, University Mysore, Mysore, 6-11, June 2008.

## Conferences/ Workshops attended

I have attended more than 50 conferences and workshops both at National and International levels in Graph Theory and related areas.