

CURRICULUM VITAE

Dr. B. Komala Durga

1941 B-Type T.N.H.B Avadi Chennai-600 054.

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CAREER OBJECTIVE:

To join a renowned Institution to enhance my skills and knowledge and to work for the growth of the Institution so as to achieve personal and job satisfaction.

EDUCATIONAL QUALIFICATION:

Doctor of Philosophy, Mathematics

June 2016 to Jan 2022

Vel Tech Rangarjan Dr. Sagunthala R&D Institute of Science and Technology,
Avadi Chennai -600 062.

THESIS TITLE: Development of Inventory Models for Substitutable and Complementary Products under Quadratic Demand

Master of Philosophy, Mathematics [74%]

August 2011- July 2012

Stella Maris College, Chennai-600 086

An autonomous college, affiliated to the University of Madras

DISSERTATION: Research under the topic “*Role of fuzzy neural networks in multimodal biometry and its optimization with genetic algorithm*”. (Feb 2012 - June 2012).

Master of Science, Mathematics [73%]

June 2009 – April 2011

Stella Maris College, Chennai-600 086

An autonomous college, affiliated to the University of Madras

INTERNSHIP: Studied *Complex Analysis by Ahlfors* and done a group project assigned by Department of Mathematics, Presidency College, Chennai in May 2010,

Bachelor of Science, Mathematics [84%]

June 2006 – April 2009

Stella Maris College, Chennai-600 086

An autonomous college, affiliated to the University of Madras

PROJECT: On Statistical Analysis during the final year of the course. The emphasis is mainly on applying the tools of Statistics for a collected data.

+2, Biology with Mathematics [79 %]

Passed out in 2006

Vijayantha Model Higher Secondary School, Avadi Chennai-600 054
Tamilnadu State Board

10th, Physics/ Chemistry/ Maths [75%]

Passed out in 2004

Vijayantha Senior Secondary School, Avadi Chennai-600 054
C.B.S.E

PROFESSIONAL CERTIFICATES:

- Certification by AICTE on, “**Inculcating Universal Human Values in Technical Education**”, (October 2022).
- Completed the NPTEL Online Certification course on **Operations and Supply Chain Management** with a consolidated score of 40%.
- Obtained A grade in **Documentation and Information Science**, one year Certificate programme offered by UGC, June 2007- April 2008 (part time).
- Completed a certificate in **Graphic Designing with Indesign Software** conducted by BICS InfoTech, during the eriod 15.02.2008 to 16.02.2008.

EXPERIENCE:

- Worked as an Assistant Professor in the Department of Mathematics, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Avadi, Chennai from 08.07.2013 to 16.06.2023.
- Worked as an Assistant Professor in the Department of Mathematics. Rajalakshmi Engineering College, Thandalam, Chennai from 12.9.2012 to 24.6.2013.

PUBLICATIONS:

1. Niranjana, S. P., **B. Komala Durga**, and M. Thangaraj. "Steady-State Analysis of Bulk Queuing System with Renovation, Prolonged Vacation and Tune-Up/Shutdown Times." Proceedings of 2nd International Conference on Mathematical Modeling and Computational Science: ICMMS 2021. Singapore: Springer Nature Singapore, 2022.
2. **Komala Durga, B.**, Chandrasekaran, E., “Impact of Substitution Cost on Optimal Order Quantity for Substitutable and Complementary Products with Quantity Discount under Quadratic demand” Journal of Mathematical and Computational Science, 11 (2021), No. 5, 5629-5651
3. **Komala Durga, B.**, Chandrasekaran, E., “Optimal ordering policy for substitutable and complementary products under quadratic demand” Journal of Mathematical and Computational Science, 11.2 (2021) :1849–1867.

4. **Komala Durga, B.**, Chandrasekaran, E., “Optimal ordering policy for substitutable products under quadratic demand with cost of substitution” *Journal of Critical Reviews*, 7.4 (2020): 200–205
5. **Komala Durga, B.**, Chandrasekaran, E., “Inventory Decision for Substitutable Products Under Quadratic Demand with Quantity Discounts” *Advances in Intelligent Systems and Computing* , Proceedings of First International Conference on Mathematical Modeling and Computational Science ICMACS (2020): 527-538.
6. **Komala Durga, B.**, Chandrasekaran, E.,” Optimal ordering policy for substitutable products with quadratic demand” ,*Journal of Advanced Research in Dynamical and Control Systems*, 11.7 Special Issue (2019): 1553–1560
7. Shanmugapriya, R., **Komala Durga, B.**, Gunasekar, T., “Mathematical modelling of lifestyle disease faced by adults in tamilnadu using fuzzy relational maps (FRMs)”,*International Journal of Recent Technology and Engineering*, 8.3 (2019) : 5312–5315
8. Shanmuga Priya, R., Gunasekar, T., Suresh, M.L., **Komala Durga, B.**,” A study on the influence of communication industry using a new average fuzzy relational maps model”,*International Journal of Mechanical and Production Engineering Research and Development*, 8.5 (2018): 399–408.
9. Shanmugapriya.R, Venkatraman.R and **Komala Durga.B**, “A SPECIAL SIMPLE RESTRICTED AVERAGE FCMS MODEL TO ANALYSIS THE PROBLEMS OF PLUS TWO STUDENTS USING FUZZY ANALYSIS”,*International Journal of Pure and Applied Mathematics*,114.6 (2017) : 241-248
10. **Komala Durga.B** and Shanmugapriya.R,” Analysis of transmission of Dengue virus using Fuzzy Relational Maps (FRMs)”, *International Journal of Pure and Applied Mathematics*, 119. 13 (2018) : 133-141
11. Shanmugapriya.R, Venkatraman.R and **Komala Durga.B**, “Analysis of Students Performance in the National Eligibility cum Entrance Test using Fuzzy Cognitive Maps (FCMs)”, *International Journal of Pure and Applied Mathematics*, 119 .13 (2018) : 123- 131.
12. Kalaiarasi, K., Mercy, P., **Komala Durga, B.**, “Optimization of fuzzy partial back ordering economic order quantity model on the boundaries of the fill rate”,*Global Journal of Pure and Applied Mathematics*, 11.3 (2015): 1583–1593
13. Kalaiarasi, K., Mercy, P., **Komala Durga, B.**, “Optimization of fuzzy EOQ inventory cost under order crossover”,*International Journal of Applied Engineering Research*, 10.11 (2015): 29835–29843.

RESOURCE PERSON:

- Acted as resource person and delivered a talk on *Optimization Modeling of Innovation in Technology* organized by the Institution Innovation Council / Innovation Club and Department of Mathematics, Cauvery College for Women (Autonomous), Annamalai Nagar, Trichy on 21st April 2022.

PRESENTATIONS:

- Presented a paper entitled *Inventory Decision for substitutable Products with Quadratic Demand* in the International Conference on Mathematical Techniques and Applications (ICMTA-2020) organized by Department of Mathematics, SRMIST, Kattankulathur, India during 30th January to 1st February 2020, sponsored by Science and Engineering Research Board (DST –SERB).
- Presented a research paper titled *Inventory Decision for Substitutable Products under Quadratic Demand with Quantity Discount* through digital media in 1st International Conference on Mathematical Modeling and Computational Science (ICMMCS-2020) held on 14th and 15th August 2020.
- Presented a paper in the National Conference on Recent Trends in Mathematics and its Applications (NCRTMA'18) conducted SRMIST, Vadapalani campus , during 23rd and 24th of February 2018. Title of the paper is *Analysis of transmission of dengue virus using fuzzy relational maps*.

SEMINARS/ WEBINARS / FDP:

- Attended a webinar on :Finance for Entrepreneurs” held on 17th February, 2022 organized by Vel Tech Institute Innovation Council at Vel Tech Rangarjan Dr Sagunthala R&D Institute of Science and Technology.
- Participated in the online webinar on Mathematical Modelling and problem- solving using Sage Math organized by Department of Applied Mathematics, Sri Venkateswara College of Engineering on 4th and 5th August 2020.
- Participated online webinar on “NAAC Assessment & Accreditation for AQAR Process, organized by IQAC of Anjuman college of Engineering and Technology held on 14th July 2020.
- Participated in the online 7 Days- Faculty Development Program organized by SNMV college of Arts and Science Institute of Management, Coimbatore held from 8/6/20 to 15/6/20.
- Participated in the webinar titled “Essential Mathematics for Engineering Projects and Research – An insight into Methodologies” organized by SASTRA Deemed to be University, Thanjavur on 12.06.2020.
- Participated in the webinar on “An Introduction to Domination in Graph Theory” organized by Department of Mathematics, KG College of Arts and Science held on 5/6/2020.
- Participated in the online webinar on “SEMI GRAPHS AND VIRUS GRAPHS” organized on 31st May 2020 by PG and Research Department of Mathematics, Cauvery College for Women, Trichy.

- Participated in the Online National Workshop on Basics of Documentation using Latex held on 24,25,29,30 April 2020 organized by the Department of Mathematics, Stella Maris College, Chennai.
- Participated in the webinar programme on OPEN SOFTWARES FOR MATHEMATICS EDUCATION organized by the Department of Science and Humanities, Sri Krishna College of Technology, Coimbatore from 20.04.2020 to 24.04.2020.
- Participated in the Two day Webinar on “Applications of Mathematics in Mechanical Engineering” conducted by Department of Mathematics, KPRIET from 11-06-2020 to 12-06-2020.
- Participated a webinar on “Guidance to Young Graduates for preparation of NET/SET Examination” organized by first year department, Priyadarshini Bhagwati College of Engineering, Nagpur, under the initiative of IQAC on 12th June 2020.
- Participated in the webinar on “Data Analysis using R” organized by Department of Mathematics, Guru Nanak College, Chennai on 17.07.2020.
- Participated in the International Workshop on Data Analytics and Matlab, organized by Department of Mathematics, Stella Maris College, on 6th September 2019.
- Participated in the one day Guest Lecture on Application of Mathematics in Engineering, organized by the Department of Mathematics at Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology on 7th April 2018.
- Participated in one day Faculty Development Program on Introduction to R Language organized by the Department of Mathematics at Vel Teech Rangarajan Dr Sagunthala R&D Institute of Science and Technology on 29th December 2017.
- Participated in the two days’ workshop on Coupling the Grand Challenges for Engineering with CDIO held on 7.3.2017 and 8.3.2017 at Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology.
- Participated in the workshop on “Effective Teaching through Active Learning Methods – ETAL ‘16’ held on 30.12.2016 at Veltech Chennai.
- Participated in the Teacher’s Enrichment week – long Workshop on Engineering Mathematics at Institute of Mathematical Sciences (**IMSc**), Chennai from 23rd to 28th November 2015.
- Undergone the FDP on “Research Methodologies in Engineering and Technology” conducted by the Department of Electrical and Electronics Engineering in association with Computer Society of India- Chennai Chapter on 8th & 9th of May 2014.
- Participated in the National Workshop on “Application of Fuzzy Theory” (NWAFT-2011) conducted by Hindustan Institute of Technology and Science on 10th & 11th August 2011.

- Participated in National Symposiims on “Recent Advances in Computational Technique” (RACT_09) conducted by Stella Maris College held during January 1-10, 2009.
- Participated in the training programme “Creating my future”, organized by Career Guidance Cell, at Stella Maris College from 10th to 14th November 2008.
- Attended the Swift Jyothi program, conducted at NIIT Mylapore in 2008.
- Attended a training in Basic Computer skills offered by Department of Computer Science, Stella Maris College and sponsored by the Foundation for Academic Excellence and Access, New Delhi from December 26 to 30, 2006.
- Undergone training on “Creative Skills” held at VSSS, Avadi from 15.04.2002 to 25.04.2002.
- Undergone training on “ Creative Skills” held at VSSS, Avadi from 16.04.2001 to 28.04.2001

AWARDS:

- Participated in paper presentation and secured first place at the Inter-Year Math Fest, 2011.
TITLE: *Mathematical Modelling of mind in Meditation.*
- Participated in paper presentation and secured second place at the Inter-Year Math Fest, 2009.
TITLE: *The Transmission Dynamics of HIV / AIDS: Some Basic Models*
- Participated in “Warm – up” and secured First place at the Inter Years Math Fest 2008.

COURSES H A N D L E D :

- Linear Algebra for Computing
- Calculus and Ordinary Differential Equations
- Probability, Statistics and Queuing Theory
- Matrices and Calculus
- Vector Calculus and Complex Variables
- Fourier series and Transform Techniques
- Probability and Random Processes
- Statistics and Numerical Methods
- Calculus and Differential Equations
- Probability and Numerical Methods
- Probability and Statistics
- Transforms and Partial Differential Equations
- Numerical Methods Using MATLAB
- Discrete Mathematical Structures
- Bio Statistics
- Business Statistics
- Statistics for Computing
- Data Analytics

KEY SKILLS

- Deep knowledge of Math subjects and strong interest in teaching mathematics
- Efficiently deliver content through ALM (Active Learning Method) to students.
- Ability to plan the lesson and deliver them efficiently to the students.
- Strong communication and organizational skills.
- Knowledge on MATLAB, R-LANGUAGE, SCI-LAB
- Advanced understanding of basic office applications, including MS Office (Word, Excel, and PowerPoint).

CO-CURRICULAR AND EXTENSION:

- Organized and co-ordinated Events in Talent Search Forum (Tech Fest) Organized by Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology in year 2022.
- Organized and co-ordinated Events in Talent Search Forum (Tech Fest) Organized by Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology in year 2021.
- Participated in MIME, organized by the Department of Social Work, “UNNATHI” Social Work Students ‘Forum and The Senior Citizens Bureau in Commemoration of “World Elders Day” held on September 30, 2009 at Stella Maris College.
- Donated Blood on 07.02.2008 at Stella Maris College, organized by CAPACS, Chennai.
- Rendered service during 16th Handi park 2008 sports meet for special children at YMCA ground, Nandanam, Chennai on February 9, 2008.
- Rendered service during 15th Handi park 2007 sports meet for special children at Rajarathnam Stadium, Egmore, Chennai on 17th March 2007.
- Participated in Art Competition organized by Pallava Artists Village & Tamilnadu Arts & Crafts improvement association on November 19, 2006.
- Participated in the special camping programme on the theme “Healthy Youth for Healthy India” at sirumathur and Salamangalam Village, Kundrathur Panchayat, Padappai, Kancheepuram District from 11th November 2006 to 20th November 2006.
- Completed the First Aid training programme conducted by CHYK Sarveswara Tamaraiakkam on July 2004 at Jaya Engineering College.
- Participated in Fancy dress Competition and secured Third , organized by Vijayantha Model Higher Secondary School, Avadi during the year 2005-2006.

PERSONAL DETAILS:

Father's name : Mr. T.Balakrishnan (late)
Mother's name : Mrs. B.Jaya Gowri
Spouse name : Mr.G.Arunachala Boopathy
Date of birth : 20th July 1989
Sex : Female
Marital status : Married
Nationality : Indian
Languages known : English and Tamil
Hobbies : Reading books and listening to music

DECLARATION:

I declare that the information and facts stated herein are true and correct.

Place: Chennai

Date:

(Dr. B.Komala Durga)