



**Name: Dr. M. Mullai**

**Designation (with stage): Assistant Professor(Stage III)**

### Contact

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### Academic Qualifications:

Course	Subject	University	Year of Completion	Class
Ph.D.	Mathematics	Alagappa University, Karaikudi	Dec. 2012	-
M.Phil.,	Mathematics	Alagappa University, Karaikudi	April 2002	First
M. Sc.,	Mathematics	Alagappa University, Karaikudi	April 2001	First
PGDCA	Computer Applications	Alagappa University, Karaikudi	April 2001	Second

**Teaching Experience: 18 Years 06 Months**

**Research Experience: 11 Years**

### Additional Responsibilities in the University

1. Acting as a **Chairperson** for Mathematics for the Valuation Board of DDE Examinations from February 2022 to till date.
2. Acting as a **Member of Board of Studies** of Mathematics from May 2019 to till date.
3. Acting as a Chairperson of Board of Studies of Mathematics for DDE from May 2019 to till date.
4. Acting as a **University Representative** to oversee the conduct of Distance Education Examination from December 2013 to till date.
5. Acted as a **Warden** for the PG Women's Hostel from 03.07 2017 to 25.06.2023
6. Acted as a **Nodal officer** for Mathematics of DDE online examinations from May 2020 to March 2022.
7. Acted as a **Chairman** of Question Paper Setting Board of DDE for April 2021.
8. Acted as a **member** of New College Affiliation Inspection Committee for July 2019.
9. Acted as a **member** of 35th Inter University South Zone Festival -2019 Committee for December 2019.
10. Acted as a **member** of the squad team for April 2018, Nov'2018 and April 2019. Regular Examinations of our Affiliated Colleges.
11. Acted as a **Deputy Warden** for the PG Women's Hostel from 19.02.2014 to 02.07 2017.
12. Acted as a Question Paper Scrutinizing Committee, Bharathiyar University, Coimbatore for Nov'2017 examinations.
13. Acted as a member of ODL Committee for UGC-DEB approval of DDE for August 2017.
14. Acted as a member of Ph.D Registration Interview Committee for February 2017.
15. Acted as an Event Co-ordinator in Cultural club from 2013 to 2015.

### Additional Responsibilities in the Department

1. Acting as a Department Research Committee Member from June 2013 to till date.
2. Acting as a Coordinator of Programme Project Report from August 2017 to till date.
3. Acting as an Internal Marks Coordinator for Karaikudi LSC from March 2017 to till date.
4. Acting as PCP Co-Ordinator For B.Sc. & M.Sc. Mathematics from June 2020 to till date.
5. Acting as a Co-Ordinator of Learning Centres from August 2020 to till date.
6. Acted as a member of Internal Stock Verification Committee for December 2020.

### Areas of Research

1. Algebra, Fuzzy Algebra, Operations Research, Mathematical Modelling, Neutrosophic sets, Graph Theory.

### Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	Ph.D.	02	02
	M.Phil.	17	-
Project	PG	72	-

## Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals/Proceedings
40	8	01	3	11

**Cumulative Impact Factor (as per JCR) :**

**h-index : 09**

**i10 index : 07**

**Total Citations : 210**

## Funded Research Projects

**Completed :01**

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	AURF-Seed Money	2017	2018	A Study on various Filters in Fuzzy Lattice	0.35
2	RUSA 2.0	17.09.2019	Till date	Mathematical Modelling and Computational Intelligence	7.25

**On Going: NIL**

## Distinctive Achievements / Awards

1. Awarded "Best Article Award 2018" in recognition of the contribution made for Writing Best article for Neutrosophic Sets and Systems by Neutrosophic Science International Association (NSIA), University of New Mexico Math & Sciences Department 705 Gurley Ave. Gallup, NM. 87301, USA.
2. Awarded "Best Article Award 2019" in recognition of the contribution made for Writing Best article for Neutrosophic Sets and Systems by Neutrosophic Science International Association (NSIA), University of New Mexico Math & Sciences Department 705 Gurley Ave. Gallup, NM. 87301, USA.
3. Awarded "Admission Enhancement Recognition Award" in recognition of the contribution made towards the enhancement of number of admission during the year 2020&2021 for DDE, Alagappa University.
4. Awarded "Admission Enhancement Recognition Award" in recognition of the contribution made towards the enhancement of number of admission during the year 2020&2021 for DDE, Alagappa University.
5. Awarded "Certificate of Appreciation" in recognition of participation support and contribution towards the community engagement of the event Gandhi Jayanthi celebration on 03.10.2022 by Alagappa University, Karaikudi.
6. Champion in "Article writing competition 2023", Multimedia University, IJORAS, MMU Press Malaysia, 12, October, 2023.

7. First Runner Up in “Article writing competition 2023”, Multimedia University, IJORAS, MMU Press Malaysia, 12, October, 2023.
8. Second Runner Up in “Article writing competition 2023”, Multimedia University, IJORAS, MMU Press Malaysia, 12, October, 2023.

### Events organized in leading roles

#### Number of Seminars / Conferences / Workshops / Events organized: 2

1. Organizing Committee member, Enhancing life skills for youth belonging to scheduled caste/scheduled tribes: Special reference to affiliated college students of Alagappa University, 16-18, March 2022.
2. Organized a National Webinar on “Introduction to MATLAB” on 16.05.2020.
3. Organizing Committee member, Vel – Humsci’ 06 National Level Seminar, Department of Science & Humanities, Veltech, Chennai –62 -Apr’ 2006.

### Events Participated

#### Conferences/Seminars/Workshops:

1. National Level Seminar on Algebraic and Analytic Methods, Department of Mathematics Alagappa University, 19.03.2005 & 20.03.2005.
2. National Workshop on Stochastic Modeling in Computational Methods, Department of Mathematics CIT, Coimbatore.
3. National Workshop on Soft Computing, Department of Mathematics GRU, Dindigul 21.01.2008 – 27.01.2008.
4. National Level Seminar on Discrete Mathematics, Department of Mathematics, Alagappa Govt. Arts College 15.02.2008.
5. National level Seminar on Fuzzy Mathematics and Its Applications, Department of Mathematics, Alagappa University, 03.03.2008 & 04.03.2008.
6. State Level Seminar on Recent Trends in Optimization Techniques, Seminar Hall, Alagappa Govt. Arts College, 18.09.2008
7. Level Seminar on Nano Science & Nano Technology, Department of biochemistry Ananda College Devakottai.
8. International Conference on Stochastic Modelling, Department of Mathematics, Alagappa University, 12.02.2009 – 14.02.2009.
9. National Level Seminar on Differential Equations, Department of Mathematics, Alagappa University, 06.03.2009-07.03.2009.

10. National Level Seminar on Fuzzy Mathematics and its applications, Alagappa University, 09.03.2009.
11. National Conference on Recent Trends in Engineering & Technology(SYNOPSE-2013), Sri Raaja Raajan College of Engineering & Technology, Amaravathipudur. 4th February-2013,
12. One Day International Conference on Recent Trends in Discrete Mathematics and its Applications to Science and Engineering(ICODIMA 2013), Periyar Maniammai University, Thanjore, 3rd December-2013.
13. National Seminar on “Role of LIS Professionals in Developing Information Literacy Skills in the Digital Era”. Department of LIS, Alagappa University, Karaikudi, 19-20 March, 2015.
14. Impact of Electronic Resources on Teaching, Learning and Research: Issues and Opportunities, Central Library & DDE, Alagappa University, Karaikudi, 24-25, April, 2015.
15. A Two Day National Seminar on Safety and Security of Women and Girls in Public Spaces: Planning and Designing Mechanism, Department of Women’s Studies, Alagappa University, Karaikudi,4-5 December 2015.
16. Research Methods an Data Analysis Using SPSS (RMDA-2016),Thanthai Hans Roever College, Perambalur, 18th March, 2016.
17. National Conference on Pure and Applied Mathematics, Department of Mathematics, Alagappa University, Karaikudi,30-31, March,2016.
18. International Workshop and Conference on Analysis and Applied Mathematics, Department of Mathematics, NIT, Tiruchirappalli, 06-16, June, 2016.
19. "Workshop on R with Application to Quantitative Finance", BITS, Pilani, Goa, 26.08.2016 to 28.08.2016.
20. “ICSSR-Project Sponsored One day National level Workshop on Current Scenario of Educational Videogames in the Technological Era: Links with Problem Solving”, 10th November, 2017.
21. M.Mullai & B. Balamurugan, (2017), International conference on Mathematical Computer Engineering, VIT University, Chennai Campus, , 3-4 Nov’2017.
22. M.Mullai & B. Balamurugan,(2018), 2nd international Conference on Smart Computing & Informatics(SCI-2018), Prasad V. Potluri Siddhartha Institute of Technology, Vijayawada, Andhra Pradesh, 27-28 Jan’2018.

23. M.Mullai, One Day Workshop on Design & Development of MOOCs for the Faculty members of Alagappa University and Affiliated Colleges, Digital Education Cell, Alagappa University, Karaikudi, 8th November, 2018.
24. Mathematical software for business applications-Hands on training & Maple for business applications-Hands on training, School of Mathematics & university business collaboration centre, Alagappa University, Karaikudi, 22, 26 Feb'2019.
25. International Conference on Recent Trends in Applied Mathematics(ICRTAM), Sri Ramakrishna Institute of Technology, Pachapalayam, Coimbatore, 11<sup>th</sup> October, 2023.

### **Other Training Programs:**

1. UGC Sponsored Orientation Programme, Academic Staff college, University of Madras, Chennai, 05.11.2014 – 02.12.2014
2. UGC Sponsored Faculty Development Programme on Diversity in Teaching, AIM, Alagappa University, Karaikudi, 7-8, March, 2014.
3. Saksham – IT Champion Training Program, Alagappa University, Karaikudi, 19-25 January, 2015.
4. Refresher Course in Mathematics, UGC, HRDC, Pondicherry University, Puducherry, 07.09.2016 to 27.09.2016.
5. Refresher Course in Mathematics, Teaching Learning Centre & Department of Mathematics, Ramanujan College University of Delhi, 16.03.2021-30.03.2021.
6. Orientation Programme on Assessment and Accreditation frame work of NAAC for dual mode universities, 27<sup>th</sup> March, 2023.
7. Two days workshop on LATEX, Operational Research Society of India, Meerut Chapter & Vardhaman College, Bijnor, 25-25, February, 2023.
8. Python Programming for Academic Projects, Govt. College(Autonomous), Rajahmundry, East Godavari District, Andhra Pradesh & Dept. of Academic Affairs, A2Z EduLearningHub LLP , Kerala, 14-25, August, 2023.
9. Three Day FDP on “From Data to Prediction: Foundations of Machine Learning, Dept. of Research & Publications, A2Z EduLearningHub LLP, 12-14, October, 2023.

### **Overseas Exposure / Visits**

1. Visited Malaysia and presented a paper in International conference on recent trends in

humanities & Science during 25-27, Oct' 2018.

2. Visited Singapore and acted as a Resource Person in International conference on challenges and opportunities in multidisciplinary research on 28.10.2018.

## Membership in

### Professional Bodies

### Editorial Board

1. Member of Editorial board in Journal of Electrical and Electronic Engineering.
2. Life Member in International Association of Engineers.

### Others

1. Member of the Reviewer board in Tamkang Journal of Mathematics.(September-2016).
2. Member of the Reviewer board in Asian Journal of Advanced Research and Reports.
3. Member of the Reviewer board in International Journal of Neutrosophic Science.
4. Member of the Reviewer board in Neutrosophic sets and systems.
5. Member of the Reviewer board in Expert system with applications.

## Resource persons in various capacities

### Number of Invited / Special Lectures delivered: 04

1. Delivered a **talk** in Fuzzy Set Theory, Department of Mathematics, Dr. Umayal Ramanathan College for Women, Karaikudi, 26th February, 2016.
2. Delivered a **talk** in Application of differential equations, Faculty development and training programme on MA8151-Engineering Mathematics-I, Department of Mathematics, St. Michael College of Engineering and Technology, Kalayarkovil, 21<sup>st</sup> June, 2018.
3. Invited as a **Chief Guest** in One day association meeting, PG department of Mathematics, Ananda College, Devakottai, 01.08. 2018.
4. Invited as a **Chief Guest** in Valedictory Function, Department of Mathematics, Nachiappa Swamigal Arts & Science College, Koviloor on 04.03.2019

### Chairperson

1. **Chaired a session** for International Conference on Recent Development and Techniques in Pure and Applied Mathematics 2023" at Alagappa University, 23-24 March 2023.
2. **Chaired a session** for International Conference on Discrete and Computational Mathematics(ICDCM- 18), Department of Mathematics and Ramanujam Centre for Higher Mathematics, Alagappa University, Karaikudi, 20-21, December 2018.
3. **Chaired a session** for ICMMCMSE-2017, 20.02.2017-22.02.2017, RCHM & Dept. of Mathematics, Alagappa University, Karaikudi
4. **Chaired a session** for Impact of electronic resources on Teaching, Learning and

Research: Issues and Opportunities, 24th & 25th April, 2015, Alagappa University, Karaikudi.

5. **Chaired a session** for ICODIMA'2013, Periyar Maniammai University, Thanjavur.

### Published Books/ Book Chapters

#### Books:02

1. **"Differential Geometry"** Book for M.Sc. Mathematics, Directorate of Distance Education, Alagappa University.
2. **"Optimization Techniques"** Book for M.Sc. Mathematics, Directorate of Distance Education, Alagappa University.

#### Book Chapters: 02

1. Domination in neutrosophic graphs, Neutrosophic Graph Theory and Algorithms , IGI Global Engineering Science Reference (an imprint of IGI Global), 2019, ISSN: 2327-1981; eISSN: 2327-199X.
2. Neutrosophic economic order quantity model with more than one price breaks, Neutrosophic theories in Communication, Management and Information Technology, Nova Science Publishers, Inc., 2020, ISBN: 978-1-53617-485-4.

### Published Patent:01

1. Published a National Patent on "Optimizing call center queueing system using non-markovian models and customer interaction using natural language processing", No:202041012642A dated 08.05.2020.

### Research Publications: 46

#### 2023

1. M.Mullai\*, G. Madhan Kumar, Grienggrai Rajchakit\* and G.Vetrivel, "Mathematical modeling on the transmission dynamics of Zika virus", International Journal on Robotics, Automation and Sciences (2023) 5,2:79-84 <https://doi.org/10.33093/ijoras.2023.5.2.9>
2. M.Mullai\*, G. Madhan Kumar, Grienggrai Rajchakit\* and G.Vetrivel, "Transmission dynamics of smoking- a mathematical model", International Journal on Robotics, Automation and Sciences (2023) 5,2:89-93 <https://doi.org/10.33093/ijoras.2023.5.2.11>.
3. M.Mullai\*, G.Vetrivel, Grienggarai Rajchakit\* and G. Madhan Kumar, " Neighbourly Edge Irregularity on Interval-valued Pythagorean Neutrosophic Graph", International Journal on Robotics, Automation and Sciences (2023) 5,2:54-58 , <https://doi.org/10.33093/ijoras.2023.5.2.6>
4. R. Meenakshi, M. Mullai, et.al.," Neutrosophic Fuzzy lattice Via Fuzzy Partial Ordering", International Journal of Neutrosophic Science (IJNS) Vol. 21, No. 01, PP. 64-68, 2023.
5. G. Madhan Kumar and M. Mullai, "Deterministic and stochastic optimal control models for plant growth using locust fertilizer", Modeling Earth Systems and Environment, <https://doi.org/10.1007/s40808-022-01596-z>.



6. G. Madhan Kumar and M. Mullai, "Modeling social media addiction with case detection and treatment", *Stochastic Analysis and Applications*, <https://doi.org/10.1080/07362994.2022.2087677>
7. R. Surya and M. Mullai, "Neutrosophic multi-item inventory control models with constraints", *Journal of Intelligent & Fuzzy Systems* 43 (2022) 8127–8136, DOI:10.3233/JIFS-221143, IOS Press.

## 2022

1. M. Mullai, S. Broumi, P.K.Santhi, "Inverse Dominating Set in Neutrosophic Graphs", *International Journal of Neutrosophic Science (IJNS)* Vol. 18, No. 3, PP. 104-110, 2022.
2. M.Mullai, S.Broumi, et.al., "Equitable Domination in Neutrosophic Graphs", *Journal of Neutrosophic and Fuzzy Systems (JNFS)* Vol. 2, No. 2, PP. 57-61, 2022.
3. M.Mullai, S.Broumi, et.al., "Split Domination in Neutrosophic Graphs", *Neutrosophic Sets and Systems*, Vol. 47,240-249, 2021.

## 2020

1. M. Mullai, R. Surya, et.al., "A Single Valued Neutrosophic Inventory Model with Neutrosophic Random Variable", Vol. 1, No. 2, PP. 52-63, 2020, *International Journal of Neutrosophic Science (IJNS)*.
2. M. Mullai and R. Surya, "Neutrosophic inventory model under immediate return for deficient items", *Annals of Optimization Theory and Practice*, Volume 3, Number 4, 1-9 December 2020 DOI: 10.22121/aotp.2020.246194.1040.
3. M. Mullai and R. Surya, "Neutrosophic Inventory Backorder Problem Using Triangular Neutrosophic Numbers", Vol. 31, 148-155, 2020, *Neutrosophic Sets and Systems*, University of New Mexico, USA.
4. B. Balamurugan and M. Mullai, "Non Markovian Priority Queue for Existing Customer with Breaks in Call Center", Vol.82, 7598- 7610, *TEST*, The Mattingley Publishing Co., Inc.
5. B. Balamurugan, M. Mullai, et.al., "Brain-computer interface for assessment of mental efforts in e-learning using the non markovian queueing model", *Comput. Appl. Eng. Educ.* 2020, 1–17. <https://doi.org/10.1002/cae.22209>.

## 2019

1. M.Mullai, S.Broumi, et.al., "Neutrosophic Intelligent Energy Efficient Routing for Wireless Ad-hoc Network Based on Multi-criteria Decision Making", Vol. 30, 113-121, 2019, *Neutrosophic Sets and Systems*, University of New Mexico, USA.
2. B. Balamurugan and M. Mullai, "Rejection and Breaks in Pharmaceutical Call Center", Vol. 11, Issue 4, 2019, *International Journal of Pharmaceutical Research*.
3. B.Balamurugan and M.Mullai, "Two-Stage Various Service with Unavoidable Abandonment and Random Breaks in Pharmaceutical Call Center", *International Journal of Pharmaceutical Research*, 2019.
4. M. Mullai, Said Broumi, R.Jeyabalan, "Homomorphism and Isomorphism in strong neutrosophic graphs", Vol. 0, No. 1, PP. 08-20, 2019, *International Journal of Neutrosophic Science (IJNS)*.
5. B.Balamurugan and M.Mullai, "Non Markovian Feedback Queue with Two Stage different Service and constant Server breaks", Volume 6, Issue 2,634-644, 2019, *International Journal of Research and Analytical Reviews*.
6. M.Mullai, S.Broumi, et.al., "A Neutrosophic Technique Based Efficient Routing Protocol For MANET Based On Its Energy And Distance" *Neutrosophic Sets and Systems*, Vol. 24, PP.61-69, 2019, University of New Mexico, USA.

7. M. Mullai and R. Surya, "Neutrosophic project evaluation and review techniques" Neutrosophic Sets and Systems, Vol. 24, PP.1-9, 2019, University of New Mexico, USA.

## 2018

1. G.Madhan Kumar and M.Mullai, "Whether Government intervention and Vocational training increases Education and Employment? A mathematical model", International Journal of Pure and Applied Mathematics, Volume 118 No. 10 2018, 435-454.
2. G.Madhan Kumar and M.Mullai, "Stability analysis on the dynamics of poverty, corruption and diseases: A mathematical model", Asian Journal of Mathematics and Computer Research, 23(2): 104-123, 2018. [ISSN: 2395-4205 (Print), 2395-4213 (Online)]
3. M. Mullai and S. Broumi, "Neutrosophic inventory model without shortages", Asian Journal of Mathematics and Computer Research, 23(4): 214-219, 2018. [ISSN: 2395-4205 (Print), 2395-4213 (Online)]
4. M. Mullai and R. Surya, "Neutrosophic EOQ Model with Price Break", Neutrosophic Sets and Systems, Vol. 19: 24-28, 2018. [ISSN (print): 2331-6055, ISSN (online): 2331-608X, Impact Factor: 1.739] <http://doi.org/10.5281/zenodo.1235249>
5. K.Shanmuga Priya and M.Mullai," Direct product of SP-Algebra", Journal of Global Research in Mathematical Archives, Vol.5(5), 90-94, 2018.
6. B. Balamurugan and M. Mullai, "Analysis of a non-markovian group arrival Queue with balking and two types of Various services in call centers", mathematical sciences international research journal, volume 7 spl issue 1, ISSN: 2278-8697, 2018.
7. B. Balamurugan and M. Mullai, "Analysis of a non-markovian group arrival Queue with balking and Bernoulli schedule server breaks in call centers", Volume 119 No. 12 2018, 14313-14320, International Journal of Pure and Applied Mathematics.
8. M.Mullai., S.Broumi., et.al.," Single valued  $(2n+1)$  sided polygonal neutrosophic numbers and single valued  $(2n)$  sided polygonal neutrosophic numbers", Neutrosophic Sets and Systems, Vol. 25, PP.54-65, 2018, University of New Mexico, USA.
9. K. Shanmuga Priya and M. Mullai, Polynomials on SP-Ring, international Journal of Computer Science, Volume 6, Issue 1, No 04, 2018 ISSN: 2348-6600, <http://www.ijcsjournal.com>.
10. M. Mullai and A. Stephen, Neutrosophic critical path analysis for Project network, Asian Journal of Mathematics and Computer Research, 21(1): 28-35, 2017, ISSN: 2395-4205 (P), ISSN: 2395-4213 (O)

## 2017

1. K.Shanmuga Priya and M.Mullai, "SP-RING AND ITS PROPERTIES", International Journal of Mathematics Trends and Technology, vol.46(2), June -2017.
2. M. Mullai, S. Broumi and A. Stephen, "Shortest path problem by minimal spanning tree algorithm using bipolar neutrosophic numbers", International Journal of Mathematics Trends and Technology, vol.46(2), June -2017.

3. M. Mullai and A. Stephen, "Neutrosophic critical path analysis for project network", Asian Journal of Mathematics and Computer Research, 21(1): 28-35, 2017.
4. M.Mullai, Fuzzy L-Quotient Filters, Imperial Journal of Interdisciplinary Research (IJIR), Vol-3, Issue-3, 2017, ISSN: 2454-1362, <http://www.onlinejournal.in>

## 2016

1. M.Mullai, (2016) "Prime fuzzy L-filters", International Journal of Applied Mathematical Sciences, Volume 9, Number 1, pp. 37-44.
2. M.Mullai,(2016), "Prime Fuzzy L-filters", NCPAM- 2016, Alagappa University, Karaikudi.
3. M.Mullai, (2016), "Railway Route Optimization System using Fuzzy Dijkstra's Algorithm", IWCAAM -2016, NIT, Trichirappalli.
4. M.Mullai, (2016), "Railway Route Optimization system using fuzzy Dijkstra's Algorithm" , International Journal of Applied Mathematical Sciences ,Volume 9, Number 1, pp. 117-123.

## 2013

1. M.Mullai, (2013), "Some Theorems on Fuzzy L-Ideals", Antarctica Journal of Mathematics, Vol. 10(2), 103-106
2. M.Mullai,(2013), "Fuzzy L-Quotient Ideals", International Journal of Fuzzy Mathematics and Systems, Vol. 3(3),179-187.

## 2012

1. M.Mullai, (2012), "Fuzzy L-filters", IOSR Journal of Mathematics (IOSRJM),Volume 1, Issue 3, 21-24.

## 2009

1. M.Mullai, (2009), " Fuzzy L-ideal ", Acta Ciencia Indica, 2009,Vol.XXXV M, No.2, 525-533.

## Paper Presentations:09

1. Presented a paper entitled "Solving Neutrosophic Fuzzy Transportation Problem Of Type-II " in International Conference on Recent Development and Techniques in Pure and Applied Mathematics 2023" at Alagappa University,23-24 March 2023.
2. Presented a paper entitled" A conditional optimization method for a multi class queueing model in a call center " in International conference on Science, Technology, Engineering and Management, KIT, Coimbatore, Tamil Nadu, during 22-23, Mar'2019.
3. Presented a paper entitled" Call loss characteristics for non-markovian queueing system" in International conference on Science, Technology, Engineering and Management, KIT, Coimbatore, Tamil Nadu, during 22-23, Mar'2019.
4. Presented a paper entitled "Call centers with a late call offer" in International conference on Information, Communication & Digital Security Alagappa University, Karaikudi, during 21-22, Mar'2018
5. Presented a paper entitled "Skill based planning of calls in call centers" in 2<sup>nd</sup>

International conference on smart computing & informatics, Prasad V.Potluri Siddhartha Institute of Technology, Vijayawada, A.P, India, 27-8, during Jan'2018

6. Presented a paper entitled "Analysis of a non-markovian group arrival queue with balking and Bernoulli schedule server breaks in call centers", International conference on mathematical computer engineering VIT University, Chennai during 3-4, Nov'2017.
7. M.Mullai & P.K.Shanthi, (2016), "Homomorphism in Fuzzy L-Ideals", National seminar on Topological Graph Theory, JAC, Periyakulam.
8. Homomorphism in Fuzzy L-Ideals,(ICODIMA 2013), Periyar Maniyammai University, Tanjore.
9. M.Mullai, (2009), "Some theorems on Fuzzy L- Ideals" National Level Seminar on Fuzzy Mathematics & its Applications, Alagappa University, Karaikudi.
10. M.Mullai, (2008), "A study on center in complete lattice", National Level Seminar on Discrete Mathematics, Alagappa Govt. Arts College, Karaikudi.

### Proceedings:09

1. M.Mullai, Polynomials on SP-Ring, International conference on "Algebra and Discrete Mathematics", ICDAM 2018, pg. 76-81, January 8-10, 2018.
2. M.Mullai, A mathematical modelling on the impact of corruption in human population, International Conference on Computing Sciences, ICCS 2018, Pg.140.
3. G. Madhan kumar & M. Mullai, "Whether government intervention and vocational training increases education and employment?: A Mathematical Model", Second National Conference On "Emerging Trends in Mathematical Sciences" (NCETMS-2017), S.A. Engineering College, Chennai.
4. B. Balamurugan & M. Mullai, "Optimal planning of calls in call centers", Second National Conference On "Emerging Trends in Mathematical Sciences" (NCETMS-2017), S.A. Engineering College, Chennai.
5. M.Mullai, Two day international conference on "Mathematical Computer Engineering", ICMCE-2017, pg. 42-44, November 3-4, 2017.
6. M.Mullai, "Railway Route Optimization System using Fuzzy Dijkstra's Algorithm", IWCAAM -2016, NIT, Trichirappalli.
7. M.Mullai, "Prime Fuzzy L-filters", NCPAM- 2016, Alagappa University, Karaikudi.
8. M.Mullai, International Workshop and Conference on " Analysis and Applied Mathematics", IWCAAM'16, pg.299, June 6-10, 2016.
9. M.Mullai, One day international conference on "Recent Trends in Discrete Mathematics and its Applications to Science and Engineering", ICODIMA 2013, pg. 43-50, December 3<sup>rd</sup>, 2013.