



Dr. K.Rameshkumar
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I Educational Qualification

- **Ph.D in Production Engineering from PSG College of Technology, Coimbatore, Affiliated to Bharathiar University, Coimbatore, 2007.**

Thesis Title:

“Development of PSO algorithms for a class of continuous and discrete optimization problems.”

- **Master of Engineering (M.E) in Mechanical Engineering, specialization in Production Engineering from Bharathiar University (Government College of Technology, Coimbatore), 1991.**

Thesis Title:

“NC Tooling, Part programming and Production Economics for a Machining Center”.

- **Bachelor of Engineering (B.E) in Mechanical Engineering from Bharathiar University, Coimbatore, 1991.**

II Career profile

S.No.	Organization	Period		Designation	Total Years of Service
		From	To		
1	Amrita School of Engineering, Ettimadai, Coimbatore	November 2007	Till date	Professor, Department of Mechanical Engineering	-
2		January 2004	October 2007	Asst. Professor, Department of Mechanical Engineering	3 years, 10 months
3		May 2000	January 2004	Senior Lecturer, Department of Production Engineering	3 years, 8 months
4	Kumaraguru College of Technology, Coimbatore.	August 1998	May 2000	Senior Lecturer, Department of Mechanical Engineering	1 year, 10 months
5	SIV Industries Limited,# Coimbatore.	May 1994	August 1998	Project Engineer (Mechanical)	4 years, 3 months
6	Kumaraguru College of Technology, Coimbatore.	June 1993	April 1994	Lecturer, Department of Mechanical Engineering	8 months
7	Clear Vision Cables, Coimbatore	January 1992	April 1993	Engineer, (Erection and Commissioning)	1 year, 3 months

involved in design, development and commissioning (Mechanical Stream) of 150 TPD distributed controlled Viscose Staple Fiber Spinning Machine in collaboration with M/s Lenzing, Austria. Responsibilities include development of basic and detailed Process & Instrumentation Diagrams (P&ID), preparation of BOM, Project Planning, erection and commissioning and technical services.

III Research Publications

International Journals (Accepted / Published)

1. Karthi, R., Arumugam, S., Rameshkumar, K., An Improved Discrete Particle Swarm Clustering (IDPSC) Algorithm for Data Clustering, *Studies in Computational Intelligence*, Springer-Verlag, (Book series), 2008.
2. Rajeshwar.S., Mohanasundaram, K.M., Rameshkumar, K., Lathashankar, B., Supply Chain Network Modeling and Optimization using Swarm intelligence, *Manufacturing Technology Today*, 7(5), pp 3-10, (2008).
3. Rajeshwar.S., Mohanasundaram, K.M., SarathChandra, P.S., Rameshkumar, K., Optimizing Manufacturing and Supply Chain Operations in Logistics Management, *The ICFAI Journal of Supply Chain Management*, 5(1), pp 54-68, (2008).
4. Karthi, R., Arumugam, S., Rameshkumar, K., Comparative evaluation of Particle Swarm Optimization Algorithms for Data Clustering using real world data sets, *International Journal of Computer Science and Network Security*, 8(1), pp 203-212, (2008).
5. Rajeshwar.S., Mohanasudaram, K.M., Rameshkumar., Chandrasekar, B., Production And Distribution Scheduling Of Supply Chain Structure Using Intelligent Particle Swarm Optimization, *International Journal of Intelligent Systems Technology & Applications (IJISTA)* Inder-science publisher Accepted after review in the month of Nov. 2007 Special issue(In Press).
6. Rajeshwar.S., Mohanasudaram, K.M., Rameshkumar, K., Chandrasekar, B., Multi Echelon Supply Chain Optimization Using Particle Swarm Intelligence Algorithm”, *International Journal of Manufacturing Science and Production*, 8(2-4), pp 199-212, (2007).
7. Rajeshwar.S., Mohanasudaram, K.M., Edinbarough A Immanuel, Prasad, P.S.S., Rameshkumar, K., Profit Optimization in Three Echelon Supply Chain revenue management through new heuristic optimizer, *International Journal of Revenue management (IJRM)*, Inder-science publisher, accepted (In press), (2007).
8. Rameshkumar, K., Mohanasundaram, K.M., Rajendran, C., An ACO-inspired PSO-algorithm for the Quadratic Assignment Problem (2007), *International e-Journal of Logistics and Supply Chain Management*, 1(1), pp1-15, (2007).
9. Rameshkumar, K., Suresh, R.K., K., Mohanasundaram, K.M., Discrete Particle Swarm Optimization (DPSO) Algorithm for Permutation Flowshop Scheduling to Minimize Makespan, *Lecture Notes in Computer Science (LNCS)*, Springer-Verlag, 3612, pp 572 – 581, (2005).

International Conferences

1. Pavan Kumar, S., Rameshkumar, K., Mohanasundaram, K.M., Performance modeling and analysis of an auto component manufacturing industry using Simulation, 4th International Conference on Logistics and Supply Chain Management, Organized by PSG College of Technology and Central Michigan University, (2008).
2. Karthi, R., Arumugam, S., Rameshkumar, K., An improved Particle Swarm Optimization Algorithm for Data Clustering, IEEE Conference on AI Tools in Engineering, (2008).
3. Karthi, R., Arumugam, S., Rameshkumar, K., Continuous function Particle Swarm Optimization Algorithm (CPSOA) for solving real world unconstrained optimization problems, ORSI Convention, INSA, New Delhi, (2007).
4. Rajeswar, K., Mohanasundaram K.M, Rameshkumar, K., and Chandraseakaran, B., Multi Stage Supply Chain Network Optimization using Swarm Intelligence, International Symposium on SCM, Canada, (2007).
5. Rameshkumar, K., Mohanasundaram, K.M., Rajendran, C., An ACO-inspired PSO-algorithm for the Quadratic Assignment Problem, Proceedings of the Third International Conference on Logistics and Supply Chain Management (ICLSCM- 2006), Coimbatore, 572 – 581, (2006).
6. Rameshkumar, K., Pavithran, P., Reddy, P.I.R., Design of Lean Manufacturing System – A case study using Value Stream Approach, Published in the proceedings of the International Conference on Operations Research Applications in Infrastructure Development (ICORAID-2005), IISc, Bangalore, organized by ORSI, India, (2005).
7. Rameshkumar, K., Mohanasundaram, K.M., Particle Swarm Optimization Algorithm for Shop Scheduling Application, Proceedings of the International Conference on Discrete Mathematics and its Applications (ICDMA2004), Amrita Vishwa Vidyapeetham, Coimbatore, pp38-39, (2004).
8. Mohanasundaram, K.M., Rameshkumar, K., Antony Arokia Durai Raj, K., Rajendran, C., Developing a Neural Network model for efficient Allocation of Kanbans for a Flowshop to minimize the lead time, Proceedings of the International Conference on Manufacturing (ICM 2002), Dhaka, Bangladesh, pp276-283, (2002).
9. Rameshkumar, K., Mohanasundaram, K.M., Antony Arokia Durai Raj, K., Application of Neural Networks and Simulation modeling of a kanban

controlled flowshop, Proceedings of the VI Annual conference of the society of operations management, IIM, Kozhikode, (2002).

10. Rameshkumar, K., Suresh, R.K., “Aggregate Production Planning - A Case Study”, XXXIII Annual Convention of the Operational Research Society of India, IIM, Ahmedabad, India, (2000).

National Conferences

1. Rameshkumar, K., PSO algorithms for Discrete and Continuous Optimization problems, proceedings of the AICTE sponsored STTP on ‘Recent Trends in Manufacturing System Design and Optimization, Institute of Road and Transport Technology, May, 2007.
2. Rameshkumar, K., Discrete Event Simulation of Manufacturing Systems, proceedings of the AICTE sponsored STTP on Recent development in simulation, Modeling and their applications to modern manufacturing practice, PSG Tech, Coimbatore, March 2007
3. Rameshkumar, K., Optimization Techniques in Engineering, AICTE sponsored STTP on Design for Manufacturing and Assembly (DFMA), Amrita School of Engineering, Ettimadai, May 2007.
4. Rameshkumar, K., Mohanasundaram, K.M., Antony Arokia Durai Raj, K., A study on scheduling rules in kanban controlled flowshop, Proceedings of the National Conference on World Class Manufacturing (WCM2003), Amrita Institute of Technology, Coimbatore, pp442-447, (2003).
5. Rameshkumar, K., Mohanasundaram, K.M., Simulation of a Manufacturing system – A case study using ARENA, Proceedings of the National conference on Manufacturing and Management, Adiyaman College of Engineering, Hosur, pp72-78, (2002).
6. Rameshkumar, K., Suresh, R.K., Mohanasundaram, K.M., Aggregate Production Planning using Genetic Algorithms – A case study, Proceedings of the National conference on Advanced Computing (NCAC2001), PSG College of Technology, Coimbatore, 119-127, (2001).

Reviewer

Reviewer for the following Journals

- European Journal of Operational Research, an Elsevier Publication
- IEEE Transactions on Evolutionary Computation
- International Journal of Computer systems and Engineering

IV Research projects:

1. Prepared a MODROB proposal (AICTE) under the guidance of Dr.R.Sellamuthu, Professor, Mechanical Engineering for Modernizing Metallurgy Lab. AICTE sanctioned Rs. 15.00 lakhs. (Co-Investigator).
2. Guided two MTech projects on machining area in collaboration with Indian Space Research Organization (ISRO), Trivandrum on machining and process optimization of ceramic materials.
3. Involved in developing Simulation models (process modeling) using ARENA discrete event simulation software for few industries as consultancy / student project work.

Number of UG / PG Projects Guided:

1. UG (B.Tech, Mechanical Engineering and Production Engineering)
: 18
2. PG (M.Tech, Manufacturing Engineering, Industrial Engineering): 6

V Courses offered in the last Five Years

UG (B.Tech, Mechanical Engineering and Production Engineering)

- Advanced Manufacturing Techniques
- CAD/CAM & Computer Aided Engineering
- Computer Integrated Design and Manufacturing
- Machine Drawing
- Materials Science and Engineering
- Modeling and Simulation of Manufacturing Systems
- Production Drawing and Cost Estimation
- Resources Management / Operations Research

PG (M.Tech, Manufacturing Engineering)

- Optimization Techniques in Engineering
- Simulation of Manufacturing Systems

Laboratory Courses

Machine drawing

Metallurgy Lab : Usage of Microscopes (Caryl-Zeiss 25CA Microscope), Image Analysis System, Semi Automatic Polishing Machines, Specimen Mounting Press and Heat treatment equipments.

Simulation lab: Development of simulation models of manufacturing systems (Job shop, flow shop, Assembly lines, FMS etc.,) using ARENA Simulation Software. Usage of Matlab / LPP / IP solvers for solving Optimization problems.

Training / Short Term Programmes Organized:

- 1. Co-Coordinator, AICTE sponsored Short term training programme on “Product Design for Environment (PDfE)” conducted during 30-06-2008 to 04-07-2008.**
- 2. Co-Coordinator, AICTE sponsored Short term training programme on “Faculty Awareness camp on Entrepreneurship (FACE)” conducted during 05-07-2008 to 07-07-2008.**
- 3. Coordinator, STTP on “Recent Developments in Simulation and their applications to modern manufacturing practice” Sponsored by AICTE, Organized by the Department of Mechanical Engineering, Amrita School of Engineering, Coimbatore, 26-31, March 2007.**
- 4. Course Director, STTP on Design for Manufacturing and Assembly (DFMA), Sponsored by AICTE, Organized by the Department of Mechanical Engineering, Amrita School of Engineering, Coimbatore, 23 Apr-04 May 2007.**
- 5. Treasurer, STTP sponsored by AICTE – ISTE, Cleaner Manufacturing in Industries, Amrita Institute of Technology, Coimbatore. 25 Oct- 7 Nov 2004.**
- 6. Treasurer, National Conference on World Class Manufacturing (WCM2003), Amrita Institute of Technology, Coimbatore. 7-9, May 2003.**
- 7. Coordinator, National Conference on “Optimization Techniques in Engineering and Technology” Organized by the Department of Mechanical Engineering, Kumaraguru College of Technology, Coimbatore, 3-4, March 2000.**

Details regarding invited Keynote address / lectures delivered etc (out side institution)

- 1. Invited speaker, AICTE-ISTE Sponsored STTP on Metaheuristics: Emerging Paradigm in Engineering Optimization & Faculty Awareness Camps on Entrepreneurship (FACE), June 23-30.**
- 2. Invited Speaker for the AICTE sponsored STTP on ‘Recent Trends in Manufacturing System Design and Optimization)’ conducted at Institute**

of Road and Transport Technology, Erode during 22 April to 05 May, 2007.

3. **Delivered Lecture on “Discrete Event Simulation Modeling of Manufacturing Process” AICTE sponsored STTP, PSG College of Technology, Coimbatore, 2007.**
4. **Co-Chairman, for the one of the sessions (Optimization) National level conference on Advances in Mechanical sciences (AIMS07), Kumaraguru College of Technology, Coimbatore, during the month of March 2007 (22-24).**
5. **Chairman for one of the session (Advanced Manufacturing Processes), National Conference on Emerging trends in Engineering and Technology, 5th may 2007, Kottayam, Kerala.**
6. **Chairman, conducted a technical session on Logistics and Distribution in the Fourth International Conference on Logistics and Supply Chain Management - ILSCM 2008 which was held during 7-9, August 2008 at PSG College of Technology, Coimbatore.**

VI Profession memberships:

1. **Life member, Indian Society for Technical Education (ISTE)**
2. **Member, Institution of Engineers (IE)**
3. **Member, International Association of Engineers (IAENG)**