

**Name** : Dr. R. JAHIR HUSSAIN  
**Sex** : Male  
**Date of Birth** : 23-02-1968  
**Date of Appointment** : 10-01-1996  
**Designation** : Associate Professor and Head i/c  
**Address** :



**Residence**

169, Darul Hikma  
 J.K. Nagar Khajamalai  
 Tiruchirappalli – 620 023  
 Tamil Nadu, India.  
 E-mail: [hssn\\_jhr@yahoo.com](mailto:hssn_jhr@yahoo.com)  
 Cell: +91 9443836946, +91 8667573418

**Office**

P.G & Research Department of Mathematics  
 Jamal Mohamed College (Autonomous)  
 Tiruchirappalli – 620 020.  
 Tamil Nadu, India.  
 Tel: 0431 2331035

**Teaching Experience (on 05-11-2022)** : Under Graduate : 26 Years 10 Months 06 Days  
 Post Graduate : 26 Years 10 Months 06 Days  
 M.Phil. : 22 Years

**Educational Qualifications:**

- 1) Master of Science (M.Sc.) in Mathematics from A.V.C. College, Mayiladuthurai, Tamil Nadu under Bharathidasan University, Tiruchirappalli in 1990.
- 2) State Level Eligibility Test (SLET) for Lectureship conducted by Madras University, Chennai in 1991.
- 3) Master of Philosophy (M.Phil.) in Mathematics from Bharathidasan University, Tiruchirappalli in 1993.
- 4) Master of Education (M.Ed.) in Mathematics from Annamalai University, Chidambaram in 1995.
- 5) Post Graduate Diploma in Computer Applications (PGDCA) from Alagappa University, Karaikudi in 1995.
- 6) Doctor of Philosophy (Ph.D.) in Mathematics from Bharathidasan University, Tiruchirappalli in 2009.

**Areas of Specialization** : Graph Theory and Fuzzy Graph Theory

**Subjects Taught** : Under Graduate : Graph Theory, Complex Analysis and SPSS  
 Post Graduate : Graph Theory, Complex Analysis  
 M.Phil. : Graph Theory, Teaching Methodology

**Languages Known** : Tamil & English

**Research Supervision** :

**Ph.D. Degree:** Awarded: 11 Submitted: Nil Pursuing: 6

S.No.	Name of the Scholar	Title of the Thesis	Institution where the work was carried out	Date of Viva - Voce
1	P. Jayaraman	A Study on the Transportation Problems under Fuzzy Environment	Jamal Mohamed College, Bharathidasan University, Trichy-20.	11-03-2015
2	S.Yahya Mohamed	Some Contributions to Fuzzy Graphs and Intuitionistic Fuzzy Graphs	Jamal Mohamed College, Bharathidasan University, Trichy-20.	13-06-2015

S.No.	Name of the Scholar	Title of the Thesis	Institution where the work was carried out	Date of Viva - Voce
3	A. Muraliraj	Fixed Point Theorems In Dislocated and Partial Metric Spaces	Jamal Mohamed College, Bharathidasan University, Trichy-20.	08-07-2015
4	V. Shanthoshini Deviha	Applications of Fractals in Medicine.	Jamal Mohamed College, Bharathidasan University, Trichy-20.	01-08-2015
5	T. Senthil Kumar	Fixed Point Theorems for Various Contraction Mappings in Complex Valued Metric Spaces, Dislocated and Partially Ordered Metric Spaces	Jamal Mohamed College, Bharathidasan University, Trichy-20.	15.10.2016
6	P. Senthil Kumar	Algorithmic Approach for Solving Allocation Problems under Intuitionistic Fuzzy Environment	Jamal Mohamed College, Bharathidasan University, Trichy-20.	15.03.2017
7	K.S. Kanzul Fathima	A Study on Various Colorings in Fuzzy Graphs	Jamal Mohamed College, Bharathidasan University, Trichy-20.	13.10.2018
8	S. Ameena Banu	Changing and Unchanging Domination in Fuzzy Graph	Jamal Mohamed College, Bharathidasan University, Trichy-20.	18.06.2019
9	R. M. Karthik Keyan	Fuzzy Non-Bondage and Fuzzy Graceful Graphs	Jamal Mohamed College, Bharathidasan University, Trichy-20.	07.07.2019
10	K.Sampath	Studies on Double – Framed Fuzzy Techniques in Algebra	Jamal Mohamed College, Bharathidasan University, Trichy-20.	21.09.2019
11	S. Satham Hussain	A Study on Fuzzy Soft Graphs and Neutrosophic Graphs	Jamal Mohamed College, Bharathidasan University, Trichy-20.	17.06.2020

**M.Phil. Degree:** Awarded: 53

Submitted: Nil

Pursuing: 1

#### **Research Paper Publications (International & National Journals):**

- 1) “Fuzzy Independent Dominating Set”, Advances in Fuzzy Sets and Systems,2(1) 2007,99-108.
- 2) “Effective Fuzzy Euler and Fuzzy Hamiltonian Graph”, International Review of Fuzzy Mathematics, Vol 3 (1), June 2008 Pp 55 – 68.
- 3) “Connected and Global Dominations of Fuzzy Graphs”. Bulletin of Pure and Applied Sciences vol,27 (no.2) 2008; pp 255 – 265.
- 4) “Fuzzy Effective Distance k – Dominating Sets and Their Applications”, The International Journal of Algorithms, Computing and Mathematics, vol2 number 3, august 2009, 25 – 36.
- 5) “The Transportation Problem in an Intuitionistic Fuzzy Environment”, International Journal of Mathematics Research. Volume 4, Number 4 (2012), pp. 411-420.
- 6) “Bounds on Fuzzy Double Domination Number of Fuzzy Trees”, Heber International Conference on Applications of Mathematics and Statistics, Vol. 1, pp. 457 -459, 2012.
- 7) “Algorithmic Approach for Solving Intuitionistic Fuzzy Transportation Problem”, International Journal of Applied Mathematical Sciences, Hikari Ltd, Bulgaria, Vol.6, No.80,3981-3989,2012.

- 8) "Transportation problem with the aid of triangular Intuitionistic Fuzzy numbers", International Conference on Applications of Mathematical modeling and soft computing vol.1 pp 819-825,2012.
- 9) "Analysing the Invasiveness of Skin Cancer using Fractals", International Journal of Engineering Research and Applications, vol. II, No.5, pp 2068-2075,2012.
- 10) "Fractal Modeling of Scale Free Network in Biology", International Journal of Mathematical Archive, Pp.01-04,2012.
- 11) "Modeling Blood Flow in The Blood Vessels of the Cardiovascular System using Fractals", International Journal of Applied Mathematical Sciences, Hikari Ltd, Bulgaria, Vol.7, No.11,527-537,2013.
- 12) "Generalized Fixed Point Theorems in Dislocated Metric Spaces", International Journal of Mathematical Sciences and Engineering Applications, Vol.7, No.III, pp. 61-67, 2013.
- 13) "Some Common Fixed Point Theorems in Dislocated Metric Spaces", International Journal of Mathematical Sciences and Engineering Applications, Vol.7, No.III, pp.231-240,2013.
- 14) "An Optimal More-for-Less Solution of Mixed Constraints Intuitionistic Fuzzy Transportation Problems", International Journal of Applied Mathematical Sciences, Hikari Ltd., Bulgaria. Vol. 8, No. 12, 565-576, 2013.
- 15) "Evaluating the Blood Flow in the Blood Vessels of the Dog Using Fractals", International Journal of Research Explorer, Vol.2, No.6, pp.35-38, 2013.
- 16) "New Results On Fixed Point Theorems in Dislocated Quasi - Metric Spaces", Int. Jr. of Mathematical Sciences & Applications Vol. 3, No. 1, pp. 321-326, January 2013.
- 17) "A New Method for Obtaining an Optimal Solution for Fuzzy Transportation Problems", International Journal of Mathematical Archive-4(11), pp.256-263, Nov 2013.
- 18) "Fuzzy Optimal Assignment Problems via Robust Ranking Techniques", International Journal of Mathematical Archive-4(11), pp.264-269, Nov 2013.
- 19) "Fuzzy Optimal Solution to Fuzzy Transportation Problem: Squaring Method", International Journal of Mathematical Archive-4(12), pp.1-7, Dec 2013.
- 20) "Common Fixed Point Theorems of Bivariate and Self Maps in  $d$ -metric Spaces", Global Journal of Pure and Applied Mathematics, Volume 9, Number 4, pp. 369-378, 2013.
- 21) "Coincidence and Fixed Point Theorems for Expansive Maps in  $d$ -metric Spaces", Int. Journal of Math. Analysis, Vol. 7, no. 44, pp. 2171 – 2179, 2013.
- 22) "New Solution of Vector Fuzzy Transportation Problem in Interval Integer Form", IOSR Journal of Mathematics (IOSR-JM), Volume 9, Issue 2 PP 47-51, (Nov. – Dec. 2013).
- 23) "Fuzzy Optimal Transportation Problems by Improved Zero Suffix Method via Robust Rank Techniques", International Journal of Fuzzy Mathematics and Systems. Volume 3, pp. 303-311, Number 4 (2013).
- 24) "Fixed Point Theorems with Implicit Function in Metric Spaces", Int. J. Contemp. Math. Sciences, Vol. 8, no. 17, pp. 833 – 841, 2013.
- 25) "Fuzzy Transportation Problem using Improved Fuzzy Russells Method", International Journal of Mathematics Trends and Technology – Volume 5 – January pp.50-59, 2014.
- 26) "Irregular Intuitionistic fuzzy graph, IOSR Journal of Mathematics (IOSR-JM)", Volume 9, Issue 6 PP 47-51 (Jan. 2014).
- 27) "New Dislocated Quasi-Metric Spaces", International J. Of Math. Sci. & Engg. Appls. (IJMSEA). Vol. 8 No. I Pp. 213-221 (January, 2014).

- 28) "Fractal Modeling of Retinal Blood Vessel System", International Journal of Computers & Technology, pp. 3734-3741, Feb,2014.
- 29) "A Method for Solving Balanced Intuitionistic Fuzzy Assignment Problem", Int. Journal of Engineering Research and Applications, Vol. 4, Issue 3(Version 1), pp.897-903, March 2014.
- 30) "Isomorphism On Irregular Intuitionistic Fuzzy Graphs and Its Complements", IOSR Journal of Mathematics (IOSR-JM), Volume 10, Issue 2 Ver. II PP 149-154, (Mar-Apr. 2014).
- 31) "Coupled Fixed Point Theorems for Contractive Condition in Partially Ordered Metric Space", International J. of Pure & Engg. Mathematics (IJPEM) Vol. 2 No. I, pp. 31-37, (April, 2014).
- 32) "Fractal Dimensional, International Journal of Scientific and Research Publications", Volume 4, Issue 4, April 2014.
- 33) "Irregularity and Density of Irregular Intuitionistic Fuzzy Graphs", IOSR Journal of Mathematics (IOSR-JM), Volume 10, Issue 3 Ver. II PP 63-68 (May-Jun. 2014).
- 34) "More On Irregular Intuitionistic Fuzzy Graphs and Its Complements", Discovery, Vol 21(68) pp-101-107, July 2014.
- 35) "Semi Global Dominating Set of Intuitionistic Fuzzy graphs", IOSR Journal of Mathematics (IOSR-JM), Volume 10, Issue 4 Ver. II PP 23-27 (Jul-Aug. 2014).
- 36) "Some Coupled Fixed Point Theorems in Dislocated Quasi Metric Spaces", IOSR Journal of Mathematics (IOSR-JM) Volume 10, Issue 4 Ver. VI (Jul-Aug, 2014).
- 37) "Common Fixed Point Theorems for Contractive Type Mappings in Complex Valued Metric Spaces", International Journal of Science and Research (IJSR), Volume 3 Issue 8, August 2014.
- 38) "Global Domination Set in Intuitionistic Fuzzy Graph", International Journal of Computational Engineering Research (IJCER), vol4, sep-2014.
- 39) "A Study On Point Set Domination of Intuitionistic Fuzzy Graphs", IOSR Journal of Mathematics (IOSR-JM). Volume 10, Issue 5 Ver. III PP 97-101 (Sep-Oct. 2014).
- 40) "Coupled Fixed Point Theorems for Contractive Type Mappings in Dislocated Metric Spaces", IOSR Journal of Mathematics (IOSR-JM) Volume 10, Issue 6 Ver. V, PP 64-66(Nov - Dec. 2014).
- 41) "Some Fixed Point Theorems for Cyclic Contractions in Dislocated Quasi-Metric Spaces", Volume: 3 | Issue: 11 | November 2014 • ISSN No 2277 – 8179.
- 42) "A Systematic Approach for Solving Mixed Intuitionistic Fuzzy Transportation Problems", International Journal of Pure and Applied Mathematics Volume 92 No. 2 pp.181-190, 2014.
- 43) "New Algorithm for Solving Mixed Intuitionistic Fuzzy Assignment Problem", Elixir International Journal, Applied Mathematics, 73, pp.25971-25977, (2014).
- 44) "Some Fixed Point Theorems in Dislocated Metric Spaces", Pure Mathematical Sciences, Vol. 3, no. 1, pp. 35 – 43, 2014.
- 45) "Generalized Fixed Point Theorems in Dislocated Quasi - Metric Spaces", Advances in Inequalities and Applications, 2014:17, 2014.
- 46) "Existence and Uniqueness of Fixed Point Theorems in Partially Ordered Metric Spaces", Bulletin of Society for Mathematical Services and Standards, Vol. 3 No.1(2014), pp.13-19.
- 47) "Some Coupled Fixed Point Theorems in Partially Ordered Metric Space", Global Journal of Mathematical Sciences: Theory and Practical. Volume 6, Number 1 pp. 19-24, (2014).

- 48) "Complementary Nil Domination in Intuitionistic Fuzzy Graph", International Mathematical Forum, Vol. 9, no. 23, 1101 – 1108, 2014
- 49) "Properties on Irregular Intuitionistic Fuzzy Graphs (IIFG)", Applied Mathematical Sciences, Vol. 8, no. 8, 379 – 389 2014.
- 50) "Semi Global Dominating Set in Fuzzy Graphs", Intern. J. Fuzzy Mathematical Archive Vol. 4, No. 2, 104-111 2014.
- 51) "Common Fixed-Point Theorem for Generalized Contractive Type Mappings In Complex Valued Metric Spaces", J. Math. Comput. Sci. 4 No. 4, 639-648 (2014)
- 52) "Fuzzy Chromatic Number of Different Types of Fuzzy Graph" Elsevier Publications, pp.439-462. 2014
- 53) "Common Coupled Fixed Point Theorem for Contractive Type Mappings in Closed Ball of Complex Valued Metric Spaces", Adv. In equal. Appl., 2014:34, 2014.
- 54) "Computationally Simple Approach for Solving Fully Intuitionistic Fuzzy Real Life Transportation Problems", International Journal of System Assurance Engineering and Management. Jan 2015
- 55) "Point Set Domination of Intuitionistic Fuzzy Graphs", Intern. J. Fuzzy Mathematical Archive, Vol. 7, No. 1, 2015,43-49, Published on 22 January 2015.
- 56) "On Solving Traffic Light Problem Using Fuzzy Coloring", Proceeding in International Conference on Mathematical Methods and Computation, Jan-2015, 618-612
- 57) "On Fuzzy Dominator Coloring in Fuzzy Graphs", Applied mathematical science Vol9, 2015, no-23.1131-1137
- 58) "A Method for Finding an Optimal Solution of an Assignment Problem Under Mixed Intuitionistic Fuzzy Environment", International Conference on Mathematical Sciences, pp. 417-421.
- 59) "Common Fixed Point Theorems in Complex Valued Metric Spaces", (IJIRSE) International Journal of Innovative Research in Science & Engineering, ISSN (Online) 2347-3207.
- 60) "Connected Eccentric Domination Number in Graphs", International Journal of Innovative Trends in Engineering (IJITE) Volume-04, Number-01, 2015.
- 61) "Characterization of Fuzzy Non-Bondage Number of Fuzzy Graphs" Mathematical Sciences International Research Journal, Volume 4 Issue 2 (2015). ISSN 2278-8697.
- 62) "A Study On Fuzzy Coloring in Fuzzy Graphs", Advances in fuzzy Mathematics, Volume 10. Number 2, 2015 pp.109-116.
- 63) "A Method for Solving Unbalanced Intuitionistic Fuzzy Transportation Problems", Notes on Intuitionistic Fuzzy Sets, Vol,21,2015, ISSN 1310-4926.
- 64) "Fuzzy Dominator Chromatic Number of Bipartite Middle and Subdivision Fuzzy Graph", International Journal of Mathematics and System. Vol 5, pp:99-106, ISSN 2248-9940, 2015.
- 65) "Fuzzy Chromatic Number of Middle and Subdivision and Total Fuzzy Graph", International Journal of mathematical Archive, pp:90-94, ISSN 2229-5046,2015.
- 66) "Fuzzy Chromatic Number of Operation on Fuzzy Graphs", Annals of Pure and Applied Mathematics, Vol 11, pp: 93-98, ISSN 2279-087, Jan 2016.
- 67) "An Introduction to Fuzzy Edge Coloring", Journal of Advances in Mathematics, Vol 11, No10, pp: 5742-5748, Jan 2016.

- 68) "Solving Fuzzy Game Problem Using Hexagonal Fuzzy Number", Journal of Computer, vol11, pp;53-59, ISSN 2518-6205, July 2016.
- 69) "Further Results On Connected Eccentric Domination Number in Graphs", Advances and Applications in Discrete Mathematics, Vol-17 no: 3 pp 243-254, ISSN 0974-1658, 2016.
- 70) "Characterization of Fuzzy Block using Non- Bondage Arc", International Journal of Applied Engineering Research, Vol11 No1, ISSN 0973-4562, 2016
- 71) "Fuzzy Graceful Graphs", Advances in Fuzzy Mathematics, Vol-12, pp.309-317 ISSN 0973-533X.2017
- 72) "The Co-bondage (Bondage) Number of Fuzzy Graphs and Its Properties", Malaya Journal of Matematik, Vol-5(3), pp-483-493, ISSN:2319-3786,2017.
- 73) "The Kp- Bondage and Kp - Non Bondage Number of Fuzzy Graphs and Graceful Graph", IOSR Journal of Electrical and Electronics Engineering (IOSR-JEEE) e-ISSN: 2278-1676, p-ISSN: 2320-3331, Vol 12,(3),PP 10-20,2017
- 74) "Triple Connected Domination Number of a Bipolar Fuzzy Graph", International Journal for Research in Applied Science & Engineering Technology, Vol-5(8), ISSN:23219653,2017
- 75) "Weak Domination Alteration Sets in Fuzzy Graphs", Intern. J. Fuzzy Mathematical Archive, Vol-12(01) ISSN 2320-3242.(2017)
- 76) "Domination Stability in Fuzzy Graphs", Global Journal of Pure and Applied Mathematics, Vol-13(10) ISSN 0973-1768, 2017
- 77) "Critical and Stability concept for Strong Dominating set in Fuzzy Graphs" International Journal of Mathematical Archive-8(10),2017. ISSN 2229-5046.
- 78) "Domination Subdivision Stable Fuzzy Graph" International Journal of Pure and Applied Mathematics, Volume 117 No.12 2017, 155-161. ISSN 1314-3395.
- 79) "Domination in Fuzzy Soft Graphs" International Journal of Fuzzy Mathematical Archive, Vol-14 No 2, Page 243-252 (2017) ISSN 2320-3250.
- 80) "A Study on Bondage and Non-Bondage Number of Fuzzy Graphs and Graceful Graphs" Journal of Global Research in Mathematical Archive, Vol-4 No 10, Page 50-57 (2017) ISSN 2320-5822.
- 81) "Lattice Structures of Double-Framed Fuzzy Soft Lattices" Specialty Journal of Engineering and Applied Science Vol -3(3) Page 10-21, 2017, ISSN No.2520-5943
- 82) "Application of Double – Framed Soft Ideal Structures over Gamma Near Rings" Global Journal of Pure and Applied Mathematics. Vol 13, Number 9(2017), pp.5101-5113. ISSN 0973-1768
- 83) "Domination Dot-Critical Fuzzy Graph" International Journal of Mathematical Archive-9(1), page 2018, 54-57 ISSN 2229 – 5046.
- 84) "Cyclic Coupled Fixed Point Theorem in Complex Valued Metric Spaces" International Journal Mathematical Archive. Vol-9 No 1, Page 130-134 (2018) ISSN 2229-5046.
- 85) "Total Domination Node Critical and Stable Fuzzy Graphs" International Journal of Pure and Applied Mathematics. Vol 118 No 6 2018, PP 381-387. ISSN 1311-8080.
- 86) "Double-Framed Fuzzy Soft Version of G-Modular Structures" Asian Journal of Science and Technology. ISSN: 0976-3376. Vol. 09, Issue, 02, pp.7439-7446, February, 2018.
- 87) "Double-Framed Soft Version of Chain Over Distributive Lattice" International Journal of Computational Engineering Research (IJCER) ISSN (e): 2250 – 3005, Volume 08, Issue 2, February – 2018.

- 88) "A New Aspect of Double-Framed Normal Fuzzy Soft Ideal Structures Over Hemi Rings" IOSR Journal of Engineering (IOSRJEN) ISSN (e): 2250-3021, ISSN (p): 2278-8719 Vol. 08, Issue 3 (March. 2018), PP 01-10
- 89) "Critical and Stability of Domination in Fuzzy Graphs" International Journal of Applied Engineering Research. ISSN 0973-4562 Volume 13, Number 6(2018) pp:3688-3691.
- 90) "Various Domination Parameters of Single Valued Neutrosophic Graphs" International Journal of Research Advent Technology, ISSN 2321 9637 volume number 7, Number.1, January (2019) pp 174-182.
- 91) "1-Edge Magic Labeling of Splitting Graph" International Journal of Applied Engineering Research. Print ISSN 0973-4562, volume number 14, Number.3, January (2019) special issue pp 60-63.
- 92) "A review on Q-fuzzy subgroups in algebra" International journal of applied engineering research. Print ISSN 0973-4562, volume number 14, Number.3, January (2019) special issue pp 83-86.
- 93) "Implementation of Fuzzy Logic for M/M/C Model in Packet Switched Network Using HoL Priority Queue" International Journal of Research in Advent Technology, Vol.7, No.2, February 2019. E-ISSN: 2321-9637.
- 94) "Operations on Dombi Bipolar Fuzzy Graphs Using T-Operator" International Journal of Research in Advent Technology, Volume number.7, No.5, May 2019. Pp 381-387. E-ISSN: 2321-9637.
- 95) "Interval Valued Neutrosophic Bipolar Vague Sets" International Journal of Emerging Technologies and Innovative Research. Volume Number 28, 2019. Pp 519-526. E ISSN: 2349-5162
- 96) "Neutrosophic Bipolar Vague Set and its Application to Neutrosophic Bipolar Vague Graphs", Neutrosophic Sets and Systems, vol. 28, 2019, pp. 69-86. DOI: 10.5281/zenodo.3387802 ISSN 2331-6055
- 97) "Domination Number in Neutrosophic Soft Graphs", Neutrosophic Sets and Systems, vol. 28, 2019, pp. 228-244. DOI: 10.5281/zenodo.3382548 ISSN 2331-6055
- 98) "On Neutrosophic Vague Graphs", Neutrosophic Sets and Systems, vol. 28, 2019, pp. 245-258. DOI: 10.5281/zenodo.3382550 ISSN 2331-6055
- 99) "Neutrosophic Vague Line Graphs ", Neutrosophic Sets and Systems, Vol. 36, 2020, pp. 121-130. DOI: 10.5281/zenodo.3382550 ISSN 2331-6055
- 100) "Fuzzy Chromatic Number of Fuzzy Soft Graphs", Advances and Applications in Mathematical Sciences, Vol. 19, Issue 11, Sep 2020, pp 1125 - 1131.
- 101) "Neutrosophic Vague Incidence Graph", International Journal of Neutrosophic Science, Vol. 12, 2020, pp.29-38. DOI: 10.5281/zenodo.4249015
- 102) "Infinite Delay Fractional Stochastic Integro-Differential Equations with Poisson Jumps of Neutral Type", The Journal of Analysis – Springer, 2020. DOI: 10.1007/s41478-020-00282-6 ISSN 0971-3611
- 103) "Inverse Eccentric Domination in Graphs", Advances and Applications in Mathematical Sciences, Volume 20, Issue 4, February 2021, pp 641-648
- 104) "Prime Edge Magic Labeling for Some Graphs", Advances and Applications in Mathematical Sciences, Volume 20, Issue 6, April 2021, pp 1093-1100.
- 105) "On Fuzzy Dominator Chromatic Number of Middle, Subdivision and Total Fuzzy Soft Graphs", International Journal of Aquatic Science, Vol 12, Issue 2, 2021.
- 106) " $(\alpha, \beta)$ -Q-Fuzzy Subgroup and its properties", Journal of Algebraic statistics, Vol 13 No 2, 2022, pp 3479-3487.
- 107) "Q-fuzzy Sub-Bi-Group of a Group and Level Q-Fuzzy Sub-Bi-Group", Journal of Algebraic Statistics, Vol 1 No 2, 2022, pp 3149-3153.

- 108) “Co-Efficient of Range Labeling for Some Trees”, Journal of Algebraic statistics, Vol 13 No 3, 2022, pp 3792-3805.
- 109) “Common Fixed Point for a Contractive Mapping via  $(\alpha, \beta, \psi)$ -Admissibility in  $b$ -metric space”, Ratio Mathematica, Vol 42, 2022, pp 245-256.
- 110) “Some Edge Domination Parameters in Bipolar Hesitancy Fuzzy Graph”, Ratio Mathematica, Vol 42, 2022, pp 157-166.
- 111) “Common Fixed Point Theorems on  $(\varphi, \psi)$ - type Multi Valued Mappings in  $b$ -Metric Spaces”, Advances and Applications in Mathematical Sciences, Vol 21, Issue 10, 2022, pp 5825-5839.
- 112) “Operations on Neutrosophic Vague Soft Graphs”, Neutrosophic Sets and Systems, Vol. 51, 2022, pp. 254-268. ISSN 2331-6055
- 113) “Quadripartitioned Neutrosophic Graph Structures”, Neutrosophic Sets and Systems, Vol. 51, 2022, pp. 269-294. ISSN 2331-6055

### **Seminars / Conferences Organized:**

- 1) Organized a one-day National Seminar on Applications of Mathematics, 22<sup>nd</sup> February 2012, PG and Research Department of Mathematics, Jamal Mohamed College(Autonomous), Tiruchirappalli-20, under UGC Autonomous Grant.
- 2) Organized a one-day state level inter-collegiate meet on 27<sup>th</sup> February 2014, PG & Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli-20.
- 3) Organized Six Days Workshop on Research Methodology and SPSS, from 20<sup>th</sup> to 25<sup>th</sup> October 2016, PG and Research Department of Mathematics, Jamal Mohamed College(Autonomous), Tiruchirappalli-20, under UGC Autonomous Grant.
- 4) Acted as a Coordinator in the International Conference on Mathematical Methods and Computation (ICOMAC 2017) Organized by the P.G & Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli-2017 is held on 11<sup>th</sup> December 2017.
- 5) Acted as a Coordinator in the International Conference on Mathematical Methods and Computation (ICOMAC 2019) Organized by the P.G & Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli-20 is held on 20 and 21<sup>st</sup> February 2019.
- 6) Organized a one-day workshop on Algebra, 10<sup>th</sup> August 2019, PG and Research Department of Mathematics, Jamal Mohamed College(Autonomous), Tiruchirappalli-20.
- 7) Acted as a Coordinator in the International Conference on Mathematical Methods and Computation (ICOMAC 2020) Organized by the P.G & Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli-20 is held on 19<sup>th</sup> February 2020.
- 8) Organized an Online Course on Quantitative Aptitude from 24-04-2020 to 02-05-2020, PG and Research Department of Mathematics, Jamal Mohamed College(Autonomous), Tiruchirappalli-20, under DBT Star College Scheme.
- 9) Organized a COVID-19 Awareness Competitions for School and College Students from 14-04-2020 to 30-04-2020, PG and Research Department of Mathematics, Jamal Mohamed College(Autonomous), Tiruchirappalli-20, under DBT Star College Scheme.
- 10) Organized a Faculty Development Programme on Data Science USING R PROGRAMMING and GEO GEBRA (Under DBT Star College Scheme) in association with Spoken Tutorial, IIT Bombay from 11-05-2020 to 14-05-2020, PG and Research Department of Mathematics, Jamal Mohamed College(Autonomous), Tiruchirappalli-20, under DBT Star College Scheme.



- 11) Organized a National Level Webinar on "Indian Science: COVID 19 Scenario" held on 29.05.2020, PG and Research Department of Mathematics, Jamal Mohamed College(Autonomous), Tiruchirappalli-20, under DBT Star College Scheme.
- 12) Organized a Seven Days International Online Faculty Development Programme on Pure and Applied Mathematics from 11.06.2020 to 17.06.2020, PG and Research Department of Mathematics, Jamal Mohamed College(Autonomous), Tiruchirappalli-20, under DBT Star College Scheme.
- 13) Organized an Online Aptitude Test Conducted in view of National Mathematics Day Celebration on 22.01.2021 PG and Research Department of Mathematics, Jamal Mohamed College(Autonomous), Tiruchirappalli-20, under DBT Star College Scheme.
- 14) Organized a Virtual Short Term Training Program on Data Science and Statistical Applications (DSSA)-2021 for seven days from 15.03.2021 to 22.03.2021, Department Of Statistics Bharathiar University, Coimbatore & PG & Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli jointly Organized by Department of Biotechnology, Ministry of Science & Technology, Govt. of India, New Delhi.
- 15) Organized a one-week faculty development programme on Data Analytics & Mathematical Software Tools from 25-02-2022 to 03-03-2022, by PG & Research Department of Mathematics, (Under DBT Star College Scheme) Jamal Mohamed College (Autonomous), Tiruchirappalli in collaboration with Teaching Learning Centre, Ramanujan College, University of Delhi, under the aegis of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching, Ministry of Education, India.
- 16) Organized Pre-Congress Symposium on Advances in Arts, Social Sciences & Sciences: Swaraj India Perspective as a part of The XLVI Indian Social Science Congress on 31.10.2022, by PG & Research Department of Mathematics, (Under DBT Star College Scheme) Jamal Mohamed College (Autonomous), Tiruchirappalli in collaboration with Bharathidasan University, Tiruchirappalli & Indian Social Science Academy, Allahabad, India.
- 17) Organized Awareness Programme for Capacity enhancement of SC/ST entrepreneurs and promoting "Entrepreneurship Culture" amongst the SC/ST population on 01.11.2022, by PG & Research Department of Mathematics, (Under DBT Star College Scheme) Jamal Mohamed College (Autonomous), Tiruchirappalli in collaboration with National SC ST Hub Office, Chennai.

#### **Conference / Seminar Attended Without Presenting Papers:**

- 1) National seminar on **Recent Developments in Mathematical Applications**, 1<sup>st</sup> and 2<sup>nd</sup> February 2002, SRI G.V.G. Visalakshi college for women, Udumalpet.
- 2) National seminar on **The Era of Globalization and Its Implications-Emerging Issues and Concerns: Canada and India**, 27, 28 and 29<sup>th</sup> March 2003, PG and Research Department of Commerce, Jamal Mohamed College, Trichy.
- 3) State level seminar on **Mathematical Methods in Social Sciences** 8<sup>th</sup> and 9<sup>th</sup> September 2004, PG and Research Department of Mathematics, Jamal Mohamed College, Trichy.
- 4) National seminar on **Mathematical Modeling to Social and Management Problems**, 24<sup>th</sup>, 25<sup>th</sup> September 2004, ADM College for Women, Nagappattinam.
- 5) National Seminar on **Application to Graph Theory**, 10<sup>th</sup> and 11<sup>th</sup> February 2005 Yadava College, Madurai.
- 6) National Seminar on **Algebraic and Analytic Methods**, 19<sup>th</sup> and 20<sup>th</sup> march 2005, Alagappa University, Karaikudi.
- 7) Regional workshop on **Computer Applications in Research in Social Science**, 14<sup>th</sup> to 20<sup>th</sup> November 2005 PG and Research Department of Commerce, Jamal Mohamed College, Trichy.
- 8) State level seminar on **Mathematical Methods and Fuzzy Applications**, 27<sup>th</sup> February 2006, PG and Research Department of Commerce, Jamal Mohamed College, Trichy.

- 9) Workshop on **Curriculum Development and Evaluation** 2<sup>nd</sup> to 4<sup>th</sup> March 2006, Jamal Mohamed College, Trichy.
- 10) National level winter school on **Advanced Statistical Tools in Research: Hands on Experience with Statistical Software**, 22<sup>nd</sup> to 27<sup>th</sup> October 2007, Cauvery college for women, Trichy.
- 11) National conference on **Fuzzy Mathematics and Graph Theory** 27<sup>th</sup> and 28<sup>th</sup> march 2008, PG and Research Department of Mathematics, Jamal Mohamed College, Trichy.
- 12) Participated in the Workshop on **Software Tools in Mathematical Modeling**, Organized by PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli-20, under Autonomous grant, 28.02.2009 to 04.03.2009.
- 13) Participated in the UGC Sponsored International conference on **Mathematical Methods and Computation** Organized by PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli-20 during July 24-25, 2009.
- 14) Participated in the UGC sponsored State Level Seminar on **Examination Reforms** Organized by Jamal Mohamed College (Autonomous), Tiruchirappalli-20 on March 12<sup>th</sup> 2010.
- 15) Participated in the UGC Sponsored National Seminar on **Graph Theory Algorithms and Modelling** Organized by PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli-20 on March 19-2010.
- 16) Participated in the UGC and DST Sponsored International workshop on **Graph Coloring and Its Applications** Organized by PG and Research Department of Mathematics, Bharathidasan University, Tiruchirappalli-24 during August 07-09, 2010.
- 17) Participated in the UGC Sponsored workshop on **Mathematical Modeling** Organized by PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli-20 during January 19-25, 2011.
- 18) Participated in the **All India Workshop on Research Methodology and Technology Management in Higher Education**, Academic Staff College, Pondicherry University, Pondicherry during 14.03.2013 & 15.03.2013.
- 19) Participated in the Faculty development Programme on **Innovative Teaching Techniques for 21<sup>st</sup> Century Learners**, Gnanam School of Business, Thanjavur on 25.10.2013.
- 20) Participated in the **Quality Research Report Writing Workshop Curriculum Development Cell**, Bharathidasan University, Tiruchirappalli on 28.02. 2014
- 21) Participated in the Workshop on **Latex and SPSS**, Organized by PG and Research Department of Mathematics, Jamal Mohamed College, Tiruchirappalli-20 on 26.09.2014 - 1.10.2014.
- 22) Participated in the **Short Term Course on SPSS Hands on Training (Social Sciences)**, Organized by UGC – Academic Staff College, Bharathiar University Coimbatore on 7.10.2014 to 12.10.2014.
- 23) Participated in the “**The Role of a Teacher in the Present Scenario**” Organized by the Internal Quality Assurance Cell of the Jamal Mohamed College, Tiruchirappalli-20 on 03.12.2014 - 1.10.2016.
- 24) Participated in the “**Global Coins, Bank Notes, Stamps & Antiques Exhibitions**” Organized by Rotaract Club of Jamal Mohamed College, Tiruchirappalli-20 on 06.01.2017.
- 25) Participated in the Three-Days “**NLP- Based Faculty Empowerment Programme**” Organized by Internal Quality Assurance Cell of the Jamal Mohamed College, Tiruchirappalli-20 on 17.06.2017 - 20.06.2017.
- 26) Participated in the Two-Days “**NLP- Foundation Workshop Master Yourself with NLP**” Organized by Master Yourself Academy, Tiruchirappalli-20 on 26.09.2018 - 27.09.2018.

- 27) Participated in the One-Days **“Promotion of API Score and CAS Filing”** Organized by Training and Placement Cell and Internal Quality Assurance Cell, Periyar E.V.R College .Tiruchirappalli-23 on 09.01.2019.
- 28) Participated in the Two-Days **“Professional Development for Academic Leadership in Curriculum Design”** Organized by Curriculum Development Cell, Jamal Mohamed College. Tiruchirappalli-20 on 18.01.2019 - 19.01.2019.
- 29) Participated in the **“Orientation Programme on Preparing Course Outcomes in Curriculum Design”** Organized by Curriculum Development Cell, Jamal Mohamed College. Tiruchirappalli-20 on 03.01.2020.
- 30) Participated in the **“Orientation Programme on MOOC’S and e-Learning”** Organized by Department of Library, Jamal Mohamed College. Tiruchirappalli-20 on 29.01.2020
- 31) Participated in the **“International Workshop on Python Programming”** Organized by PG & Research Department of Mathematics, Jamal Mohamed College, Tiruchirappalli-20 on 18.02.2020.
- 32) Participated in the national level Webinar on **“Sustainable Entrepreneurial Spirit – Post COVID 19”** Organized by Aalim Muhammed Salegh College of Engineering, Chennai on 09-05-2020.
- 33) Participated in the **“A two days National level online FDP on Project Proposals for Funding Agencies: Preparation and Submission Protocol”** organized by Patrician College of Arts & Science, Chennai during 16-05-2020 to 17-05-2020.
- 34) Participated in the **“One Day IQAC National Level Webinar on Assessment & Accreditation as a Measure of Internal Quality in HEI’s”**, organized by Loganatha Narayanasamy Govt. College, Tiruvallur on 19-05-2020.
- 35) Participated in the **“National Webinar on Research Advances in Graph Theory”** organized by Justice Basheer Ahmed Sayeed College for Women, Chennai on 28-05-2020.
- 36) Participated in the **“International Webinar on Flexible Teaching, Learning, Assessment and Curriculum Provisions in the Midst of a Pandemic”** organized by Dr. SNS Rajalakshmi College of Arts and Science, Coimbatore on 03-06-2020.
- 37) Participated in the **“One-day National Level Webinar on Online Content Creation Tools”** organized by Department of Computer Science, Bishop Heber College, Tiruchirappalli on 11-06-2020.
- 38) Participated in the **“One-day International Level Webinar on Data Analytics & Applications”** organized by Department of Computer Science, Bishop Heber College, Tiruchirappalli on 12-06-2020.
- 39) Participated in the **“International Level Webinar on a Simple Model for How Irregular Solar Strength Changed the Ice Ages in the Past”** organized by JIS College of Engineering on 12-06-2020.
- 40) Participated in the **“National Level Webinar on Mathematics of Cancer”** organized by St.Justin Arts and Science College for Women, Cholapuram, Sivagangai on 17-06-2020.
- 41) Participated in the **“One-day International Level Webinar on Online Examination Tools”** organized by Department of Computer Science, Bishop Heber College, Tiruchirappalli on 20-06-2020.
- 42) Participated in the **“National level webinar on Basic Author Workshop Research Article Writing & Reference Management using Mendeley”** organized by Annamalai University in Collaboration with Elsevier on 22-06-2020.
- 43) Participated in the **“National Level Online Webinar on Higher Education Scenario after Covid-19”** organized by RKDF University, Bhopal, (M.P.) on 24-06-2020.
- 44) Participated in the **“National Level Webinar on Asteroid Day Celebration”** Organized by Tamilnadu Science Forum- College Students Branch, Tiruchirappalli on 30-06-2020.
- 45) Participated in the **“National Level Webinar on Impact of Non-Linear Differential Equations in Chemical Sciences”** organized by Hindusthan College of Engineering and Technology, Coimbatore on 30-06-2020.

- 46) Participated in the “**Faculty Development Programme on E-content Development**” organized by IQAC, Jamal Mohamed College, Tiruchirappalli during 30-06-2020 to 04-07-2020.
- 47) Participated in the “**National Level Webinar on Adapting to Online Teaching- Opportunities and Challenges Faced by Teachers**” organized by Institute of Advanced Study in Education, Chennai on 02-07-2020.
- 48) Participated in the “**National Level Webinar on Stay Motivated & Stay Focused**” organized by Institute of Advanced Study in Education, Chennai on 07-07-2020.
- 49) Participated in the “**National Level Webinar on Crisis comes with Opportunities**” organized by G.T.N. Arts College, Dindigul on 10-07-2020.
- 50) Participated in the “**National Level Webinar on IOT Applications to Fight Against COVID-19 Pandemic**” organized by Bishop Heber College, Tiruchirappalli on 17-07-2020.
- 51) Participated in the “**National Level Two-Day Webinar on Intellectual Property Rights**” organized by IPR Cell, Jamal Mohamed College, Tiruchirappalli during 18-07-2020 to 19-07-2020.
- 52) Participated in the “**National Level Webinar on Functions of Brain and its Relationship with Memory: How to Memorise Things Quickly**” organized by Department of Science, Dashmesh Khalsa College, Zirakpur, Mohali on 23-07-2020.
- 53) Participated in the “**National Level Webinar on Unakkul irukkum Unnatham**” organized by Department of Tamil, SRM Trichy Arts and Science College, Tiruchirappalli on 24-07-2020.
- 54) Participated in the “**National Level Webinar on Indian Citation Index user Awareness Online Training Program**” organized by Diva Enterprises PVT LTD on 24-07-2020.
- 55) Participated in the “**State Level Webinar on Applications of Various Divisions of Mathematics in Graph Theory**” organized by Department of Mathematics, Holy Cross College, Tiruchirappalli on 25-07-2020.
- 56) Participated in the “**National Level Webinar on Perseverance is the Magic key to Success**” organized by G.T.N. Arts College, Dindigul on 31-07-2020.
- 57) Participated in the “**National Level Webinar on Uniformly Continuous Functions**” organized by Periyar E.V.R. College, Tiruchirappalli on 07-08-2020.
- 58) Participated in the “**National Level Webinar on Basics of Survey Analysis Design**” organized by Department of Mathematics, Mizoram University, Mizoram on 07-08-2020.
- 59) Participated in the “**National Level Webinar on National Education Policy-2020**” organized by IQAC, Jamal Mohamed College, Tiruchirappalli on 08-08-2020.
- 60) Participated in the “**National Level Webinar on Applications of Number Theory & Algebra in Computer Science**” organized by Department of Mathematics, Korambayil Ahamed Haji Memorial Unity Women’s College, Manjeri, Malappuram, Kerala on 06-10-2020.
- 61) Participated in the Webinar on **Applications of Nature Inspired Optimization Techniques for Solving Real Life Problems** organized by Department of Mathematics, KPR Institute of Science and Technology, Coimbatore on 08-10-2020.
- 62) Participated in the “**National Level Webinar Series 4: Stochastic Process and Mathematical Modelling**” organized by Department of Mathematics, RSET and Centre for Topology and Applications, Kochi, Kerala during 14-10-2020 to 16-10-2020.
- 63) Participated in the “**National Level Webinar on Radial Graphs and its Applications**” organized by Department of Mathematics, VET Institute of Arts & Science, Erode on 23-10-2020.

- 64) Participated in the Webinar on **Ergodic Correspondence and Combinatorics** organized by Department of Mathematics, Gujarat University, Ahmedabad on 05-11-2020.
- 65) Participated in the Webinar on **Cyber Crimes and Human Rights** organized by IQAC, Arignar Anna Government Arts College, Salem on 10-12-2020.
- 66) Participated in the Webinar on **Applications of Mathematics in Science and Technology**, organized by Department of Mathematics, Salipur Autonomous College, Salipur, Odisha from 15.12.2020 to 16.12.2020.
- 67) Participated in the Webinar on **Srinivasa Ramanujam, His Life and His Work** organized by Department of Mathematics, KPR Institute of Science and Technology, Coimbatore on 16-12-2020.
- 68) Participated in the National Webinar on **Life and Findings of Srinivasa Ramanujam** organized by Department of Mathematics, Khalsa College, Patiala on 22-12-2020.
- 69) Participated in the Two Days National E-Seminar on **Fuzzy set Theory and its Applicatoins** organized by Department of Mathematics, Institute of Science, GITAM Deemed to be University, Vishakappattinam from 22.12.2020 to 23.12.2020.
- 70) Participated in the Webinar on **Natural Dyes: An Alternate Source for Synthetic Dyes** organized by Department of Chemistry & Research Committee, Arasu Engineering College, Kumbakonam on 29.12.2020.
- 71) National Webinar on **Applications of Graph Theory** organized by Department of Mathematics, K.S.Rangasamy College of Arts and Science, Tiruchengode on 30-12-2020
- 72) Participated in the Webinar on **How to do Research in Mathematics** organized by Department of Mathematics & Research Committee, Arasu Engineering College, Kumbakonam on 08.01.2021.
- 73) Participated in the International Conference on **Applied Mathematical Models-Online** organized by Department of Mathematics, PSG College of Technology, Coimbatore on 07-09.01.2021
- 74) Participated in the International Virtual Conference on **Applications of Partial Differential Equations in Control and Inverse Problems** organized by Department of Mathematics, Rathinam College of Arts & Science, Coimbatore on 11.01.2021.
- 75) Participated in the International Virtual Conference on **Recent Development in Computational Mathematics** organized by School of Foundational Sciences (Mathematics), Kumaraguru College of Technology, Coimbatore on 20.01.2021.
- 76) Participated in the National Webinar on **Applications of Mathematics** organized by Department of Mathematics, Government Autonomous P.G. College, Chhindwara (AP) on 22.01.2021.
- 77) Participated in the “**Two Day International Online Workshop on Integration of Animation in Teaching-Learning**” Organized by Centre for Knowledge Acquisition, Retention and Transformation (C-KART) School of Education Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching, MoE, Govt. of India on 28 – 29.01.2021.
- 78) Participated in the Webinar on **Soft skills are Life skills** organized by Department of English, Arasu Engineering College, Kumbakonam on 10.02.2021.
- 79) Participated in the National Webinar on **Group Theory Applications to Cryptography** organized by PG & Research Department of Mathematics, Nandha Arts & Science College, Erode on 15-02-2021.
- 80) Participated in the National Webinar on **The Importance of Analogies and Counterexamples in Mathematics**, organized by Department of Mathematics and IQAC under the project of World Bank, Govt College, Timarni(dt), Harda, M.P. on 20-02-2021.
- 81) Participated in the National Webinar on **Truth vs Proof**, organized by Department of Mathematics, Maharashtra College of Arts, Science & Commerce, Mumbai on 20-02-2021.

- 82) Participated in the Two Days Webinar on **Awareness of Statistical Softwares (R, Python, SAS, SPSS)** organized by ISPS and Department of Mathematics & Statistics, The Madura College, Madurai during 13-14 March 2021.
- 83) Participated in UGC Sponsored FDP on **Aspects of Mathematics**, organized by PG & Research Department of Mathematics, Dhwaraka Doss Goverdhan Doss Vaishnav College, Chennai during 22<sup>nd</sup> – 28<sup>th</sup> March 2021.
- 84) Participated in the International Seminar (Virtual) on **Application of Mathematics in Computer Science and Real Life**, organized by Department of Mathematics & CS under umbrella of IQAC and project of World Bank, Govt College, Timarni Dt, Harda, MP on 25-03-2021.
- 85) Participated in the International Conference on **New Trends in Differential Equations and Applied Mathematics** organized by Sri Vidya Mandir Arts and Science College (Autonomous), Krishnagiri in collaboration with CHRIST (Deemed to be University), Bengaluru and Jyothi Engineering College, Thrissur during April 12-13, 2021.
- 86) Participated in the Capacity building program on **Physical and Mental health in adolescents & nutrition and lifestyle for present day adolescents**, organized by Department of Mathematics, PSGR Krishnammal College for Women, Coimbatore on 25-05-2021.
- 87) Participated in the National Webinar on “**Modelling and Solving Graph Colouring Problems Using GRIN Software**” organized by the PG & Research Department of Mathematics, Theivanai Ammal College for Women(Autonomous), Villupuram on 26th May 2021
- 88) Participated in the National Webinar on “**Understanding Advanced Learners: Role of Teachers**” organized by Department of Mathematics & Statistics, NSS College of Commerce and Economics, Mumbai on 27<sup>th</sup> May 2021
- 89) Participated in the “**Six Day International Online Workshop on Innovative Techniques for statistical data analysis using R-Programming**” Organized by Department of Mathematics, CSE & IT, KS Rangasamy College of Technology, Tiruchengode on 31.05.2021 – 05.06.2021.
- 90) Participated in the National Webinar on “**Mathematical Software Workshop**” organized by the Department of applied sciences and humanities in association with mathematics club, Universal Engineering College, Thrissur, Kerala during 02.06.2021 to 06.06.2021
- 91) Participated in One Week National Level Online FDP on “**Number Theory & its Applications**” organized by the Department of applied sciences and humanities, GATES Institute of Technology, Andhra Pradesh from 14.06.2021 to 19.06.2021
- 92) Participated in Six Day Online FDP on “**Application of Mathematics in Science & Technology**” organized by the Department of science and humanities, Narasu’s Sarathy Institute of Technology, Salem from 21.06.2021 to 26.06.2021.
- 93) Participated in One-day International Webinar on **Recent Advances in Statistics (RAS-2021)** organized by Department of Mathematics, Institute of Science, GITAM, Vishakapatnam on 29.06.2021.
- 94) Participated in the Faculty enrichment programme on “**Art of Writing in Indexed Journal Publications**” Organized by Department of Library in association with IQAC, Jamal Mohamed College. Tiruchirappalli-20 on 28.07.2021.
- 95) Participated in the “**One Day Workshop on Astronomy**” Organized by PG & Research Department of Mathematics, Jamal Mohamed College, Tiruchirappalli-20 on 31.08.2021.
- 96) Participated in the webinar on “**Graph Theory in day today life**” Organized by Department of Mathematics and Science Association, RKT College, Ulhasnagar on 09.12.2021
- 97) Participated in the Three Days National level virtual FDP on “**Graph Theory**” Organized by Department of Mathematics (CA), Vellalar College for women, Erode-12 from 21.12.2021 to 23.12.2021.

- 98) Participated in the Two Days virtual lecture workshop on “**Differential Equations and its Applications**” Organized by Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli-20 from 21-12-2021 to 22-12-2021.
- 99) Participated in the Faculty Development program on “Outcome based Education”, organized by IQAC of Rajeev Gandhi College of Management studies, Ghansoli from 13.01.2022 to 19.01.2022.
- 100) Participated in the National Level Webinar on “Effective Presentation Skills”, organized by Shri Kumarswami Mahavidyalaya, Ausa, Dist. Latur, MS, on 20.01.2022.
- 101) Participated in the Berchmans Webinar on “An introduction to Fractals and Fractal Dimensions”, organised by the Department of Mathematics, St Berchmans College, Changanassery on 22.01.2022.
- 102) Participated in the one week faculty development programme on “ICT Tools for E-content Development”, organized by PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli from 24-01-2022 to 29-01-2022.
- 103) Participated in the one week faculty development programme on “Research Essentials”, organized by the department of computer science and engineering, Chandigarh University, Gharuan, Mohali, Punjab from 31-01-2022 to 05.02.2022.
- 104) Participated in the 7 days online workshop on “The 7 Assessment Criteria for NAAC Accreditation”, organized by IQAC, S.K.B.R. Govt. Degree College, Macherla and Government College for women (A), Guntur from 21-02-2022 to 28-02-2022.
- 105) Participated in the TANSICHE sponsored one day workshop on “Nuances on Documentation Process: Research Proposal, NAAC & NIRF”, held at Thanthai Periyar Government Arts and Science College (A), Tiruchirappalli on 12-08-2022.
- 106) Participated in the “Workshop on Fundamentals of Probability Theory and Detection Estimation Theory”, organized by Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli with Pentagram Technologies, India and Pentagram Research UK Ltd., Birmingham, United Kingdom from 06-10-2022 to 08-10-2022.
- 107) Participated in the one week online FDP on “Recent research area and its application in Mathematics”, organized by Vel Tech Multi Tech Dr. Rangarajan Dr. Sakunthala Engineering College, Chennai from 10-10-2022 to 15-10-2022.
- 108) Participated in the National Webinar on “Fuzzy Mathematics”, organized by PG Department of Mathematics, Gonzaga College of Arts and Science for Women, Elathagiri, Krishnagiri on 26-10-2022.

#### **Conference / Seminar Attended and Presenting Papers:**

- 1) Presented a paper on **Analysis of Skin Cancer using Fractals** in the UGC Sponsored National Seminar on Applications of Mathematics Organized by PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli-20 On 22.02.2012.
- 2) Presented a paper on **Operations in Triangular Intuitionistic Fuzzy Numbers** in the UGC Sponsored National Seminar on Applications of Mathematics Organized by PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli-20 On 22.02.2012.

- 3) Presented a paper **On Double Domination Number of Fuzzy Graphs** in the UGC Sponsored National Seminar on Applications of Mathematics Organized by PG and Research Department of Mathematics, Jamal Mohamed College (Autonomous), Tiruchirappalli-20 On 22.02.2012.
- 4) Presented a paper on **A Study of Fuzzy Open Domination Number with Double Domination Number of Fuzzy Graphs**, National Seminar on Discrete Mathematics and Its Applications, 09<sup>th</sup> March 2013.
- 5) Presented a paper on **Evaluating the Cardiovascular Diseases in Dogs Using Fractal**, International Conference on Mathematical Methods and Computation, Organized by PG and Research Department of Mathematics, Jamal Mohamed College Tiruchirappalli-20 On 13<sup>th</sup> and 14<sup>th</sup> Feb 2014.
- 6) Presented a paper on **Hungarian Method of Solving Intuitionistic Fuzzy Assignment Problem**, 3<sup>rd</sup> International Conference on Competency Building Strategies in Business and Technology for Sustainable Development, Organized by Sri Ganesh School of Business Management Salem on 25.02.2014.
- 7) Presented a paper on **'On Uniquely Fuzzy Colorable Graphs'**, National conference, Holy Cross College, March-2014.
- 8) Presented a paper on **Fuzzy Chromatic Number of Different Types of Fuzzy Graphs**, International conference on mathematical science, July 2014, 439-442.
- 9) Presented a paper on **'On Solving Traffic Light Problem Using Fuzzy Coloring'**, proceeding in International conference on mathematical methods and computation, Jan-2015, 618-612.
- 10) Presented a paper on **Point Set Domination of Intuitionistic Fuzzy Graph**, proceeding in International conference on mathematical methods and computation, Jan-2015, 618-612.
- 11) Presented a paper on **The Co-Bondage and Non – Bondage Number on Fuzzy Graphs** in the International Conference on Innovations in Engineering Technology and Science (ICIETS-2017) in Ramakrishnan College of Engineering Samayapuram held on 24<sup>th</sup> and 25<sup>th</sup> February 2017.
- 12) Presented a paper on **Triple Connected Domination Number of a Bipolar Fuzzy Graphs** in the International Conference on Innovations in Engineering Technology and Science (ICIETS-2017) in Ramakrishnan College of Engineering Samayapuram held on 24<sup>th</sup> and 25<sup>th</sup> February 2017.
- 13) Presented a paper on **Strong Domination Critical and Stability in Fuzzy Graphs** in the International Conference on Innovations in Engineering Technology and Science (ICIETS-2017) in Ramakrishnan College of Engineering Samayapuram held on 24<sup>th</sup> and 25<sup>th</sup> February 2017.
- 14) Presented a paper on **"Domination Subdivision Stable Fuzzy Graph"**. International Conference on Advances in Applicable Mathematics (ICAAM2017) in Bharathiar University, Coimbatore-46., held on 7 -8 December 2017.
- 15) Presented a paper on **Domination in Fuzzy Soft Graph** International Conference on Mathematical Methods and Computation (ICOMAC 2017) in Jamal Mohamed College, Trichy, held on 11<sup>th</sup> December 2017.
- 16) Presented a paper on **Total Domination Node Critical and Stable Fuzzy Graphs** International Conference on Mathematical Methods and Computation (ICOMAC 2017) in Jamal Mohamed College, Trichy, held on 11<sup>th</sup> December 2017.
- 17) Presented a paper entitled as **"Domination Dot-Critical Fuzzy Graph"** in the International Conference on Intuitionistic Fuzzy Sets and Systems (ICIFSS-2018), held at Vellalar College for Women, Erode on 08-10 January 2018.



- 18) Presented a paper entitled as “**1-Edge Magic Labeling of Splitting Graph**” in the International Conference on Mathematical Modeling, Analysis and Computing (MMAC-2018), held at Thiruvalluvar University, Vellore-632 115 on 13-14 December 2018.
- 19) Presented a paper entitled as “**A Review on Q-Fuzzy Groups In Algebra**” in the International Conference on Mathematical Modeling, Analysis and Computing (MMAC-2018), held at Thiruvalluvar University, Vellore-632 115 on 13-14 December 2018.
- 20) Presented a paper entitled as “**Various Domination Parameter of Single Valued Neutrosophic Graphs**” in the International Conference on Mathematical Modeling, Analysis and Computing (MMAC-2018), held at Thiruvalluvar University, Vellore-632 115 on 13-14 December 2018.
- 21) Presented a paper entitled as “**Weight and Domination of Intuitionistic Fuzzy soft Graphs with the product Domination.**” in the International Conference on Mathematical Methods and Computation (ICOMAC-2019), held at Jamal Mohamed College, Tiruchirappalli 620 020 on 20-21 February 2019.
- 22) Presented a paper entitled as “**Fuzzy Chromatic Number of Fuzzy Soft Graphs**” in the International Conference on Mathematical Methods and Computation (ICOMAC-2020), held at Jamal Mohamed College, Tiruchirappalli - 20 on 19<sup>th</sup> February 2020.
- 23) Presented a paper entitled as “**Prime Edge Magic Labeling For Some Graphs**” in the International Conference on Mathematical Methods and Computation (ICOMAC-2020), held at Jamal Mohamed College, Tiruchirappalli - 20 on 19<sup>th</sup> February 2020.
- 24) Presented a paper entitled as “**Fixed Point Theorems in Arbitrary Convex Banach Spaces**” in the 6th Biennial International Group Theory Conference – 2021 (6BIGTC–2021) held virtually at Department of Mathematics, School of Advanced Sciences, VIT, Vellore on 4<sup>th</sup> to 6<sup>th</sup> March 2021.

#### **Resource Person/ Chair Person**

- 1) House Listing and Population Enumeration, Govt. of India, Ministry of Home Affairs, Census 2011, Department of Census Operations, Tiruchirappalli City Corporation, 28.01.2011,29.01.2011 and 05.02.2011.
- 2) Applications of Graph Theory, a special lecture, Organized by the Department of Mathematics, Holy Cross College Trichy on 09. 08.2011
- 3) Fractal Modeling in Medicine, State Level Seminar in Recent Trends in Mathematics, A.V.C.College Mayiladuthurai on 28-02-2013.
- 4) Graph Theory and its Applications, Valedictory Address to the Mathematics Association, Theivanai Ammal College for Women, Villupuram on March -2013.
- 5) Chairperson in National Seminar on Discrete Mathematics and Its Applications, 09<sup>th</sup> March 2013.
- 6) Application on Graph Theory in Real Life One Day at Seminar Selvam Arts Science College (Autonomous) Namakkal, on 7<sup>th</sup> August 2014.
- 7) Application of Graph Theory, one-day seminar at The New College Chennai on 29<sup>th</sup> Jan-2015.
- 8) Domination in Graph Theory, one-day seminar on contemporary trends in mathematics at Holy Cross (Autonomous) Trichy on 9<sup>th</sup> Feb-2015.
- 9) Special Lecture On Domination in Graph Theory at Meenakshi Chandrasekaran College of Arts and Science, Pattukkottai on 23<sup>rd</sup> Feb-2015.

- 10) National Science day celebration, Tamil Nadu Science forum students Branch, Trichy District on 28.02.2017.
- 11) Successor of Success, One Day Seminar Organized by PG & Research Department of Mathematics, Holy Cross College Trichy on 20.09.2017.
- 12) National Science day celebration, Tamil Nadu Science forum students Branch, Trichy District on 28.02.2017.
- 13) National Science day celebration, Tamil Nadu Science forum students Branch, Trichy District on 28.02.2018.
- 14) Graph Theory and its Applications, One Day seminar on “Smart Seminar on Mathematics for Communication Engineers” Organized by Department of Electronics and Communication & Department of Mathematics at Mahendra Engineering College, Mallasamudram, Namakkal is held on 11.03.2018.
- 15) UGC assisted Guest Lecture on “Research Awareness Program for PG Mathematics Students” Organized by P.G & Research Department of Mathematics, AVC College, Mayiladuthurai, is held on March 15,2018.
- 16) Chief Guest on “Maths Carnival and Ramunajan 131 Birth day Celebration” Organized by P.G & Research Department of Mathematics, Padamavani Arts and Science College for Women, Saelam, is held on December 22,2018.
- 17) Chairperson in the International conference on Mathematics Methods and Computation (ICOMAC 2019) Organized by PG and Research Department of Mathematics, Jamal Mohamed College, Tiruchirappalli-20 is held on 20 and 21<sup>st</sup> February 2019.
- 18) Guest of Honour on “Inter Collegiate Competition Infinity Minds Infinity Minds 2k19” Organized by PG & Research Department of Mathematics, Urumu Dhanalakshmi College is held on 4<sup>th</sup> March 2019.
- 19) Guest Lecture on “Application of Graph Theory” In the Mathematics Association Meeting Organized by P.G & Research Department of Mathematics, Periyar E.V.R College (Autonomous) Trichy-23. Is held on 09<sup>th</sup> March 2019.
- 20) Resource person on “27<sup>th</sup> National Children’s Science Congress-2019” Organized by Tamilnadu Science Forum is held on SBOIA Matriculation Higher Secondary School- Trichy on 03.11.2019.
- 21) Acted as a Jury in the event MATH ENTERPRENEUR in the “Math-O-Vision” Organized by PG& Research Department of Mathematics (SF Women), Jamal Mohamed College, Trichy-20 held on 22.01.2020.
- 22) Acted as a Resource person in the UGC Sponsored One Day Seminar on “Exploring the Advances in Mathematics” Organized by PG & Research Department of Mathematics, Seethalakshmi Ramaswami College, Tiruchirappalli-02. held on 30.01.2020.
- 23) Chairperson in the International conference on Mathematics Methods and Computation (ICOMAC 2020) Organized by PG and Research Department of Mathematics, Jamal Mohamed College, Tiruchirappalli-20 is held on 19<sup>th</sup> February 2020.
- 24) Chief Guest of National Conference on Mathematics: Pure, Applied and Computation, Kongunadu College of Engineering &Technology, Thottiam, Tiruchirappalli is held on 04.03.2020
- 25) Chief Guest of International Mathematics Day Celebration, Arignar Anna Government Arts College, Musiri, is held on 04.03.2020
- 26) Acted as a Resource person in the Two Days National Level Webinar on “Applications of Mathematics in New Era” Organized by Majlis Arts and Science College, Puramannur, Valanchery, Kerala held on 29.07.2020.

- 27) Acted as a Resource Person in the Skill Development Program on Mathematical Modelling and Analysis organized by Department of Mathematics, AICTE Skill and Personality Development Centre, Sathyabama institute of Science and Technology (Deemed to be University), Chennai on 08-03-2022.

#### **Orientation/Refresher Courses Attended**

- 1) Orientation Course: 20.05.2000 To 16.06.2000 Bharathidasan University.
- 2) Refresher Course: 02.12.2000 To 22.12.2000 Bharathidasan University.
- 3) Refresher Course: 06.11.2002 To 26.11.2002 Pondicherry University.
- 4) Refresher Course: 05.11.2003 To 25.11.2003 Gandhigram Rural University.
- 5) Census 2011, House Listing and Population Enumeration, Govt. of India, Ministry of Home Affairs, Department of Census Operations on 06<sup>th</sup>, 08<sup>th</sup> & 12<sup>th</sup> April 2010.
- 6) Census 2011, House Listing and Population Enumeration, Govt. of India, Ministry of Home Affairs, Department of Census Operations on 13.12.2010 – 15.12.2010.

#### **Study Materials / Books Written & Published:**

- 1) Study Material Written: B.Sc., IT- Essential of Mathematics, CDE, BARD Trichy.
- 2) Chapter Written: Quadripartitioned Neutrosophic Soft Graphs., Handbook of Research on Advances and Applications of Fuzzy sets and Logic, DOI: 10.4018/978-1-7998-7979-4, ISBN: 9781799879794, IGBN Global Publisher of Timely Knowledge, October 2021.

#### **Administrative Position Held in the College:**

- 1) Sub-Warden - Khajamian Hostel: June 1996 – December 1997.
- 2) Deputy Warden - Khajamian Hostel: January 2001 – May 2004.
- 3) Advisor – Leo Club of Jamal Mohamed College: June 2001 – May 2004.
- 4) Deputy Warden - Khajamian Hostel: May 2014 – 31.05.2018.
- 5) Advisor – Rotaract Club of Jamal Mohamed College: August 2014– 31.05.2018.
- 6) Coordinator Self Finance Course Women: June 2018 – May 2020
- 7) General Secretary JMC Alumni Association: June 2019 – till date.
- 8) Head In-charge – Department of Mathematics: June 2020 – till date

#### **Membership in Autonomous Programme:**

- 1) Member – Autonomous Examination Committee.
- 2) Member – Board of studies, Department of Mathematics June 2004 – till date.
- 3) Member – Academic Audit Committee.
- 4) Member – Curriculum Development Cell.
- 5) Member – Research Committee.
- 6) Member – Board of Studies, Department of Mathematics Selvam Arts and Science College, Namakkal on 28.04.2018.

- 7) Member – Board of Studies, Department of Mathematics, Park’s College. Tiruppur on 25.10.2018.
- 8) Member – Board of Studies, Department of Mathematics, AVVM Sri Pushpam College. Poondi from 19.11.2018.
- 9) Member – Board of Studies, Department of Mathematics, Periyar EVR College, Tiruchirappalli, from 09.04.2019.
- 10) Member – Academic Council.
- 11) Member – Planning & Evaluation.
- 12) Convenor – Grievance and Redressal Students Welfare.

**Member in Editorial Board:**

- 1) Journal of Advanced Applied Scientific Research – Associate Editor.

**Ph.D. Thesis Adjudicated:**

Year	Name of the University	Title of the Thesis
2013	Dravidian University	The study on Inertia and permanent nature of Circulant Matrices
2021	Bharathiar University	A study on Intuitionistic Fuzzy Transportation Problems using Octagonal Intuitionistic Fuzzy Numbers.
2021	Bharathiar University	A study on Multi interval and Multi Intuitionistic Fuzzy Soft Matrices.
2022	Bharathiar University	Studies on Nano Semi c(s) generalized Homeomorphisms in Nano Topological Spaces

**External Examiner for Ph.D. Viva - Voce:**

Name of the Scholar	Title of the Thesis	Name of the University	Date of Viva - Voce
A. Venkatesan	Bounds for Location-2 Domination Number of Certain Graphs	Thiruvalluvar University	28-07-2021
K. Nagarajan	Location-Domination Number of certain Graphs	Thiruvalluvar University	23-09-2021
S. Visalakshi	Studies on Nano Semi c(s) generalized Homeomorphisms in Nano Topological Spaces	Bharathiar University	02-03-2022
J. Naveen	Prime Labelings of Graphs	Thiruvalluvar University	15-09-2022

**Awards and Recognitions:**

- 1) Best Leo Advisor Award from Lions Club International for the Year 2002-03 and 2003-04.
- 2) Best Staff Coordinator Award from Rotaract District Organization, Rotary International District 3000 for the Year 2017-2018.
- 3) Jamal Research Excellence Award: Best Researcher (Senior Category) in the science Discipline from Jamal Mohamed College (Autonomous), Tiruchirappalli for the academic year 2020-2021.