

Profile



Name : Dr. K. ANNADURAI

Designation : Associate Professor and Head

Department : PG and Research Department of Mathematics

Nationality : Indian

Qualification : M.Sc.,M.Phil.,M.Ed.,PGDCA.,Ph.D.,

Institutional Address : PG and Research Department of Mathematics,
M.V.Muthiah Government Arts College for Women,
Dindigul - 624 001, Tamil Nadu, India.

Residential Address : 4/591, Mugiyagam,
Rajakaliamman Nagar, Karur Road,
Dindigul - 624 001, Tamil Nadu, India.

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drkannadurai@gmail.com

Educational Qualifications:

Exam Passed	Institution/University	Year	Specialization
Ph.D *	Gandhigram Rural University	2012	Operations Research (Inventory Control)
M.Phil	Madurai Kamaraj University	2000	Mathematics
M.Ed	Madurai Kamaraj University	1998	Education
PGDCA	Madurai Kamaraj University	1995	Computer Science & Technology
B.Ed	Madurai Kamaraj University	1993	Education
M.Sc	Thiagarajar College, Madurai	1991	Mathematics
B.Sc	Gandhigram Rural University	1988	Mathematics
H.Sc	Govt. HSS, Oddanchatram	1985	Maths, Physics, Chemistry, Biology
SSLC	Govt. HS, K. Pudukottai	1983	General

* **Title of Thesis:** Study on a class of inventory models for single item under supply chain environment.

Professional Experience:

Institution worked	Designation	Period of Service
M.V.Muthiah Govt. Arts College (W), Dindigul	Associate Professor	09.07.2021 to Till date
M.V.Muthiah Govt. Arts College (W), Dindigul	Assistant Professor	17.12.2015 to 08.07.2021
Government Arts College, Udumalpet	Assistant Professor	03.09.2013 to 16.12.2015
Government Arts College, Karur	Assistant Professor	20.07.2010 to 02.09.2013
Government Arts College, Dharmapuri	Assistant Professor	09.07.2009 to 19.07.2010
Government High School, Puravipalyam	BT Assistant	31.12.2008 to 08.07.2009
PSNA College of Engg.& Tech., Dindigul	Assistant Professor	14.10.2005 to 29.12.2008
RVS College of Engg.& Tech., Dindigul	Lecturer	31.07.1995 to 13.10.2005
M.K. University-Evening College, Dindigul	Lecturer	01.07.1997 to 30.04.2005

Membership of Professional Bodies:

Life member in Indian Society for Technical Education (MISTE) - LM34612

- **Teaching Experience:**

UG: 32 Years, PG: 32 Years

- **Research Experience:** 19 Years

Training Programmes Attended:

S.No	Programme	University	Period	Days
1	Orientation Programme	UGC-ASC University of Madras	09.07.2009-05.07.2009	28 days
2	Refresher Course	UGC-ASC Madurai Kamaraj Unvty	01.02.2013-21.02.2013	21 days
3	Refresher Course	UGC-HRDC Madurai Kamaraj Unvty	25.11.2015-15.12.2015	21 days
4	Refresher Course	UGC-HRDC Madurai Kamaraj Unvty	16.11.2018-06.12.2018	21 days
5	Refresher Course	UGC-HRDC Madurai Kamaraj Unvty	10.03.2021-23.03.2021	14 days

Research Guidance:

S.No	Degree	Awarded	Guiding
1	Ph.D	4	1
2	M.Phil	14	0

Number of times acted as external Examiner for Ph.D Candidates : 17

Details of Departmental Examination Passed :

- Test Code Number: 152

Name of the Departmental Test: The Account Test for Executive Officers

Date of Examination: 20.02.2021.

Member of Board of Studies:

- Mother Teresa Women's University, Kodaikanal
- Sri Meenakshi Government Arts College for Women (Autonomous), Madurai
- Arulmigu Palaniandavar Arts College for Women (Autonomous), Palani
- G.T.N. Arts College (Autonomous), Dindigul
- Sri S. Ramasamy Naidu Memorial College (Autonomous), Sattur
- Valluvar College of Science and Management (Autonomous), Karur.

Member of Doctoral Committee in various Colleges:

- H.H.The Rajah's College (Autonomous), Pudukottai (Affiliated to Bharathidhasan University, Trichirappalli)
- Government Arts College, Udumalpet (Affiliated to Bharathiar University, Coimbatore)
- Sri S. Ramasamy Naidu Memorial College (Autonomous), Sattur (Affiliated to Madurai Kamaraj University, Madurai)
- G.T.N. Arts College (Autonomous), Dindigul (Affiliated to Madurai Kamaraj University, Madurai)
- Sri G.V.G. Visalakshi College for Women (Autonomous), Udumalpet (Affiliated to Bharathiar University, Coimbatore)

Subject Expert - Confidential Work:

- G.T.N. Arts College (Autonomous), Dindigul
- Government Arts College (Autonomous), Karur
- Tamilnadu Public Service Commission (TNPSC), Chennai

External Examiner for M.Sc and M.Phil Project Work:

- Mother Teresa Women's University, Kodaikanal
- Government Arts College, Krishnagiri
- Government Arts College, Karur
- G.T.N. Arts College (Autonomous), Dindigul
- Government Arts College for Women, Nilakottai
- Jayaraj Annapackium Arts College (Autonomous), Periyakulam
- NGM College (Autonomous), Pollachi

Member of Board of Examiner:

- Mother Teresa Women's University, Kodaikanal
- Bharathiar University, Coimbatore
- Baharathidhasan University, Trichirappalli
- Periyar University, Salem
- Madurai Kamaraj University, Madurai
- Manonmaniam Sundaranar University, Tirunelveli
- Gandhigram Rural Institute (Deemed to be University), Gandhigram
- Government Arts College, Karur

- E.V.R. Government Arts College (Autonomous), Trichirappalli
- Thiagarajar Arts College(Autonomous), Madurai
- Fatima College for Women (Autonomous), Madurai
- H.H.The Rajah's College (Autonomous), Pudukottai
- PARK's College (Autonomous), Tirupur
- Sri Sarada College for Women (Autonomous), Salem
- Poombuhar College for Women (Autonomous), Sirkali
- Saraswathi Thiagaraja College (Autonomous), Pollachi
- NGM Coolege (Autonomous), Pollachi
- G.T.N. Arts College (Autonomous), Dindigul
- Jayaraj Annapackium Arts College (Autonomous), Periyakulam

Editorial Activity/Journal Reviewer:

- International Journal of Numerical Algebra, Control and Optimization
- International Journal of Dynamical Systems and Differential Equations
- International Journal of Advances in Mathematics and Computer Science
- International Journal of Production Research
- International Journal of Systems Science: Operations and Logistics
- Computers and Industrial Engineering
- International Journal of Applied and Computational Mathematics
- Asian Journal of Mathematics and Computer Research
- International Journal of Management Science and Engineering Management.

Additional Responsibilities:

- Served as a IQAC member
- Served as a Secretary for Students-Staff Co-operative Store
- Served as a RUSA Co-ordinator
- Served as College Union in-charge
- Acted as Chief Invigilator for Tamilnadu Public Service Commission - Group I examination
- Served as a Committee member for Tamil medium Scholarship
- Served as a Committee member for Research and Ethical Committee
- Serving as a Committee member for M.V.M Journal of Research
- Serving as a Nodal Officer for E-Governance.

Chaired Sessions:

- Chaired a Session in the International Conference on Mathematical Modelling and Computational Intelligence Techniques conducted by the Department of Mathematics, The Gandhigram Rural Institute (Deemed to be University), Gandhigram on 11.02.2021.
- Acted as Chair Person in the International Conference on Applied Analysis and Discrete Mathematics organized by the Department of Mathematics, The Gandhigram Rural Institute (Deemed to be University), Gandhigram on 23.01.2024.

Invited Talk / Resource Person:

- Acted as a Resource Person on Mathematics Association Function and delivered a lecture on Real life Applications in Mathematics organized by PG and Research Department of Mathematics, G.T.N. Arts College (Autonomous), Dindigul - 624005 on 15.09.2023
- Acted as a Resource Person and Delivered a Guest Lecture on Applications of Operations Research in Business on 07.12.2023 at Ramanujan Mathematical Club, Department of Mathematics, Mother Teresa Women's University Research and Extension Centre, Coimbatore
- Delivered a Special lecture on Inventory Control on 11.12.2023 at PG and Research Department of Mathematics, Sri S. Ramasamy Naidu Memorial College, Sattur - 626203
- Acted as a Resource Person on One Day Hands on Training Program in $\text{\LaTeX}$ on 05.02.2024 at PG and Research Department of Mathematics, G.T.N. Arts College (Autonomous), Dindigul - 624005
- Acted as a Resource Person on One Day Faculty Development Program on $\text{\LaTeX}$ (An Outreach Activity for School Teachers) on 26.03.2024 at Prasiddhi Vidyodaya Senior Secondary School under the aegis of DBT Star College Scheme, PG and Research Department of Mathematics, G.T.N. Arts College (Autonomous), Dindigul - 624005.

Seminars and Conferences Conducted:

- As the Organizing Secretary, organized **UGC Sponsored One day Seminar** on the topic **Applications of Mathematics in Real Life** on 02.01.2015 representing Department of Mathematics, Government Arts College, Udumalpet
- As the Organizing Secretary, organized **State level Seminar** on the topic **Recent development in Mathematics** on 21.03.2018 representing Department of Mathematics, M.V.Muthiah Government Arts College for Women, Dindigul.

Number of Publications in Journals : 48 Papers in Journals and 14 in Proceedings

Number of Papers Presented in Conferences : 10

Number of Seminars/Conferences/Workshops attended : 30

Number of Online Seminars/Conferences/Workshops attended : 113

- **Research Metrics:**

Citation Index: 349

i-10-Index: 11

h-Index: 10

List of Papers Published in Journals

- **Controllable lead time and lost sales rate reduction with varying order cost in stochastic inventory system**, International Journal of Applied Mathematical Analysis and Applications, 2007, Volume 2, No.1, pp. 71-81
- **Controlling setup cost in (Q, r, L) inventory model with defective items**, Applied Mathematical Modelling, 2010, Volume 34, No.6, pp.1418-1427
- **Reducing lost-sales rate in (T, R, L) inventory model with controllable lead time**, Applied Mathematical Modelling 2010, Volume 34, No.11, pp. 3465-3477
- **Ordering cost reduction in probabilistic inventory model with controllable lead time and a service level**, International Journal of Management Science and Engineering Management, 2010, Volume 5, No.6, pp. 403-410
- **An inventory model for deteriorating items with credit period dependent demand under two-level trade credit financing**, Journal of Advanced Research in Applied Mathematics, 2011, Volume 3, No.1, pp. 24-46
- **Analysis of partial trade credit financing in a supply chain by EOQ-based model for decaying items with shortages**, International Journal of Advanced Manufacturing Technology, 2012, Volume 61, No.9-12, pp. 1139-1159

- **Integrated inventory model for deteriorating items with price-dependent demand under quantity dependent trade credit**, International Journal of Manufacturing Engineering, 2013, Volume 2013
- **An optimal replenishment policy for decaying items with shortages and salvage value**, International Journal of Management Science and Engineering Management, 2013, Volume 8, No.1, pp. 38-46
- **An integrated inventory model for decaying items with time discounting and shortages under two levels of trade credit**, Bulletin of Kerala Mathematics Association, 2013, Volume 10, No.1, pp. 49-66
- **Ordering cost reduction in inventory model with defective items and back order price discount**, Journal of Optimization, 2014, Volume 2014, Article ID 767943, pp. 1-14
- **Decaying inventory model with stock-dependent demand and shortages under two-level trade credit**, International Journal of Advanced Manufacturing Technology, 2015, Volume 77, pp. 525-543
- **Minimax distribution-free procedure for mixture inventory model with variable lead time and a service level constraint by reducing order cost**, American Journal of Mathematical and Management Sciences, 2016, Volume 35, No.1, pp. 1-14
- **A study on triangular prime total labeling of graph**, Journal of Applied Science and Computations, 2018, Volume 5, No.12, pp. 13-19
- **Fuzzy topologized domination in graphs**, International Journal of Mathematics Trends and Technology, 2019, Volume 65, No.8, pp. 133-138
- **Stabilizer graph and orbit graph of finite groups**, Annals of Pure and Applied Mathematics, 2020, Volume 21, No.2, pp. 95-102

- **An integrated production-distribution inventory system for deteriorating products in fuzzy environment**, Malaya Journal of Matematik, 2020, Volume 8, No.4, pp. 1527-1538
- **Fuzzy parametric inventory model for economic production cycle with imperfect production process**, International Journal of Advance and Innovative Research, 2021, Volume 8, No.1(IV), pp. 366-375
- **An integrated vendor - buyer inventory model with ordering cost reduction, exponential lead time crashing cost and rework**, Journal of Applied Science and Computations, 2021, Volume 8, No.5, pp. 1-16
- **Comprehensive Study on Prime Combination Labeling of Graphs**, Indian Journal of Natural Sciences, 2021, Volume 12, No.67, pp. 32733-32742
- **Optimization of fuzzy integrated inventory model with ordering cost reduction dependent on lead time**, International Journal of Operations Research, 2021, Volume 18, No.4, pp. 79-97
- **k-Triangular prime cordial labeling of maximal outer planar graphs**, Jnanabha, 2022, Volume 52, No.2, pp. 126-137
- **Integrated supply chain model with pricing strategies and controllable processing lead time under VMI-CS policy**, International Journal of Mathematics Trends and Technology, 2022, Volume 68, No.6, pp. 60 - 80
- **Optimal policy for an inventory model using pentagonal fuzzy number**, International Journal of Mathematics Trends and Technology, 2023, Volume 69, No.3, pp. 7-15
- **Optimization of a fuzzy inventory model with pentagonal fuzzy numbers**, International Journal of Mathematics and Computer Research, 2023, Volume 11, No.3, pp. 3277- 3287

- **Ordering cost reduction dependent on lead time in a constrained probabilistic backorders inventory model**, International Journal of Advance and Innovative Research, 2023, Volume 10, No.1(VI), pp. 4-14
- **A Supply Chain Model with Ordering Cost Reduction and Rework under Trade-Credit**, Indian Journal of Natural Sciences, 2023, Volume 14, No.77, pp. 54860- 54879
- **A closed loop supply chain inventory model with distribution-free approach in environmental investigation**, Advances and Applications in Mathematical Sciences, 2023, Volume 22, No.5, pp. 977 - 996
- **A fuzzy EOQ inventory model with advance payment and various fuzzy numbers**, Indian Journal of Science and Technology, 2023, Volume 16, No.27, pp. 2076- 2089
- **Inventory model with preservation technology and exponential holding cost in fuzzy scenario**, Ratio Mathematica, 2023, Volume 48, pp. 1- 14
- **Integrated vendor-buyer supply chain model with deteriorated items by reducing carbon emission**, Ganita, 2023, Volume 73, No.2, pp. 41 - 57
- **Fuzzy inventory model for deteriorating items with low carbon emission cost under preservation technology and trade credit**, Communications in Mathematics and Applications, 2023, Volume 14, No.5, pp. 1767 - 1797
- **Optimizing a fuzzy multi-item inventory system and ordering cost depletion contingent on lead time with carbon emission cost**, Communications in Mathematics and Applications, 2023, Volume 14, No.5, pp. 1693 - 1725
- **On new classes of some nano closed sets**, International Journal of Research and Analytical Reviews, 2024, Volume 11, No.2, pp. 146 - 157

- **Carbon Constrained Integrated Inventory System with Linear and Quadratic Production and Compound Poisson Demand**, Tuijin Jishu/Journal of Propulsion Technology, 2024, Volume 45, No.2, pp. 4440 - 4464 .
- **Multi-object manufacture with multi-trader optimization of fuzzy inventory system feasible events along credible demand**, Indian Journal of Natural Sciences, 2024, Volume 14, No.82, pp. 70566 - 70580.
- **On $n^*\mu$ -continuous and decomposition of nano continuity maps**, Indian Journal of Natural Sciences, 2024, Volume 15, No.85, pp. 79207-79214.
- **Inventory model involving lead time crashing cost as an exponential function with ordering cost reduction dependent on lead time**, Jnanabha, 2024, Volume 54, No.2, pp. 306 - 314.
- **Multi item production for fuzzy inventory system optimization along credible actions contingent demand**, Mukd Shabd Journal, 2025, Volume 14, No.1, pp. 385 - 400.
- **An inventory model for perishable items addressing six demand types, non-linear holding costs, and investment in green technology**, Fuzzy System and Soft Computing, 2025, Volume 19, No.2, pp. 127 - 156.
- **An integrated mixture of distribution model for environmental cost with fuzzy demand**, OPSEARCH, 2025, Volume 62, No.2, pp. 926 - 958.
- **Optimizing a Single-Vendor Multi-Purchaser for Multi-Item Fuzzy Inventory System along Lead Time with Carbon Emission Cost**, Mapana Journal of Sciences, 2025, Volume 24, No.3, pp. 1 - 24.
- **An EOQ model for a Two-warehouse system considering environmental impact through multiple carbon emission factors**, Mukd Shabd Journal, 2026, Volume 15, No.2, pp. 36 - 50.

- **Optimization of Single-Seller Multi-item in Multiple Outlets Distribution Network Fuzzy Inventory System with Lead Time and Carbon Emission Cost**, Mapana Journal, 2026, Volume 25, No.1, pp. 111 - 136.

List of Seminars/Conference/Symposium/Workshop etc. attended

- **International Conference on Logistics and Supply Chain Management** at PSG College of Technology Coimbatore, during 7 - 9 August, 2008
- **Two days Workshop on Soft Computing** at PSNA College of Engineering and Technology, Dindigul, during 14 - 15 March, 2008
- **International Conference on Intelligent Systems and Control** at Karpagam College of Engineering, Coimbatore during 01-02 February, 2008
- **National Conference on Applied Mathematics** at B.S. Abdur Rahman Crescent Engg. College, Chennai, during 03-04 January, 2008
- **National Conference on Mathematical and Computational Models** at PSG College of Technology Coimbatore, during 13 - 15 December, 2007
- **Workshop on Soft Computing** at National Institute of Technology, Tiruchirappalli, during 15-17 November, 2007
- **Symposium on Recent Advances in Mathematical Modeling in Engineering** at Thiagarajar Engineering College, Madurai, during 14-15 September, 2007
- **National Conference on Operational Research in Information Technology and Supply Chain Management** at Thiagarajar Engineering College, Madurai, during 06-08 September, 2007
- **National Conference on Mathematics, Computing and Modeling** at Gandhigram Rural University, Gandhigram, during 03-04 March, 2007
- **International Conference on Global Manufacturing and Innovation** at Coimbatore Institute of Technology, Coimbatore during 27-29 July, 2006

- **National Conference on Intelligent Optimization Modeling** at Gandhigram Rural University, Gandhigram, during 03-04 March, 2006
- **Eighth Annual Convention of ISTE on Innovations in Engineering Education Trends and Focus** at P.S.N.A.College of Engineering and Technology, Dindigul, during 28-29 October, 2005
- **National Conference on Computing and Mathematical Modeling** at Gandhigram Rural University, Gandhigram, during 25-26 March, 2005
- **Seminar on Optimization Techniques for Engineering Applications** at R.V.S. College of Engineering and Technology, Dindigul, during 10 - 11 March, 2005
- **National Seminar on Environment and Pollution Awareness** at R.V.S. College of Engineering and Technology, Dindigul, on 30 July, 2004
- **One week Short Term Training Programme on Recent Trends in Automated Manufacturing Systems** at R.V.S.College of Engineering and Technology, Dindigul, during 15- 19 December, 2003
- **Workshop on Better methods of Teaching** at R.V.S.College of Engineering and Technology, Dindigul, on 08 September, 2003
- **One week Short Term Training Programme on Neural Net works and Fuzzy Logic and their Applications to Information Processing Technologies** at R.V.S.College of Engineering and Technology, Dindigu, during 23- 27 June, 2003.
- **Five day workshop on Finite Element Methods and Applications in Engineering** during Anjalai Ammal Mahalingam Engineering College, Kovilvenni, Thiruvavarur, during 17 - 21 March, 2003.
- **Fifth Annual Convention of ISTE -Tamilnadu and Pandichery Section on E-Governance in Educational Perspective** at Periyar Maniammai College of Technology for women, Vallam, on 12 October, 2002

- **Workshop on Application of Mathematics in Engineering and Technology**
at P.S.N.A.College of Engineering and Technology, Dindigul, on 02 September, 2002
- **XXX Annual Convention and National Seminar on Shaping Technical Education for the future** at Nirma Institute of Technology, Ahmadabad, during 14- 16 December, 2000
- **First Annual Convention of the ISTE, Tamilnadu and Pandichery Section**
at Kongu Engineering College, Perundurai, Erode, on 1 August, 1998