

Faculty Profile



Dr.K. Ruth Isabels
Professor & HoD Dept. of Mathematics

HIGHLIGHTS:

- Number of Journal Publications:17
- H-Index:3
- Project Funding Received:
- Patents Published:
- Patents Granted: 2

PROFESSIONAL LINKS:

- Scopus ID: 0000-0003-1616-3851
- Scopus Link: <https://www.scopus.com/authid/detail.uri?authorId=57851124400>
- Google Scholar ID:
https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=K+Ruth+Isabels&btnG=
- Anna University Faculty ID: 2122044
- AICTE Faculty ID: 1469182056
- LinkedIn:

PROFESSIONAL BACKGROUND:

- Teaching Experience till date: 29 years 2 months
- Industrial Experience: NIL.

AREA OF SPECIALIZATION:

- Differential Equations

RESEARCH INTERESTS:

- **Fuzzy MCDM**
- **Optimization**

ACADEMIC EXPERIENCE:

Professor in the Department of Mathematics, Saveetha Engineering College from 02.01.2017 till date.
Associate Professor in the Department of Mathematics, Saveetha Engineering College from 01.06.11 to 01.01.2017 (5yrs, 7months).

Assistant Professor in the Department of Mathematics, Saveetha Engineering College from 01.06.10 to 31.05.11 (1yr).

Senior Lecturer in the Department of Mathematics, Saveetha Engineering College from 02.07.07 to 31.05.10 (2yr, 11months).

Lecturer in the Department of Mathematics, Saveetha Engineering College from 06.09.05 to 01.07.07 (1yr, 10months).

8 years (Lecturer), 2years (Asst.Prof), in the Department of Mathematics, Rajarajeswari Engineering College from 09.95 to 02.09.05. (10 yrs).

SELECTED PUBLICATIONS: (INTERNATIONAL & NATIONAL)

K. Ruth Isabels, Arul Freeda Vinodhini, Ranking Consistency Index (RCI) Integrated VIKOR Method for Multicriteria Decision Making with Intuitionistic Interval-valued Trapezoidal Fuzzy Number, Taylor and Francis Proceedings.

S. Sindu Devi, H. Mary Henrietta, **K. Ruth Isabels**, Analyzing the effectiveness of fuzzy in solving first order differential equations using Laplace Transforms. Taylor and Francis Proceedings.

K. Ruth Isabels, Arul Freeda Vinodhini, Viswanathan Anandan, Optimizing machining of 17-4 PH steel with ionic coolant: A comprehensive evaluation using hybrid CRITIC IF R-VIKOR MCDM approach. Journal of Intelligent & Fuzzy Systems. DOI:10.3233/JIFS-241509, IOS Press (published online April 2024).

K. Ruth Isabels, Arul Freeda Vinodhini, Viswanathan Anandan, Implementation of FMCDM Techniques to Select the Best Composite Material -Comparative Ranking. Isabels et al. 2024. Int. J. Vehicle Structures & Systems, 16(2), 149-155

K. Ruth Isabels, Arul Freeda Vinodhini, Viswanathan Anandan, Evaluating and Ranking Metaverse Platforms Using Intuitionistic Trapezoidal Fuzzy VIKOR MCDM: Incorporating Score and Accuracy Functions for Comprehensive Assessment, Decision Making: Applications in Management and Engineering, Volume 7, Issue 1 (2024) 54-78, <https://doi.org/10.31181/dmame712024858>.

A. Thirupathi1, G. Selvi, K. Ruth Isabels, Quality Cement Bricks Selection Using Apex Angle and Fuzzy Linguistic Information, Civil Engineering and Architecture 12(1): 160-167, 2024 <http://www.hrpub.org> DOI: 10.13189/cea.2024.120113.

Birendra Kumar, K. Ruth Isabels, Analysis of Mathematical Modelling Deterministic and Stochastic Problems in Federated Learning, 2023 3rd International Conference on Advance Computing and Innovative Technologies in Engineering (ICACITE), DOI: 10.1109/ICACITE57410.2023.10183114.

K. Ruth Isabels and K. Mrudula Devi, An Intellectual Fusion Classification Prototypical for an Imbalanced Electrocardiogram Data, SN Computer Science (2023) 4:721 <https://doi.org/10.1007/s42979-023-02120-5>, Springer Nature.

K. Ruth Isabels, M. Naresh Babu, V. Anandan & G. Arul Freeda Vinodhini, Ionic liquids assisted LQL for turning PH steels: smart methodology, Materials and Manufacturing Processes, MATERIALS AND MANUFACTURING PROCESSES, <https://doi.org/10.1080/10426914.2023.2187840>.

Shanmugam Jagan, K. RUTH ISABELS, A Meta-Classification Model for Optimized ZBot Malware Prediction Using Learning Algorithms, Mathematics 2023, 11, 2840. <https://doi.org/10.3390/math11132840>.

K. RUTH ISABELS and G. ARUL FREEDA VINODHINI, MATERIAL SELECTION FOR DENTAL IMPLANT - IF VIKOR MCDM TECHNIQUE, Advances and Applications in Mathematical Sciences Volume 22, Issue 8, June 2023, Pages 1807-1817, 2023 Mili Publications, India ISSN 0974-680.

G Divakara Reddy, K. RUTH ISABELS, Utilization of AI for Streamlining and Optimizing Credit Decision Process and Security in Banking Sector, Proceedings of the Sixth International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud) (I-SMAC-2022). IEEE Xplore Part Number: CFP22OSV-ART; ISBN: 978-1-6654-6941-8.

Yousef Algani, K. RUTH ISABELS and G. ARUL FREEDA VINODHINI, Analyze the anomalous behavior of wireless networking using the big data analytics, Measurement: Sensors, 9 August 2022, Measurement: Sensors 23 (2022) 100407.

K.Ruth Isabels, G.Uthra An Application of Linguistic Variables in Assignment Problem with Fuzzy Costs” in International Journal of Computational Engineering Research (IJCER), Vol 2 /Issue No.4/July-August 2012 , ISSN No. 2250-3005.

PATENTS PUBLISHED:

- Patent on Math Teaching Device, Indian Design Patent, October 2024.

PROFESSIONAL DEVELOPMENT ACTIVITIES:

- Co-Convenor, 2nd International conference on Innovations in Science and Humanities (ICISH-2024)- 18th &19th, July 2024 at Saveetha Engineering College, Chennai.
- Participated in Five Days FDP in “Leap into Fuzzy Logic Applications”, organised by the Division of Mathematics, School of Advanced Sciences, VIT (12.6.23 to 16.6.23).
- Participated in Six Days online FDP on “Applications of Mathematics in Science and Technology”, organised by Dept. of Science and Humanities, Narasus Sarathy Institute of Technology, Salem from 21.6.21 to 26.6.21.
- Attended 2 days’ workshop, (11.12.18 to13.12.18) IUCEE International Engineering Educator workshop (Phase I), held at Saveetha Engineering College, Chennai.
- Attended A One Day Faculty Development Programme on “Continuing Professional Development for Teachers of English” on 10.18 held at Saveetha Engineering College, Chennai.
- Attended One day FDP in “Skill Development in Research, Projects and Patent Filing” on 17.02.18 at Saveetha Engineering College, Chennai.
- Attended Two Week AICTE Approved FDP on Pedagogy for online and Blended Teaching – Learning Process – FDP 201X from 14.09.17 – 12.10.17 conducted by IIT Bombay (Online through ICT) Saveetha Engineering College, Chennai.
- Attended Two Week AICTE Approved FDP on Foundation Program in ICT for Education – FDP 101X from 03.08.17 – 13.09.17 conducted by IIT Bombay (Online through ICT) Saveetha Engineering College, Chennai.
- Attended Two Week ISTE Short Term Training Program on introduction to Design of Algorithms from 25.05.15 – 30.05.15 conducted by IIT Kharagpur (Online through ICT) Saveetha Engineering College, Chennai.

- Attended Two week - Engineering Physics FDP, from 08.12.15 – 18.12.15 conducted by IIT Bombay (Online through ICT) Saveetha Engineering College, Chennai.
- Organising Secretary, Two Days Workshop in “Algebra and Number Theory” on 28th and 29th June 2019 at Saveetha Engineering College, Chennai.
- Treasurer, National conference on Emerging trends in Science and Humanities (NCETSH 2014) on 11th, April 2014 at Saveetha Engineering College, Chennai.
- Organising committee member, National conference on Emerging trends in Science and Humanities (NCETSH 2014) on 5th April 2013 at Saveetha Engineering College, Chennai.
- Organising committee member, National conference on Emerging trends in Science and Humanities (NCETSH 2012) on 9th March 2012 at Saveetha Engineering College, Chennai.

COURSES CERTIFIED:

- Completed the NPTEL course on “Data Analysis and Decision Making-1”-NPTEL-AICTE-FDP (Jan-Apr 2024).
- Completed the NPTEL course on “MCDM Techniques Using R”-NPTEL-AICTE-FDP (Jan-Feb 2024).
- Completed the NPTEL course on “Research Methodology”-NPTEL-AICTE-FDP (Aug-Oct 2023).
- Completed the NPTEL course on “Applied Linear Algebra in AI and ML”-NPTEL-AICTE-FDP (Jan-APR 2023).
- Completed the NPTEL course on “Accreditation and Outcome Based Learning”-NPTEL-AICTE -FDP (Aug-Oct 2022).
- Completed the NPTEL course on “Decision Making Under Uncertainty”-NPTEL-AICTE -FDP (Aug-Sept. 2022).
- Completed the NPTEL course on “Introduction to Queueing Theory”- NPTEL-AICTE -FDP (Jan-Apr. 2022).
- Completed the NPTEL course on “Introduction to Probability Theory and Stochastic Process -NPTEL-AICTE -FDP (Jul-Oct. 2021).
- Completed 5-day online FDP on the theme “Inculcating Universal Human Values in Technical Education” organized by All India Council for Technical Education (AICTE) from 12 July, 2021 to 16 July, 2021.
- Qualified Phase II (I class) of the IIEECP (IUCEE International Engineering Educators Certification Program), duration from Jan 2019 to May 2019.

ACHIEVEMENTS AND AWARDS:

- Top Journal Publication Award (2023-24)-Saveetha Engineering College.
- 100% result – TPDE -2017-18
- 100% result – TPDE -2016-17
- 100% result –Numerical Methods -2013-14
- 100% result –Numerical Methods -2008-09
- Best Teacher Award 2008-09

CONFERENCES/SEMINARS/WORKSHOPS ATTENDED:

- Two Day workshop on Transformative Leadership: Building and Developing High Performance Team, organised by Saveetha Teaching Learning Centre. (27.7.23 & 28.7.23).
- Two days National Level workshop on Sage Math for Calculus, organised D.G.Vaishna College, Chennai from 5.7.21 to 6.7.21.
- One day workshop on “Recent Trends in Fuzzy, Rough Set Theory and Graph Theory Applications”20th December 2019 at S.A Engineering college.
- National Conference on Research Methodology –Tools & Techniques in Engineering, (26.11.18 & 27.11.18), at Saveetha Engineering College, Chennai.
- One day Workshop on Engineering Instruments and Applications, on 08.18 at Saveetha Engineering College, Chennai.
- One day workshop in “LINEAR ALGEBRA” on 7.18 conducted by Department of Mathematics, Saveetha Engineering College, Chennai.
- Designing Research, Proposal Writing .Grants and Funding Agencies,(26.04.18 – 27.04.18), at Saveetha Engineering College, Chennai.
- Workshop On Statistical Package for Social Sciences (SPSS), (19.04.17 – 20.04.17), conducted by Department of Management Studies, Saveetha Engineering College, Chennai.
- One day Workshop on Probability and Queueing Theory, (27.11.15), conducted by Department of Mathematics, Saveetha Engineering College, Chennai.
- National Conference on Emerging Trends in Science and Humanities NCETSH 15, (10.04.2015) conducted by Department of Mathematics, Saveetha Engineering College, Chennai.
- National conference on Emerging trends in Science and Humanities 2014, (11.04. 2014)conducted by Department of Mathematics, Saveetha Engineering College, Chennai.

- One Day Workshop on Scientific Approach to SPSS in Research, (21.02.2014), conducted by Department of Mathematics, Ethiraj College for Women (Autonomous), Chennai
- Bridge Course for Ist year B.E/B.Tech, June 2013, conducted by Anna University, Chennai.
- National Level Workshop on “Multi-Response Optimisation” (21st& 22nd March 2013), conducted by Dept. of Mechanical Engineering, Saveetha Engg. College, Chennai.
- National workshop on Fuzzy set theory and Applications / Queuing theory applications, (August 6th,2011) conducted by Dept. of Mathematics, Ramakrishnan college of Technology, Samayapuram, Thiruchirapalli.
- National Conference On Advances in Science and Technology, (October 31st 2012) conducted by Saveetha University, Saveetha School of Engineering, Chennai.
- Workshop on Joy of Teaching Transforms (Laplace, Fourier and Z) from Engineering Perspective, (4th August 2012), conducted by Dept. of Applied Mathematics and Computational Sciences PSG College of Technology, Coimbatore.
- National Conference on Advances in Science and Technology, (March 01,2011), Saveetha University, Saveetha School of Engineering, Chennai.
- National Conference on Computational Mathematics and Soft Computing, (24th& 25th July 2009), conducted by Departments of Mathematics and Computer Science, Women’s Christian college, Chennai.
- The National Seminar on Display Phosphorus and Applications, (10th & 11th November 2008), at Saveetha Engineering.

PROFESSIONAL MEMBERSHIPS:

- Life Member of The Indian Society for Technical Education since 2008 (LM 54846).