



CURRICULAM VITAE

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ACADEMIC PROFILE

Qualification	University	Year
Ph.D.	Bangalore University	2003
M.Phil	Mangalore University	1990
M.Sc.,	University of Mysore	1987

TEACHING PROFILE

Sl No	Designation & Nature of Employment Place of Work Periods	Place of Work
1	Professor and Head	Bangalore Institute of Technology, Bangalore
2	Professor	Bangalore Institute of Technology, Bangalore
3	Senior grade Lecturer	Bangalore Institute of Technology, Bangalore
4	Lecturer	Bangalore Institute of Technology, Bangalore
5	Lecturer	PES Engineering College, Mandya

Level of teaching undertaken:

BE, M.Tech, MCA, MBA, PhD (Course Work): Applied Mathematics, Advance Mathematics, Linear Algebra, Probability and Random Process, Statistics, Mathematical foundation for computer Science, Advance Numerical Methods, Calculus, Discrete & Continuous Transforms, Optimisation, Diploma Mathematics, Discrete Mathematical Structures.

Soft Skills

MATLAB Software, GIS and RS Software Skills, Geo-Spatial Data Handling, Network Analysis and Classification Algorithms

Awards:

Secured second prize for the poster presentation for the title “**Finding shortest Route for Hospitals in Chikkaballapur Town- An approach using Network analysis**” in Engineering Sciences category in the KSTA Conference on “**Energy, Climate and Environment**” organized by the school of Earth Science, Central University of Karnataka, Kadaganchi, Kalaburgi on 30th January 2016.

Delivered Talks

- Resource person for the webinar organised by Department of Science and Humanities, Hindusthan College of Engineering and Technology on “**Applications of Mathematics in Engineering field**” held during 11th September 2020.
- Resource person for the webinar organised by Department of Science and Humanities, Hindusthan College of Engineering and Technology on “**MATLAB**” held during 2nd – 4th September 2020.
- Delivered Lecture and conducted hands on training on **MATLAB** to I year BE students during Induction Programs, MTech and MCA students.
- One of the speaker in Faculty Enrichment Programme on “**18MAT11 – Calculus & Linear Algebra (Module – 2)**” organized by VTU at Centre for Post Graduate Studies, Bangalore Region Visvesvaraya Institute of Advanced Technology, Muddenahalli, Chikkaballapur District during 7/8/2018 to 11/8/2018

VTU Affiliated works:

- Nominated as a member for Faculty advisory board for Basic Science board for VTU e-Shikshana programme for the Academic year 2020-2021.
- Nominated as a member for LIC committee from VTU for the Academic years 2018-2019, Jyothi College of Institute of Technology, Bangalore.
- Participated as an Expert for Interview/Presentation and scrutiny of Applications of Ph.D. /M.Sc. (Engg) by Research Registration Expert Committee in Basic Science for the year 2017-18 at VTU, Belagavi.
- Nominated as a member for BOE committee from VTU for the Academic year 2017-2018.
- Participated as an Expert for Interview/Presentation and scrutiny of Applications of Ph.D. /M.Sc. (Engg) by Research Registration Expert Committee in Basic Science for the year 2016-17 on 27th December 2017 at VTU Regional Office, Bengaluru.
- Participated as an Expert for Interview/Presentation and scrutiny of Applications of Ph.D. /M.Sc. (Engg) by Research Registration Expert Committee in Basic Science for the year 2016-17 on 30th January 2017 at VTU, Belagavi.

- Participated as an Expert for Interview/Presentation and scrutiny of Applications of Ph.D. /M.Sc. (Engg) by Research Registration Expert Committee in Basic Science for the year 2016-17 on 6th December 2017 at BNMIT, Bengaluru.
- Participated as an Expert for Interview/Presentation and scrutiny of Applications of Ph.D. /M.Sc. (Engg) by Research Registration Expert Committee in Basic Science for the year 2016-17 on 12th January 2017 at VTU, Belagavi.
- Nominated from VTU to the Academic Council of PDA College of Engineering, Kalburgi (Autonomous) from 03/02/2017 to 02/02/2019.
- Worked as PG Coordinator for M.Tech. Program in Geoinformatics at Visvesvaraya Technological University at the VTU Regional Office, SJCE Campus, Mysore between Sept. 2006 and May 2007.
- Guest Faculty for PG course on “**Linear Algebra and Probability and Random Process**” at VTU PG centre, Bangalore Region during 2011 to 2013
- Guest Faculty for PG course on “**Statistical Concepts Applied to Geo-Informatics**” at Karnataka State Remote Sensing Application Centre, Bangalore between 2005 and 2006.

Other Works

- One of the jury members for evaluation of exhibited models and quiz in the state Level Event Mathematical Model on 7th March 2020.
- Coordinator for conduction of oral quiz and preparation of quiz questions in the State Level Event Mathematical Model on 6th March 2020.
- One of the Jury Member for evaluation in the District Level Event Mathematical Model and Mathematics Quiz paper setter held during 11th February 2020 at KSTA.
- Conducted Quiz for I year BE Students during “Alumini Meet” on 15th February 2020.
- Delivered a lecture and conducted hands on training on Basic MATLAB for I year BE students during Induction program of the academic 2019-20.
- Nominated as a member for BOE committee from BMSCE, Bangalore for the Academic year 2019-2020.
- Delivered a lecture and conducted hands on training on Basic MATLAB for M.Tech and MCA students.
- One of the paper setter for Ph.D., UG and PG for several universities.
- One of the Jury members for Evaluation of poster at National Conference on Mathematics and its Applications (NCMA -2019) organized by the Department of Mathematics, Karnataka University, Dharwad during November 7th-8th, 2019.
- One of the Jury members for Judging “ STING-2019, Innovative School of the Year Award” jointly organized by Karnataka Science and Technology Academy and Eggheads Education, Bengaluru which is held during 24th February 2019.
- One of the Jury members for Evaluation of group assignment presentation during the workshop on “ **Environment Impact Assessment** ” organized by Karnataka Science and Technology Academy which is held during 7th – 9th February 2019.
- One of the evaluator and external examiner of M Phil/PhD Viva Voce at Jain University till date.
- One of the External BOE for BMS College of Engineering, Bengaluru.
- One of the External Auditor for Answer Scripts for BMS College of Engineering, Bengaluru.

- One of the Jury members for Evaluation of poster presentation “ 11th KSTA Annual Conference “ jointly organized by Karnataka Science and Technology Academy and NMKRV College for Women, Jayanagar, Bengaluru held during 1st – 2nd February 2019.
- One of the Jury members for Evaluation of poster presentation “ 10th KSTA Annual Conference” jointly organized by Karnataka Science and Technology Academy and Reva University held during 18th – 19th January 2018.
- Nominated as an External faculty member for the audit of Question Paper from BMSCE, Bangalore for the Academic year 2018-2019.
- One of the Jury members for Evaluation of poster presentation “ Science and Technology Education “ jointly organized by Karnataka Science and Technology Academy and Agriculture University, Raichur held during 21th – 22th July 2017.

Research Activities Record

Major Fields of Research interest:

Fluid Mechanics, Mathematical Modelling, Transportation GIS, Network Systems

Total number of Ph.D. students currently working: 03

Research Projects:

A grant of Rs 5, 00,000/- from Vision Group of Science and Technology (VGST), Govt. of Karnataka under RGS/F scheme titled “Mathematical modelling of Climate change in selected regions of Karnataka – A Geostatistical approach”.

Research Publications

- Roopa K.M., V. K. Srinivasu., Mohammed A Rasiq , Konanna Gari Jaswanth Reddy, 2020. **Prediction of Daily and Yearly Rainfall of Kolar Region of Karnataka State by Markov Chain and Regression Model**, IOSR Journal of Engineering (OSR JEN), ISSN: 2250-3021, Volume No. : 10, Issue No. : 2.
- Roopa K.M., V G Umesh., Srinivasu, V.K. and Viswanath, M.C., 2019. **Review on shortest route problem in urban network system**, International Journal of Engineering Applied Sciences and Technology, Vol. 4, Issue 3, ISSN No. 2455-2143, Pages 149-152.
- Roopa K.M., 2015. **Mathematical model for nonlinear analysis of the stability of a system during uni-directional solidification with buoyancy and small segregation coefficient**, International of Computer Science and Engineering Technology (IJCSET), Vol.6; No.05, pp. 262 -266.
- Roopa K.M., 2014. **A Mathematical Model for Linear Analysis of the Stability of a system during Unidirectional Solidification with Buoyancy and small segregation coefficient**, International Journal of Advanced Technology in Engineering and Science (IJATES), Vol. 2; Issue 10, pp. 283-292 (Impact Factor 1.012).
- Roopa K.M, Apoorva H.R, and Viswanath M.C., 2014. **A Comparative Study on Different Algorithms for finding longest Route in a project network**, International Journal of Mathematical and Computer Research (IJMCR), Vol. 2; Issue 12, pp... 751-765. (Impact Factor 2.2).
- Roopa K.M., 2014. **A Mathematical Model for Stability of the Ferro-fluid Melt in a sparsely Packed Porous Medium Rotating on a Vertical axis during the Solidification on a Binary Alloy**, International Journal of Advanced Technology in Engineering and Science (IJATES), Vol. 2; Issue 7, pp. 277-287 (Impact factor 1.012).

- Roopa K.M., Apoorva, H.R., Srinivasu, V.K. and Viswanath, M.C., 2013. **A Study on Different Algorithms for Shortest Route Problem**, International Journal of Engineering Research and Technology (IJERT), Vol. 2; Issue 9, pp. 1-13 (Impact factor 1.76).
- Roopa K.M., 2013. **A Non-Linear Analysis to Identify the Stability of the Ferro-Fluid Melt Rotating on a Vertical Axis during the Solidification of a Binary Alloy**, International Journal of Theoretical and Applied Mechanics, ISSN 0973-6085 Vol. 8; Number 1(2013) pp. 57-62 (Impact Factor 1.7).
- Roopa K.M., 2013. **A Mathematical Formulation for the Hydrodynamic and Morphological Stability of the Unidirectional Stability of Freezing Binary Alloy in Porous Medium**, International Journal of Mathematical Research and Science (IJMRS) Vol. 1; Issue 3, pp. 1-14 (Impact Factor 2.3).
- Roopa K.M., 2013. **Stability of the Ferro-Fluid Melt Rotating on a Vertical Axis, during the Solidification of Binary Alloy using a Mathematical Model**, International Journal of Theoretical and Applied Mechanics ISSN 0973-6085 Volume 8; Number 1 (2013) pp. 45-46 (Impact Factor 1.7).

Workshops/ Webinar/ Conferences Conducted

- Conducted FDP on **“Teaching, Learning and Evaluation in Science and Engineering”** held during 17th -19th July 2020 in Association with IQAC, BIT, Bangalore
- Conducted International FDP on **“High Quality Research – Approach, Design & Publishing”** held during 5-08-2020 to 6-08-2020 in association with R & D, BIT
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- Conducted National Webinar **“Hands on Training in Data Analysis using Microsoft Excel”** held during 27th -31st July 2020 at Bangalore Institute of Technology (BIT), Bangalore.
- Conducted Webinar on **“Sage Math”** held during 1st – 3rd July 2020 at Bangalore Institute of Technology (BIT)
- Conducted National level online workshop on **“MATLAB with application in Linear Algebra”** during 11th to 16th May 2020.
- Conducted **“Inauguration of IP – Innovation Cell & Three day FDP on innovation & IPR for engineering”** held on 27th-29th February 2020 at Bangalore Institute of Technology (BIT) in association with Karnataka State Council for Science and Technology (KSCST) and Cell for IPR Promotion & Management (CIPAM), Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry, Government of India.
- Conducted Two day workshop on **“Introduction to Artificial Intelligence and Conceptualization of Algorithms”** held on 12th -13th November 2019 being organized by Bangalore Institute of Technology (BIT) in association with Karnataka State Council for Science and Technology (KSCST) and Karnataka Innovation & Technology Society (KITS), Govt. of Karnataka.
- Conducted **“Engineer’s Day”** held on 17th September 2019 at Bangalore Institute of Technology (BIT) in association with Karnataka Science and Technology Academy (KSTA).
- Conducted Three day Workshop on **“Linear Algebra for Engineering Applications and Hands on Training with MATLAB”** held on 1st -3rd April 2019 jointly organized by Karnataka State Council for Science and Technology (KSCST), Karnataka Innovation and Technology Society (KITS) and Bangalore Institute of Technology (BIT) at Bengaluru.
- Conducted Three day Workshop on **“Linear Algebra for Engineering Applications and Hands on Training with MATLAB”** held on 1st -5th April 2019 jointly organized by Karnataka state Council for Science and Technology (KSCST), Karnataka Innovation and Technology Society (KITS) and Bangalore Institute of Technology (BIT) at Bengaluru.

- Coordinated in organization of a workshop on “**Research Methodology**” held during 10th- 12th July 2018 at KSTA, Bangalore.
- Coordinated in organization of two day workshop on “**New Model Curriculum for First Year BE/B.Tech-CBCS Detailed Syllabus (2018-19) as per Outcome-Based Education (OBE) format including Course Outcomes (CO) and Bloom’s Taxonomy**” held on 7th -8th May 2018 jointly organized by VTU and Bangalore Institute of Technology.
- Coordinated in organization of Two day Workshop on “**Linear Algebra for Engineering Applications**” held on 27th -28th April 2018 jointly organized by Karnataka State Council for Science and Technology (KSCST) at Bangalore.
- Coordinated in organization of a day workshop on “**Blow up syllabus for Engineering Mathematics I & II (17MAT11 & 17MAT21)**” at Bangalore Institute of Technology for the Academic year 2017-2018.
- Coordinated in organization of a workshop on “**Role of Statistics in Scientific Research**” held during 4th- 5th January 2018 at KSTA, Bangalore.
- Coordinated in organization of a workshop on a two day workshop on “**Statistical Analysis & use of Software LATEX & R**” held during 22nd – 23rd August 2017 at KSTA, Bangalore.
- Coordinated in organization of a workshop on a two day workshop on “**Research Methodology**” held during 17th- 18th July 2017 at KSTA, Bangalore.
- Coordinated in organization of a workshop on on a two day workshop on “**Research Methodology**” held during 6th- 7th July 2017 at KSTA, Bangalore.
- Coordinated with Department of EI to organized two day workshop on “**Statistical Signal Processing using R-Graphics and Report Writing**” held during 17th- 18th April 2017 at BIT, Bangalore.
- Coordinated with Department of MBA to organized two day workshop on “**R – Statistical software**” with hands on experience for MBA faculties and students during the month of March 18th & 19th -2017
- Three day workshop on “**MATLAB & SIMULINK for Science and Engineering applications**” during 27th-29th July 2016.
- Coordinated in organization of 8th KSTA conference on “**Science and Technology for GenNext Urban Space**” being organized in association with BIT during Nov 5 – 6, 2015 in Bangalore.
- Coordinated in organization of a workshop on “**Statistical and Numerical Trends in Engineering**” held during 29th – 30th July 2015 at BIT, Bangalore.
- Coordinated in organization of a workshop on “**Research Methodologies**” held during 4th March 2015 at BIT, Bangalore.

Patron of National Conference

National Conference on Mathematics and its Applications (NCMA -2019) organized by the Department of Mathematics, Karnataka University, Dharwad during November 7th -8th , 2019.

Poster Presentation and Paper Publish in Conference

- Presented a paper entitled “**Comparative study of the Computing eigenvalues of a symmetric matrix between The existing methods and proposed method** ” in the “International Web Conference on Mathematics for Materials Science, Signals, Images and Structured Data” [ICMMSIS’20] organised by Department of Mathematics, Bannari Amman Institute of Technology, Sathyamangalam, Tamil Nadu, India from 23th - 24th July 2020

- Presented paper titled “**The Role of differential techniques for the application of Physics**” in Web based 6th National Conference on “Emerging trends in Engineering and Technology” on 15th May 2020 at GMIT, Mandya.
- Presented a poster titled “ **Finding shortest Route for Hospitals in Chikkaballapur Town- An approach using Network analysis**” in Engineering Sciences category in the KSTA Conference on “ **Energy, Climate and Environment**” organized by the school of Earth Science, Central University of Karnataka, Kadaganchi, Kalaburgi on 30th January 2016.

Book Published

A Text Book of “**DISCRETE MATHEMATICS**” – As per New CBCS Syllabus of I Semester B.C.A Course, Bangalore University published by SYKWARD PUBLISHERS.

Workshops/ Conferences attended

1. Participated in the webinar on “**E – Content Development for blend learning**” organised by New Horizon College of Engineering held on 25th July 2020.
2. Participated in the webinar on “**Complex analysis, Probability and Statistical methods**” organised by The Oxford college of Engineering held on 24th – 25th July 2020.
3. Participated in International Virtual Workshop on “ The Craft of Research” organised by the Department of Mathematics, SRMIST, Ramapuram, Chennai - 600089 on 02nd – 3rd July 2020.
4. Participated in the webinar on “**Applications Vedic Mathematics**” organized by SSUN Tamil Nadu held on 31th May 2020.
5. Participated in National Symposium on “**Technology & Innovations interface with IPR**” held at IISc, Bengaluru on 28th January 2020.
6. Participated in the One week faculty development program on “**Applications of Optimization Techniques & Number theory in Engineering Sciences**” organized by Department of Mathematics, Ramaiah Institute of Technology, Bangalore held on 16th – 21st January 2020
7. Participated in the “**107th Indian Science congress**” held at University of Agricultural Sciences, GKVK held on 3rd – 7th January 2020
8. Participated in the “**Women’s Science Congress -2020**” held from 5th-6th January,2020 during the “**107th Indian Science Congress**” held at University of Agricultural Sciences, GKVK, Bengaluru
9. Participated in the Three day – PG workshop on “**Applications of Geoinformatics**” held 3rd – 5th December 2019 at KSTA, Bangalore
10. Participated in the one day workshop on “**KSTePS-DFG Indo-German Research Proposal Writing**” held on 30th August 2019 at KSTA, Bengaluru
11. Participated in the one day workshop on “**Internet Based Information Sources and Services for Excellence in Academics**” organized by Bangalore Institute of Technology, on 30th March, 2019

12. Participated in the Three day workshop on **“Statistical Data Analysis Using Advanced MS Excel”** organized by Department of Management Studies & Research Centre (MBA), Bangalore Institute of Technology IN Association with Business Toys Pvt , Ltd, Bangalore held on 18th to 20th March 2019
13. Participated in the **10th Bangalore India Nano International Conference** held during December 5th – 7th, 2018 at Bangalore
14. Participated in the one day workshop on **“UAVs for Agriculture”** organized by the Department of Aerospace Engineering, Indian Institute of Science, Bengaluru held 22nd January 2018
15. Participated in the Two weeks Faculty Development Program on **“Recent development and Challenges in Materials and Manufacturing Process(RDCMMP2018)”** organized by the Department of Mechanical Engineering, Bangalore Institute of Technology, Bengaluru held during 1st to 13th January 2018
16. Participated in the **“One week Faculty Development Program on Discrete Mathematics, Modeling & Computational Techniques in Science & Engineering”** organized by the Department of Mathematics, MSRIT, Bengaluru held during 16th to 21th January 2017
17. Participated in the **“9th KSTA Annual Conference on SCIENCE, TECHNOLOGY AND INNOVATIONS IN THE 21st CENTURY”** jointly organized by Karnataka Science and Technology Academy and Christ University held during 20th – 21st December 2016
18. Participated in the **“Open Lecture Series on recent advances in Science & Technology MATHEMATICA”** organized by PG & UG, Department of Mathematics, MES Degree College on 19th September 2016
19. **8th Bangalore India Nano International Conference** held during March 3rd - 4th, 2016 at Bangalore
20. KSTA Conference on **“ Energy, Climate and Environment”** organized by the school of Earth Science, Central University of Karnataka, Kadaganchi, Kalaburgi on 30th January 2016
21. National Conference for **“Indian Science Congress”** held during January 3-4, 2016 at Manasa Gangotri, Mysore
22. 7th Annual KSTA National on **“Science, Technology and Productization-A means for growth”** held during 5-6 February 2015 at Oxford College of Science, Bangalore
23. KSTA Conference on **“Ecosystem: Emerging Issues”** held during 09-10 January 2015 at Poornaprajna College, Udupi
7th Bangalore India Nano International Conference held during December 4-6, 2014 at Bangalore
24. One day Seminar on **“Statistical Modeling, Analysis and Its Applications to Engineering”** held during 8th July, 2014 at M.S.Ramaiah Institute of Technology, Bangalore
25. **6th Conference of KSTA** held during December 20-21, 2013 at Christ University

26. Training Workshop on “**Digital Image Processing**” during 07-08 November, 2013 organized jointly by Dept. of Aerospace, IISc and KSTA.

Training Course attended

1. Post Graduate SQL and JAVA during 5-15 February, 2006 by Data Grid Tech Pvt. Ltd.
2. Utilization of Remote Sensing and GIS for Agriculture and Watershed Development from 16th January to 5th February, 2004 by KSRSAC
3. ‘Introduction to ARCGIS 9’ Training Program during 15th May-19th May, 2006 by ESRI India (PVT) Ltd, Bangalore.

Declaration:

I, the undersigned, declare that the above information is true and correct to the best of my knowledge and belief.

(K.M. Roopa)