



Dr.K.Bala Deepa Arasi

Assistant Professor

PG & Research Department of Mathematics

A.P.C.Mahalaxmi College for Women, Thoothukudi

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Date of Appointment : 24th August 2017

Education : M.Sc., M.Phil., Ph.D.,

Specialization : Topology

Education & Credentials

| Degree | College / University | Specialization | Year |
|----------|--|----------------|------|
| Ph.D., | Manonmaniam Sundaranar University, Tirunelveli | Topology | 2017 |
| M.Phil., | A.P.C.Mahalaxmi College for Women, Thoothukudi | Mathematics | 2008 |
| M.Sc., | A.P.C.Mahalaxmi College for Women, Thoothukudi | Mathematics | 2007 |
| B.Sc., | A.P.C.Mahalaxmi College for Women, Thoothukudi | Mathematics | 2005 |

Research Experience

Ph.D:

- a) Topic : “Certain Investigations into $sb\hat{g}$ -closed in Topological and Bi-topological spaces.”

b) Name and Description of
the Supervisor :

Dr.S.Navaneethakrishnan,
Associate Professor of Mathematics,
V.O.Chidambaram College,
Thoothukudi.

Research Guidance:

Ph.D - 2 (Pursuing)

Project Guidance:

a) M.Sc., - 23 students

b) M.Phil., - 7 students

Research Papers published in journals:

| S. No | Name of the Paper | Name of the Journal | Level | Year | ISSN/ ISBN No. | Impact Factor |
|-------|--|---|---------------|--|----------------|---------------|
| 1. | On $sb\hat{g}$ -closed sets in topological spaces | International Journal of Mathematical Archive | International | Vol. 6(10), 115-121, 2015 | 2229-5046 | 5.835 |
| 2. | On ψg^* -closed sets in Topological spaces | International journal of Engineering Research & Technology | International | Vol.4, Issue 2, 398-402, December 2015 | 2278-0181 | 1.76 |
| 3. | On $b^*\hat{g}$ - closed sets in Topological Spaces | International Research Journal of Mathematics, Engineering & IT | International | Vol.2, Issue 12, 1-13, December 2015 | 2349-0322 | 2.868 |
| 4. | On $sb\hat{g}$ -continuous functions and $sb\hat{g}$ -homeomorphisms in topological spaces | International Research Journal of Mathematics, Engineering and IT | International | Vol.3, Issue 1, 22-38, January 2016 | 2349-0322 | 2.868 |

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|-----|---|---|---------------|--|-----------------------|--------|
| 5. | On contra $sb\hat{g}$ -continuous functions in topological spaces | International Journal of Engineering Research and Technology | International | Vol.5, Issue 2, 135-142, February 2016 | 2278-0181 | 1.76 |
| 6 | On ψg^* -continuous functions in Topological Spaces | Proceedings of International Conference on Recent Trends in Mathematical Modeling | International | pp 276-289, 12 th February 2016 | 13-978-93-82592-00-06 | |
| 7. | On Topological $sb\hat{g}$ -quotient mappings | International Journal of Innovative Research in Science, Engineering and Technology | International | Vol.5, Issue 6, 9435-9443, June 2016 | 2319-8753 | 6.209. |
| 8. | On ψg^* -closed sets in Topological Spaces | Enrich | State | Vol. VII, Issue II, 71-75, Jan-June 2016. | 2319-6394 | |
| 9. | On $sb\hat{g}$ -connected and $sb\hat{g}$ -compact spaces | International Journal of Engineering and Scientific Research | International | Vol. 4, Issue 8, 89-101, August 2016 | 2347-6532 | 6.660 |
| 10. | On ψg^* -open maps and ψg^* -homeomorphisms in Topological spaces | International Journal of Mathematical Archive | International | Vol.7(5), 90-99, 2016 | 2229-5046 | 7.543 |
| 10. | On (τ_i, τ_j) - $sb\hat{g}$ -closed sets in bi-topological spaces | International Journal of Sciences and Applied Research | International | 3(8), 104-116, 2016 | 2394-2401 | 4.129 |
| 11. | On $b^*\hat{g}$ -continuous functions and $b^*\hat{g}$ -open maps in Topological spaces | International Journal of Mathematical Archive | International | 8(7), 121-128, 2017 | 2229-5046 | 7.543 |

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|-----|--|---|---------------|------------------------------------|-------------------|-------|
| 12. | On contra $b^*\hat{g}$ -continuous functions in Topological spaces | International Journal of Science, Engineering and Management | International | Vol. 2, Issue 12, Dec 2017 | 2456-1304 | 2.7 |
| 13 | \hat{g}^* - R_i $i=0,1$ spaces in Topological spaces | Proceedings of National Conference on Innovations in Mathematics | National | 9 th Feb 2018, 76-80 | 978-81-935198-5-1 | |
| 14 | \hat{g}^* -separation axioms in Topological spaces | Proceedings of National Conference on Innovations in Mathematics | National | 9 th Feb 2018, 81-86. | 978-81-935198-5-1 | |
| 15. | On $b^*\hat{g}$ -homomorphism in Topological spaces | International Journal of Engineering and Scientific Research | International | Vol6(2) , Feb 2018-149-155 | 2347-6532 | 6.660 |
| 16 | Some Neighbourhood Prime Graphs | Enrich | Regional | Vol IX(I), 32-39, July – Dec. 2017 | 2319-6394 | |
| 17 | Neighbourhood Prime labelling on some square Graphs | Enrich | Regional | Vol IX(II), Jan – Jun 2018 | 2319-6394 | |
| 18. | A New Notion on some applications of $b^*\hat{g}$ - closed sets in Topological spaces. | International Journal of Recent Research Aspects | International | April 2018,456-460 | 2349-7688 | 1.235 |
| 19. | $SB\hat{g}$ - R_0 space and $SB\hat{g}$ - R_1 space | Proceedings of National Seminar on New Dimensions in Mathematics and its applications | National | 22-29, October 2018 | | |

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|----|--|---|---------------|--|-----------|------|
| 20 | \mathcal{G}^* -continuous maps in topological spaces | Proceedings of National Seminar on New Dimensions in Mathematics and its applications | National | 74 – 83, October 2018 | | |
| 21 | Some new separation axioms in Topological Spaces | Journal of Emerging Technologies and Innovative Research | International | February 2019, Vol.6, Issue 2, 336-341 | 2349-5162 | 5.87 |
| 22 | ρ - T_0 and ρ - T_1 spaces in Topological spaces | Journal of Emerging Technologies and Innovative Research | International | February 2019, Vol.6, Issue 2, 731-735 | 2349-5162 | 5.87 |
| 23 | Application on \mathcal{G} -closed sets in Topological Spaces | Journal of Emerging Technologies and Innovative Research | International | February 2019, Vol.6, Issue 2, 742-747 | 2349-5162 | 5.87 |
| 24 | Some new \mathcal{G}^* -continuous functions in Topological Spaces | Journal of Emerging Technologies and Innovative Research | International | February 2019, Vol.6, Issue 2, 757-761 | 2349-5162 | 5.87 |
| 25 | Application on \mathcal{G} -closed sets in Topological Spaces | Journal of Emerging Technologies and Innovative Research | International | February 2019, Vol.6, Issue 2, 832-836 | 2349-5162 | 5.87 |
| 26 | On generalized semi \mathcal{G} -closed sets in Topological Spaces | Journal of Emerging Technologies and Innovative Research | International | February 2019, Vol.6, Issue 2, 862-866 | 2349-5162 | 5.87 |
| 27 | On \mathcal{G}^* -closed sets in Topological spaces | Journal of Emerging Technologies and Innovative Research | International | February 2019, Vol.6, Issue 2, 867-871 | 2349-5162 | 5.87 |

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|----|---|--|---------------|--|-------------------|------|
| 28 | 3-Graphoidal path covers | Journal of Emerging Technologies and Innovative Research | International | February 2019, Vol.6, Issue 2, 940-945 | 2349-5162 | 5.87 |
| 29 | On Some Neighbourhood prime labeling of graphs | Journal of Emerging Technologies and Innovative Research | International | February 2019, Vol.6, Issue 2, 1252-1257 | 2349-5162 | 5.87 |
| 30 | The Strong Product on Anti-Fuzzy Graphs | Proceedings on International Conference on Graph Theory and its applications | International | pp 24-30, February 2019 | 978-81-938054-7-3 | |
| 31 | Some results on Cube-divisor Cardial Labelling Graphs | Proceedings on International Conference on Graph Theory and its applications | International | pp 41-46, February 2019 | 978-81-938054-7-3 | |
| 32 | Some new class of functions on soft JP closed sets | Proceedings on International Conference on Graph Theory and its applications | International | Pp 13-18, February 2019 | 978-81-938054-7-3 | |

Book Published:

| S.No | Name of the Book | ISBN Number | Year |
|------|------------------|--------------------|------|
| 1 | சமூக படைப்புகள் | 978-81-94-2832-8-7 | 2019 |

Papers presented in Seminars / Conferences:

| S. No | Date | Name of the Program | Topic | Venue | Level |
|-------|-------------------------|--|--|---|----------------|
| 1. | 26.03.2015 & 27.03.2015 | Recent Developments in Functional Analysis, Topology and Graph Theory | #rg open sets in bi-topological space | The Madurai Diraviyam Thayumanavar Hindu College, Tirunelveli | National |
| 2. | 30.09.2015 | Recent Developments in Algebra and Graph Theory | $b^*\hat{g}$ – closed sets in Topological Spaces | A.P.C.Mahalaxmi College for Women, Thoothukudi. | State |
| 3. | 28.02.2017 | Mathematics and its application scenario in 21 st century | $b^*\hat{g}$ –continuous and $b^*\hat{g}$ –open maps in Topological Spaces | A.P.C.Mahalaxmi College for Women, Thoothukudi. | National |
| 4 | 14.12.2017 | Conference on Recent Advancements in Information Technology, Science and Engineering | Contra $b^*\hat{g}$ – continuous in Topological Spaces | A.P.C.Mahalaxmi College for Women, Thoothukudi. | Inter national |
| 5 | 09.02.2018 | Conference on Innovations in Mathematics | \hat{g}^* - R_i , $i = 0,1$ spaces in Topological Spaces | Sadakathullah Appa College (Autonomous), Tirunelveli. | National |
| 6 | 09.02.2018 | Conference on Innovations in Mathematics | \hat{g}^* - separation axioms in Topological Spaces | Sadakathullah Appa College (Autonomous), Tirunelveli. | National |
| 7 | 20.02.2018 | Conference on Current Scenario in Pure and Applied Mathematics | Neighbourhood Prime Labeling on Square Graphs | Sri Sarada College for Women, Tirunelveli. | National |
| 8 | 20.02.2018 | Conference on Current Scenario in Pure and Applied Mathematics | Some neighbourhood Prime Graphs | Sri Sarada College for Women, Tirunelveli. | National |
| 9 | 17.10.2018 | Seminar on New Dimensions in Mathematics and its applications | $SB\hat{g}$ - R_0 space and $SB\hat{g}$ - R_1 space | Kamaraj College, Thoothukudi | National |

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| 10 | 17.10.2018 | Seminar on New Dimensions in Mathematics and its applications | \mathbb{R}^n - continuous maps in topological spaces | Kamaraj College, Thoothukudi | National |
| 11 | 20.12.2018 & 21.12.2018 | Conference on Recent Trends in Multi-Disciplinary Research | Application on b^* -closed sets in Topological Spaces | A.P.C.Mahalaxmi College for Women, Thoothukudi | International |
| 12 | 20.12.2018 & 21.12.2018 | Conference on Recent Trends in Multi-Disciplinary Research | Application on sb^* -closed sets in Topological Spaces | A.P.C.Mahalaxmi College for Women, Thoothukudi | International |
| 13 | 20.12.2018 & 21.12.2018 | Conference on Recent Trends in Multi-Disciplinary Research | Some new b^* -continuous functions in Topological Spaces | A.P.C.Mahalaxmi College for Women, Thoothukudi | International |
| 14 | 20.12.2018 & 21.12.2018 | Conference on Recent Trends in Multi-Disciplinary Research | ρ - T_0 and ρ - T_1 spaces in Topological spaces | A.P.C.Mahalaxmi College for Women, Thoothukudi | International |
| 15 | 20.12.2018 & 21.12.2018 | Conference on Recent Trends in Multi-Disciplinary Research | On Some Neighbourhood prime labeling of graphs | A.P.C.Mahalaxmi College for Women, Thoothukudi | International |
| 16 | 20.12.2018 & 21.12.2018 | Conference on Recent Trends in Multi-Disciplinary Research | Some new separation axioms in Topological Spaces | A.P.C.Mahalaxmi College for Women, Thoothukudi | International |
| 17 | 20.12.2018 & 21.12.2018 | Conference on Recent Trends in Multi-Disciplinary Research | On generalized semi b^* -closed sets in Topological Spaces | A.P.C.Mahalaxmi College for Women, Thoothukudi | International |
| 18 | 20.12.2018 & 21.12.2018 | Conference on Recent Trends in Multi-Disciplinary Research | 3-Graphoidal path covers | A.P.C.Mahalaxmi College for Women, Thoothukudi | International |

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| 19 | 20.12.2018 & 21.12.2018 | Conference on Recent Trends in Multi-Disciplinary Research | On R^* -closed sets in Topological spaces | A.P.C.Mahalaxmi College for Women, Thoothukudi | Inter national |
| 20 | 25.09.2019 | Conference on Pure and Applied Mathematics | A new class of closed sets in Topological Spaces | Wavoo Wajeeha Women's College of Arts and Science, Kayalpatnam | National |
| 21 | 25.09.2019 | Conference on Pure and Applied Mathematics | Semi Feebly generalized closed sets | Wavoo Wajeeha Women's College of Arts and Science, Kayalpatnam | National |

Orientation/Refresher programme attended:

Attended Orientation programme conducted by UGC-HRDC, Bharathiar University from 13.02.2019 to 12.03.2019.

Online Course completed:

| S.No. | Course Name | Duration | Type of Certificate | Conducted by | Funded by |
|-------|---|----------|-----------------------|--------------|----------------------|
| 1. | Body Language – A key to professional success | 4 weeks | Successfully complete | NPTEL | MHRD, Govt. of India |
| 2. | Introduction to Biostatistics | 8 weeks | Elite | NPTEL | MHRD, Govt. of India |

Workshops/ Seminars / Conferences attended:

| S.No | Date | Name of the Program | Venue | Type of the Program | Level |
|------|------------|---|--|---------------------|-------|
| 1. | 19.01.2011 | Preparation for NET in Mathematical Sciences | Holy Cross College, Nagercoil | Seminar | State |
| 2. | 27.01.2011 | Nurturing the Spirit of Research among Undergraduate students | A.P.C.Mahalaxmi College for Women, Thoothukudi | Workshop | State |

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| 3. | 17.09.2011 | Modern Trends in Pure and Applied Mathematics | Sri Kaliswari College, Sivakasi | Conference | National |
| 4. | 12.10.2011 & 13.10.2011 | Recent Trends in Mathematics | A..P.C.Mahalaxmi College for Women, Thoothukudi | Seminar | National |
| 5. | 23.02.2012 & 24.02.2012 | Fuzzy optimization and Graph Theory with applications | Mepco Schlenk Engineering College, Sivakasi | Conference | National |
| 6. | 21.03.2012 & 22.03.2012 | Frontiers of Pure and applied Mathematics | Madurai Diraviyam Thayumanavar Hindu College, Tirunelveli | Conference | National |
| 7. | 02.04.2012 | Graph Theory and Topology | V.O.Chidambaram College, Thoothukudi | Seminar | State |
| 8. | 06.09.2013 | Emerging Trends in Graph Theory and Fuzzy Mathematics | A.P.C.Mahalaxmi College for Women, Thoothukudi | Seminar | State |
| 9. | 22.01.2015 & 23.01.2015 | Advances in Fuzzy Algebra, Fuzzy Topology and Fuzzy Graphs | A.P.C.Mahalaxmi College for Women, Thoothukudi | Conference | National |
| 10. | 26.03.2015 & 27.03.2015 | Recent Developments in Functional Analysis, Topology and Graph Theory | The Madurai Diraviyam Thayumanavar Hindu College, Tirunelveli | Seminar | National |
| 11. | 30.09.2015 | Recent Developments in Algebra and Graph Theory | A.P.C.Mahalaxmi College for Women, Thoothukudi | Seminar | State |
| 12. | 28.02.2017 | Mathematics and its application scenario in 21 st century | A.P.C.Mahalaxmi College for Women, Thoothukudi | Seminar | National |
| 13. | 06.07.2017 | Discussions, Interactions and Literature on Gender Studies – DIALOGS 2017 | A.P.C.Mahalaxmi College for Women, Thoothukudi | Seminar | National |
| 14 | 14.12.2017 | Recent Advancements in Information Technology, Science and Engineering | A.P.C.Mahalaxmi College for Women, Thoothukudi | Conference | Inter national |
| 15 | 22.12.2017 | Net Training Programme | A.P.C.Mahalaxmi | Workshop | State |

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| | | | College for Women, Thoothukudi | | |
| 16 | 09.02.2018 | Innovations in Mathematics | Sadakathullah Appa College (Autonomous), Tirunelveli. | Conference | National |
| 17 | 20.02.2018 | Current Scenario in Pure an Applied Mathematics | Sri Sarada College for Women, Tirunelveli. | Conference | National |
| 18 | 19.04.2018 – 20.04.2018 | Recent Trends in Multi – Disciplinary Research | V.O.Chidambaram College, Thoothukudi. | Conference | Inter national |
| 19 | 17.10.2018 | New Dimensions in Mathematics and its applications | Kamaraj College, Thoothukudi | Seminar | National |
| 20 | 20.12.2018 & 21.12.2018 | Recent Trends in Multi- Disciplinary Research | A.P.C.Mahalaxmi College for Women, Thoothukudi | Conference | Inter national |
| 21 | 02.02.2019 | Scholarly Writing and Publishing Research Papers | V.O.Chidambaram College | Workshop | State |

Total Teaching Experience

U.G. : 10 years
P.G. : 10 years
M.Phil : 5 years

Faculty Development Programme completed

| S.No. | Course Name | Duration | Conducted by | Funded by |
|--------------|---|-----------------|---------------------|-------------------------|
| 1. | Body Language – A key to professional success | 4 weeks | NPTEL | MHRD, Govt. of India |
| 2. | Introduction to Biostatistics | 8 weeks | NPTEL | MHRD, Govt. of India |

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| 3. | The Role of faculty in Institutional Development | 17 th August 2019 | IQAC, V.O.Chidambaram College, Thoothukudi | IQAC, V.O.Chidambaram College, Thoothukudi |
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Expertise shared:

1. Acted as a Judge in Poster Presentation competition conducted by the Department of Physics, A.P.C.Mahalaxmi College for Women on 26.09.2017
2. Served as a Chair Person in a International Conference on Recent Trends in Multi-Disciplinary Research at A.P.C.Mahalaxmi College for Women, Thoothukudi on 20.12.2018 to 21.12.2018.
3. Delivered a lecture on the topic “A weaker form of generalized closed sets in Topological Spaces” in the Research Oriented Lecture Series conducted by Department of Mathematics, A.P.C.Mahalaxmi College for Women, Thoothukudi on 16th August 2019.

Recognition

- Member in Institute for Engineering Research and Publication from 27.09.2019 to 31.12.2020.

Participation in College Committees

- Incharge of Students' Union Activity Committee from 2009 to 2016 (7 years).
- Incharge of Alumnae Association from 2017 to 2018
- Incharge of Youth Red Cross from 2018 to 2019
- Incharge of Library Advisory Committee from 2018 to 2019
- Incharge of College Calendar Committee
- Coordinator in APCian Alumnae Association.