# Mr.N.VELMURUGAN. M.Sc., M.Phil., B.Ed., (Ph.D.), SET.,

#### ASSISTANT PROFESSOR

# RESEARCH DEPARTMENT OF MATHEMATICS

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## CONTACT DETAILS

OFFICE ADDRESS: Theivanai Ammal College for Women (Autonomous),

Chennai-TrichyTrunk Road,

Villupuram, Tamil Nadu-605602

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RESIDENTIAL ADDRESS: No.124, Main Road, Nemur Village & Post,

Villupuram - District.Pin: 605 203.

# **QUALIFICATION**

- B.Sc., Mathematics (Arignar Anna Govt. Arts College, Villupuram, 2007)
- M.Sc., Mathematics (Dr. Ambedkar Govt. Arts College, Chennai., 2010)
- M.Phil., Mathematics (SCSVMV Deemed University, Kanchipuram, 2012)
- B.Ed., Mathematics (Vasavi College of Education, Madgadipet, 2008)
- Ph.D., Mathematics (Bharathiyar University, Pursing)

## TEACHING EXPERIENCE

- Assistant Professor in Theivanai Ammal College for Women (Autonomous), Villupuram from June 2018 to till date.
- Assistant Professor in St. Joseph College of Engineering, Sriperumbudur from July 2012 to May 2018.
- Lecturer in Arignar Anna Govt. Arts College, Villupuram from July 2010 to April 2012.
- Experience in handling Mathematical Aptitude training classes for Placement.

# AREA OF SPECIALIZATION

- Graph theory
- Linear Algebra
- Differential Geometry
- Differential Equations



## **QUIZ COMPETITION AWARDS**

- Participated in the **Competition** on "**Maths Quiz Analysis**" conducted by Don Bosco College (Co-Ed) Yellagiri Hills, 2020.
- Participated in the **Competition** on "**E-Quiz on Graph Theory**" conducted by Thiru Kolanjiappar Govt.Arts.College, Virudhachalam, 2020.
- Participated in "Online General Awareness Quiz-Computer Fundamentals" conducted by Shanmuga Insustries Arts & Science College,2019.
- Participated in the **Competition** on "E-Quiz on Graph Theory" conducted by St. Anne's College of Arts & Science College, Tindivanam, 2020.
- Participated in the **Competition** on "**E-Quiz:Algebra & Analysis**" conducted by Bharathi Women's College (Autonomous), Chennai, 2020.
- Participated in "E- quiz on Research & publication ethics-2022 "conducted by Thiruvalluvar University 26.03.2022

#### PAPER PRESENTATION/ PARTICIPATION / WORKSHOP

- Participated in National Webinar Analysis & its Applications Dr.M.G.R Government arts and science college for Women 30.03.2022
- Participated in National Workshop Mathematical techniques in fluid dynamics SRM Institute of Science and Technology 28.03.2022to 30.03.2022
- Participated in National Webinar wellness & women's mental health in the covid 19 pandamic SRM Institue of Science and Technology 07.03.2022
- Participated in National Webinar My Trinity of my gods & concept of a teachers WELLTTA International-world english language learners, teachers& trainers association 15.02.2022
- Participated in National Webinar on Unifying factor of teacher &a student. The limits of my language are the limits of my world
- Participated WELLTTA International-world english language learners, teachers& trainers association14.02.2022
- Participated in National Workshop on Outcome based education-Mapping/Attainment TACW 24.11.2021.
- Participated in National Webinar on Professional English Orientation Programme TACW 30.10.2021
- Participating in the Online Webinar on "Role of Libraries in the Promotion of Research Activities" conducted by Gokaraju Rangaraju Institute of Engineering and Technology (Autonomous), Hyderabad, 24<sup>th</sup> September 2021.

- Participated in the **National Level Webinar** on "Current Trends in IT" conducted by Dr.M.G.R Educational and Research Institute, Adayalampattu Phase II Campus, Chennai, 24<sup>th</sup> September 2021.
- Participated in the **Webinar on "Entrepreneurship Campus Eco System"** conducted by Dr.M.G.R Educational and Research Institute, Adayalampattu Phase II Campus, Chennai, 18<sup>th</sup> September 2021.
- Attended the NAAC Sponsored One-day Online Seminar on "Qualitative & Quantitative Metrics in RAAF of NAAC" conducted by Rajalakshmi Engineering College (Autonomous), Chennai, 17<sup>th</sup> September 2021.
- Participated in the One Week Faculty Development Programme on "Software tools for Mathematical Education" Conducted by Bannari Amman Institute of Technology, Sathyamangalam and Providence College for Women, Coonoor, from 30<sup>th</sup> August 2021 to 05<sup>th</sup> September 2021.
- Participated in National Webinar Dominations in Graphs C.Abdul Hakeem College (Autonomous), Melvisharam. 17.08.2021 & 18.08.2021
- Participated in the **Two Days National Webinar** on "**Dominations in Graphs**" Conducted by C. Abdul Hakeem College (Autonomous), Melvisharam, 17<sup>th</sup> & 18<sup>th</sup> August 2021.
- Participated in National Workshop Blended Learning Through E-Assessment: Moodle SRM Institute of Science and Technology, Chennail 2.08.2021 & 13.08.2021
- Participated in the National Workshop Innovation Ambassador Training MoE's Innovation Cell & AICTE 30.06.2021 to 30.07.2021
- Participated in the National Webinar Frontiers of Mathematics(FDP)SRM Institute of Science and Technology 18.06.2021 & 19.06.2021.
- Participated in the **Two Days Webinar** on "**Professional Development Programmes(PDP)**" Conducted by Theivanai Ammal College for Women (Autonomous), Villupuram, 18<sup>th</sup> & 19<sup>th</sup> June 2021.
- Attended Seminar on National Seminar on "Recent developments in Cryptography" at Theivanai Ammal College for Women (Autonomous), Villupuram, 29<sup>th</sup> January 2021.
- Participated in the **Workshop** on "MATLAB", Theivanai Ammal College for Women (Autonomous), Villupuram, 2019.
- Presented a paper entitled on "On Harmonic Index of New Operation of Graphs" in International Conference on "Recent Advancements in Pure and Applied Mathematics" conducted by Government Arts College (Autonomous), Kumbakonam, 25<sup>th</sup> February 2019.
- Attended one day National workshop on "Essential of Thesis Writing and Hands on Training in Octave" conducted by Theivanai Ammal College for Women (Autonomous), Villupuram, 8th February 2019.
- Attended Workshop on "Outcome Based Education Mapping / Attainment" at Theivanai Ammal College for Women (Autonomous), Villupuram, 24th November 2021.

#### FACULTY DEVELOPMENT PROGRAM

- Participated in seven days national online Faculty Development Program on "Research Methodology: Analysis, Tools & Techniques" organized By Internal Quality Assurance Cell and Research Department of Mathematics at Theivanai ammal college for women, Villupuram.from 28.12.2022-03.01.2023.
- Participated in "Faculty Development Training Programme" at Sri Venkateshwara College of Engineering from 4th to 11th December 2013 organized by ANNA UNIVERSITY.
- Participated in "Faculty Development Training Programme" at DMI College of Engineering on July 2013 organized by ANNA UNIVERSITY.
- Participated in "Faculty Development Training Programme" at Loyola Institute of Technology on June 2016 organized by ANNA UNIVERSITY.

#### **PUBLICATIONS**

- 1. Upper Bounds for Harmonic Coinvariant of Graphs, International Journal of Mechanical Engineering. Vol. 7 (IV) ISSN: 0974-5823,2022
- 2. Hypercubes Of Fq5, Fq6 And Their Fault Tolerance, International Journal of Mechanical Engineering. Vol. 7 (IV)ISSN: 0974-5823,2022
- 3. Solution Of Linear Fredholm Integral Equation With Taylor Series Expansion Using Matlab, International Journal of Mechanical Engineering Vol. 7 (IV)ISSN: 0974-5823,2022
- 4. On Direct Sum of Five Intuitionistic Fuzzy Graphs, International Journal of Mechanical Engineering. Vol. 7 (IV)ISSN: 0974-5823,2022
- 5. Cordial Labeling And Edge Cordial Labeling For Sixteen Sprocket Graph, International Journal of Mechanical Engineering Vol. 7 (IV)ISSN: 0974-5823,2022
- 6. Decagonal Fuzzy Numbers In Solving Assignment Problem By Hungarian Method, International Journal of Mechanical Engineering. Vol. 7 (IV)ISSN: 0974-5823,2022
- 7. Some Special Graceful Labeling Results Of Hexagonal Pyramidal Graceful Graphs International Journal of Mechanical Engineering. Vol. 7 (IV)ISSN: 0974-5823,2022
- 8. Zagreb Index and its Coindex of New Transformation Graphs, Journal of Applied Science and Computations (JASC). ISSN: 1076-5131,2022
- 9. Transportation Problem using C Language, Utkal Historical Research Journal, Vol 34(IX), ISSN: 0976-2132, 2021.
- 10. Two modulo Four Sum Graphs, Vidyabharati International Interdisciplinary Research Journal, ISSN: 2319-4979, 2021.
- 11. Lucky Edge Labeling of various Graphs ,Utkal Historical Research Journal, Vol.34(XI),ISSN : 0976-2132, 2021.
- 12. Job Sequencing Problem Using C Programming, Utkal Historical Research Journal, Vol.34 (XI), ISSN: 0976-2132, 2021.
- 13. chebyshev Polynomial using Trigonometric Identities, Utkal Historical Research Journal, Vol.34(XI),ISSN: 0976-2132, 2021.
- 14. Coloring of Strong Intuitionistic Fuzzy Petersen Graph with Total Coloring Utkal Historical Research Journal, Vol.34(XI),ISSN: 0976-2132, 2021.
- 15. Fekete Szego using Quasi Subordination, Utkal Historical Research Journal, Vol.34(XI),

ISSN: 0976-2132, 2021

- Super Edge BI-Magic Labeling of New Constructions of Trees from Path & Star, Science, Technology and Development Multidisciplinary Journal, Vol IX, ISSN NO 0950- 0707, 2020.
- 17. Zagreb Related Index and its Coindex of Some Derived Graphs, Journal of Applied Science & Computations, Vol 6, 2019, ISSN NO:7021-2008,2019.
- 18. On Harmonic Index of New Operation of Graphs, International Journal of Engineering Technology, Vol-8, ISSN: 2249-8958, 2019.

#### **ORGANIZATION OF EVENTS**

- Organized International Conference on "Smart and Sustainable Development in Multidisciplinary Research (SCI-VISION-2050)" at Theivanai Ammal College for Women (Autonomous), Villupuram, 9<sup>th</sup> &10<sup>th</sup> March 2023.
- Organized Invited lecture on "**Restructuring Lattice Theory-A Research View**" at Research Department of Mathematics Theivanai Ammal College for Women (Autonomous), Villupuram, 21<sup>st</sup> February 2023.
- Organized one day National workshop on "Research article using LateX" conducted by Research Department of Mathematics, Theivanai Ammal College for Women (Autonomous), Villupuram, 25<sup>th</sup> January 2023.
- Organized a National Seminar on "New Developments in Domination Graphs" at Theivanai AmmalCollege for Women (Autonomous), Villupuram, 16<sup>th</sup> December 2021.
- Organized a Video conference on "**Intellectual Property Rights**" at Theivanai Ammal College forWomen (Autonomous), Villupuram, 10<sup>th</sup> November 2021.
- Organized a National Seminar on "Recent developments in Cryptography" at Theivanai AmmalCollege for Women (Autonomous), Villupuram, 29th January 2021.
- Organized one day National workshop on "Essential of Thesis Writing and Hands on Training inOctave" conducted by Research Department of Mathematics, Theivanai Ammal College for Women (Autonomous), Villupuram, 8th February 2019.

# ACADEMIC MEMBERSHIP (ST. JOSEPH COLLEGE OF ENGINEERING)

- Served as a **Coordinator** for the Department of **Science & Humanities** from July 2013 to 31.05.2018 date.
- Served as a **Discipline Coordinator** for the department of **Science & Humanities** from July 2012 to 31.05.2018 date.
- Anna University Representative **AUR** for three times to the smooth conduction of semester examinations of Anna University from 2015 to 2017.
- Member of Anna University Exam Squad Committee for two times from 2015 to 2017.
- Served as a Convener for **Ramanujam Mathematics Club** from 2013 to 31.05.2018.

# ACADEMIC RESONSIBILITIES (TACW)

- M.Phil., Research Supervisor
- Document coordinator
- Exam committee member
- PG Service learning
- Innovation Hub Coordinator
- Control Room Coordinator for End Semester Examination
- Coordinator of the Chemistry Practical for school students
- Coordinator of Vocational Course for School students

## AWARDS AND ACHIEVEMENTS

- Exam TNSET qualified in Aril 2017 in Mathematics
- Awarded certificate for Produced **94** % in **Discrete Mathematics** 2013.
- Awarded certificate for Produced **94** % in **Discrete Mathematics** 2014.
- Awarded certificate for Produced **80** % in **Probability and random processes** 2014.
- Awarded certificate for Produced 94 % in Graph Theory and Applications 2016
- Awarded certificate for Produced 93% in Graph Theory and Applications 2017

#### **OTHER ACTIVITIES**

- Acted as Resource Person for the one day seminar on the topic is "**Recent Trend In Graph Theory**" on October 2021 in Sacred Heart Arts &ScienceCollege, Perani, Tindivanam.
- Acted as Resource Person for the one day Multidisciplinary National seminaron the topic is "Graph Theory and its Applications" on March 2020 in Saraswathi Arts & Science College, Tindivanam.
- Acted as **External practical examiner** during University practical examination conducted by Thiruvalluvar University.
- Acted as **External Examiner** during University Theory examination conducted by Thiruvalluvar University.