

Biography of Dr.M.Ponnavaikko (www.ponnavaikko.com)

Dr. Murugesan Ponnavaikko was born in 1946 at Sengamedu village, South Arcot district, Tamil Nadu. He graduated in Electrical Engineering from Guindy Engineering College in 1969 and obtained his M.Sc.(Engg.) in Power Systems from the same institution in 1972. He received his Ph.D. degree in Optimal Distribution System Planning from I.I.T.(Delhi) in 1983. He is specialized in Operation Research and has contributed original methods for Distribution System Optimization.

He started his career from Tamil Nadu State Electricity Board in 1972, immediately after completing his P.G. degree programme. From there he moved to different organisations including Indian Institute of Science (Bangalore), Southern Regional Electricity Board (Bangalore), Bharath Heavy Electricals Limited (New Delhi) and Rural Electrification Corporation (New Delhi) from 1972 till 1984. In 1984, he was deputed to ECCO (Electrical Construction Company), Libya as an **Advisor and Secretary** to the Board. After serving for 2 years at that capacity at ECCO, he moved to the Higher Institute of Mechanical and Electrical Engineering, Hoon, Libya as a **Visiting Professor** in 1986 and served there till 1989.

From 1989 till Jan.1995, he was serving as Professor and Head of the Department of Computer Science and Engineering, initially at Mookambigai College of Engineering, Tiruchirappalli, and then at Regional Engineering College, Tiruchirappalli. While at Mookambigai College of Engineering he devised Syllabus for M.Phil. (Comp.Sc.) for the Summer Sequential Programme, instituted at Bharathidasan University and conducted the course for the first time in the University as its Course Director and continued offering the same course while at Regional Engineering College. He later served as Professor and Head of the Department of Computer Science at the Crescent Engineering College, Chennai from 1995 till 2000. From July 2000. He served as the **Director**, at the level of Vice-Chancellor at the Tamil Virtual University from July 2000 till August 2003. From September 2003 he was serving as the **Director**, Research and Virtual Education Directorate at the SRM University till June 2007. From July 2007 he was serving as the **Vice-Chancellor**, **Bharathidasan University**, Tiruchirappalli, Tamil Nadu till July 2010. He is at present the **Vice-Chancellor**, SRM University.

He was a pioneer in the country to promote energy conservation techniques using his models for improving the Distribution systems of the State Electricity Boards through Rural Electrification Corporation, New Delhi and his models are known as "Ko Models". He is also a pioneer in promoting Virtual Education in the country. His contributions to the Tamil Virtual University of the Tamil Nadu Government, as its founder Director are commendable. He made commendable contributions to the community as Vice-Chancellor at Bharathidasan University by introducing Skill based academic curriculum, making the graduates employable and a number of empowerment programs for the community, including differently abled persons, for the economic development of the people living in the area under the jurisdiction of the University. He functioned as a unique Vice-Chancellor, making Bharathidasan University as a model University.

He has made tremendous service to the academic community through SRM University. He has been responsible to establish a Research Directorate in 2003 at SRM University which has seeded for the growth Research potential at the University and resulted in a large number of Research paper publications, patents and innovative product developments like SRM Nano satellite, Nickel nano dots for computer memory, herbal based Siddha/Ayurvedic medicines, etc. He is responsible for setting up of a Nanotechnology Research Center, Earthquake Research Center, Learning through Discovery lab and an Inter disciplinary School of Indian System of Medicines at SRM University. He is also responsible to establish Thamizh Perayam (Tamil Academy) for the promotion of Tamil culture, recognition of Tamil scholars, publication of rare Tamil books and development of Tamil computing software and systems.

He has also served as Member of the Sub-Committees constituted by UGC & AICTE for improving the standard of Higher Education in the Country. His contributions to the Committee on 'National Initiatives on Engineering Experimentation', constituted by the AICTE, as an Expert Member are commendable.

He was Vice-Chairman, IEEE Madras Section, for two terms, 2004, and 2005; and Chairman, IEEE Madras Section, for two terms, 2006, and 2007. Currently he is the Chairperson of IEEE India Council for the year 2013 and 2014.

He has been a Consultant, Researcher, Teacher, Academician and Administrator in the Industries and Public Sectors and academic Institutions contributing in the areas of Power Systems and Computer Engineering for over 4 decades. He has published over 110 technical papers, 22 Books and worked on more than 40 research projects. His areas of interest are Power System Studies, Computer Science & Engineering, Curriculum Planning and Tamil Computing.

1.2 Educational Details

Degree	Specialisation	Institutions	Year of Passing
B.E	Electrical Engineering	College of Engineering, Guindy, Madras University, Madras - 600 025.	1969
M.Sc. (Engg.)	Power Systems Engineering	College of Engineering, Guindy, Madras University, Madras - 600 025.	1972
Ph.D	On some aspects of Optimal Distribution System Planning	IIT Hauz Khas, New Delhi - 110 016.	1983
Certificate	Operations Research in Practice	NITIE, Bombay	1981

Experience – Positions occupied

Sl.No.	Position - Held	Position - Held Organisation	
1	Vice-Chancellor	SRM University, Chennai	From July 16, 2011.
2	Provost	SRM University, Chennai	From July 15, 2010 till July 15, 2011.
3	Vice-Chancellor	Bharathidasan University, Thiruchirappalli	11 th July 2007 – till 10th July2010
4	Director (Research, Virtual Education & International Initiatives)	SRM University, Chennai	Sept 2003 – June 2007
5	Director (at the level of Vice- Chancellor)	Tamil Virtual University, Govt. of Tamilnadu	3 Years (Jul.2000- Sep.2003)
6	Prof. & Head, Dept. of Comp. Sc. & Engineering	Crescent Engg. College, Chennai (1995-2000), REC Trichy (1993-1995), Mookambikai College of Engg.,	10.5 Years (1989 - 2000)

		Trichy (1989 - 1993)	
7	Prof. (Elect. Engg.)	HIMEE, Hoon, Libya	3.0 Years (1986 - 1989)
8	Board Secretary & Advisor (Engineering)	ECCO, Tripoli, Libya	2.5 Years (1984 - 1986)
9	Special Officer (System Improvement) (Equivalent to Professor from Jan.1981 – Feb. 1984 and Assistant Professor from Sept.1977- Dec.1980)	Rural Electrification Corporation Ltd., New Delhi 110 019	6.5 Years (1977 - 1984)
10	Design Engineer (Computer Aided Analysis, Design and Planning of Power Systems)	BHEL / PED, New Delhi	1 Year (1976 - 1977)
11	Assistant Engineer	Tamilnadu Electricity Board and on deputation at IISc, Bangalore and SREB, Bangalore	4.5 Years (1972 -1976)
12	PG Studies (on Leave)	College of Engg., Guindy	1.5 Years (1970-1972)
13	Field Engineer	TNEB, Crompton Engg. Co	1 Year (From July1969 – 1970)

1.10 Affiliation to Technical and Other Societies

- Fellow IET, FIET(UK)
- Senior Member IEEE (USA)
- **Life Member**, Indian Society for Technical Education
- Life Member, Indian Officers' Association

1.7 Original Contributions and Achievements

- Developed and dedicated Tamil Virtual University (TVU) to the world community as the Founder Director of TVU, a unique Virtual Education platform for learning Tamil using internet and web technology.
- Contributed Original Mathematical tools (O.R. Techniques) and Computer Methods for optimal distribution system planning. My models are known as "
 KO Models" in the literature.
- Developed Nomograms for Distribution System Analysis and Planning.
- Designed and Developed new courses in Computer Science and Engineering both at UG and PG levels for Bharathidasan and Madras University.
- Developed Laboratories such as Parallel Computing and Distributed Systems,
 Multimedia Computing, Internet Computing Labs, etc. in different Engineering Colleges.

- Established Intranet and campus—wide network with Fibre Optics as backbone in the campus at Crescent Engineering College.
- Established a OFC based campus-wide network with wireless internet facilities, upgrading the computing facilities with all platforms, including Mac, Sun solaris, Linex, Unix and Windows and high-end servers, storage devises, desktops, workstations and network switches.

1.9 Specialization Areas

- Power system Planning with special reference to Optimal Distribution System Planning
- Virtual Education
- Software Engineering.
- Computer Simulation and Modeling.
- Operation Research Techniques
- Genetic Algorithm.
- Neural Network
- Fuzzy Logic.
- Computer curriculum Development.

1.8 Research Works

1.8.1 Ph.D. Research Works:

(a) Ph.D. Programmes (Completed)

- Mr.T.Thyagarajan, Asst. Professor, Crescent Engineering College -Ph.D. dissertation on "Neuro Fuzzy Model using Genetic Algorithm for Model Based Control of Drying Process", Anna University, July 1999.
- Mrs. Jayamsakthi, Manager (Systems), Satyam Infotech, Ph.D. dissertation on "Study of Security Issues and Development of Risk Minimization Techniques for Web Applications", BITS, Pilani, Rajasthan through off-campus mode, October 2008.
- 3. Mr.M.Chandrasekar, Professor, JJ Engineering College Ph.D. dissertation on "Tamil Speech Recognition", Bharathidasan University, November 2009.

- Mrs. A. Josaphine Amala, Assistant Professor, JJ Engineering College -Ph.D. Dissertation on "Development of Improved Solution Procedures using GA and SA for Solving Some Distribution System Problems", Bharathidasan University, November 2009.
- Mrs.Santhi S.Kumatran, Ph.D. Dissertation on "Development of Improved Methods for the Stabilization of 2-D NSHP Recursive Digital Filters", SRM University, SRM University, December 2009.
- 6. Ms.E.Poovamal, Sr.Lecturer (CSE), SRM University, Ph.D. Dissertation on "**Data Mining**", SRM University, November, 2010.
- 7. Mrs.C.Lakshmi, Sr.Lecturer (CSE), SRMIST, Ph.D. Dissertation on "Pattern Recognisation", SRM University, November, 2010.
- Mr.Shivaraman Ramasamy, Ph.D. Dissertation on "Novel Polymer templated Lithography Technique for Fabrication of Ni Nanodots for Bit Patterned Media Applications", SRM University, September, 2011.
- Mr.Purushothaman, Ph.D. Dissertation on "Study of Nano and Submicro Inclusions to probe into the origin of Natural Diamonds", SRM University, December, 2011.
- 10. Ms.B.Amudha, Sr.Lecturer (CSE), SRMIST, Ph.D. Dissertation on "Wireless Communication", SRM University, November, 2012.
- 11. Mr. S.S.Sridhar, Prof. of CSE, SRMIST, Ph.D. Dissertation on "Neural Network", SRM University, November, 2014.

(b) Ph.D. Programmes (On going)

- Ms.Arpudharatna, Asst.Professor, B.S.Abdur Rehman University, Chennai, pursuing Ph.D. research on "Software Engineering" under my direct supervision, at Barathidasan University- Tiruchirappalli, as part time Research scholar, since September 2010.
- 2. Ms.Kayalvizhi, Asst.Professor, Eswari Engineering College, Chennai, pursuing Ph.D. research on "Software Engineering" under my direct supervision, as part time Research scholar, at SRM University, since September 2011.
- 3. Mrs.G.Niranjana, Assistant Professor, Dept. of CSE, SRM University, Chennai, pursuing Ph.D. research on "Medical Image Processing" under my direct supervision, as part time Research scholar, at SRM University, since December 2012.

- 4. Mr. Kadiyala Ramana, pursuing Ph.D. research on "Software Metrics", under my direct supervision, at SRM University, since September 2012.
- M.Senthil Raja, pursuing Ph.D. research on "Development of a Tamil Computer Languag" under my direct supervision, as part time Research scholar, at SRM University since August 2014.
- 6. N.Yuvaraj, pursuing Ph.D. research on "Cloud Computing" under my direct supervision, as full time Research scholar, at Bharath University since Jannuary, 2015.

1.8.2 M.Phil. (CS) Dissertations guided : 16 (1992-1999)

1.8.3 M.E.(CSE)/M.Tech.(CSE)/M.E. (Power

Systems) Dissertations guided : 7 (1991 - 1995)

1.8.4 B.E. (CSE) Projects guided : 40 (1989 - 2000)

Awards

- "Bharathi Sevai Semmal", awarded by Bhatathi Sangam, Chennai, Tamil Nadu, June 2014.
- "Thiruvalluvar Award– senthamizh selvam" by Sankaradas swamikal Memorial Mandram, May 2014
- "senthamizh kavalar" Award by Thiruvalluvar Mandram, Rajapalayam, Tamil Nadu, January 2014.
- 'Tamil Achiever Award' (சாதனைத்தமிழர் விருது) by Bharathi Tamil Sangam, Kolkatta, 2012
- The prestigious "Bharat Jyoti Award", Certificate of Excellence, awarded by the India International Friendship Society for his Meritorious Services, for the Outstanding Performances and Remarkable Role of Sir Dr.M.Ponnavaikko, Vice-Chancellor of SRM University by Shri Rajeev Shukla, Hon'ble Minister of State for Parliamentary Affairs in the presence of Dr.Bhishma Narain singh, former Governor of TamilNadu & Assam, during the *Global Friendship Day* celebration held on 11th January 2012 at Winsor Palace, Janpath, New Delhi.
- "Knights of Sovereign order of Princes and Knights of Antarcticland" of the Sovereign Order of Knights of Antarcticland, was awarded to Dr.M.Ponnavaikko by His Highness Sir Giovanni Caporaso Gottlieb, elected 42nd Grandmaster of Sovereign Order of Knights of Antarcticland State, USA, in the Nobility Awarding ceremony held on the 7th November 2009. With this Honor he is entitled to use the title **Sir** affixed to his name, **His Excellency Sir M.Ponnavaikko**.

- Certificate of Honour, awarded by The International Council of CCLP Worldwide, Brazil, in recognition of his valuable contributions to the field of higher education in India, on 6th November 2009.
- Certificate of Appreciation awarded by IEEE Inc. USA to Dr.Murugesan Ponnavaikko, for his Notable Services and Contributions towards the Advancement IEEE and the Engineering Professions, as Chair, IEEE Madras Section, 2006-2007.
- "Lifetime Achievement Award", presented by the International Association of Educators for World Peace, Hunstsville, Alabama, USA, affiliated to the United Nations, at New Delhi on the occasion of the South Asia Virtual Education Submit held on 13-14 March 2008.
- "Achievement Award" presented by the Indian Science Monitor at the 5th Annual Achievement Award Function during the National Science Day Celebration on 28th February 2008.
- "Distinguished Service to Tamil Award" presented by the California Tamil Academy, USA, in Recognition of his Untiring Efforts to Promote Tamil Education Worldwide in June 2003.
- Madras Chapter IEEE / PES Outstanding Engineer Award 2000.
- Jaya Distinguished Academician Award 2001.
- Recipient of the Best Project Award for the development of "Walking Aid for Blind" from the Tamilnadu State Council for the Science and Technology, 1994.
- Listed in the Directory of **Prominent individuals in the fields of Science and Engineering** in Marquis Who's Who in America, 1998.

Other Recognitions

- Member Board of Studies in Computer Science, Bharathidasan University, 1991 to 1995
- Director, Summer Sequential Programme for M.Phil. (Comp. Sc.), Bharathidasan University, 1991 to 1995
- Member Board of Studies in Computer Science, Madras University, 1995 to 2000.
- Member, Academic Council, Madras University, 1995 to 2000.
- Expert Member in the National Committee on "National Initiatives on Engineering Experimentation" constituted by AICTE, New Delhi, 2001.

- Expert Member in the UGC Sub-Committee to propose measures to deal with fall-out on higher education as a result of a recent Constitutional (86th) Amendment, making education as fundamental right for children of 6-14 age group, 2002.
- Special Invitee to the National Graduate Student Repository formulation Committee, constituted by the UGC, Sept. 2004 to Sept. 2005.
- Special Invitee to the Committee, constituted by the UGC, for framing Norms
 and Methods for implementing the proposal on National Graduate Student
 Repository Scheme, July 2006 to October 2006.
- Member, Academic Council, Anna University, for a 3 year period from 3rd
 January 2006 to 2nd January 2009.
- Chairman, IEEE Madras Section, 2006, and 2007.
- Chair, IEEE India Council, 2013 and 2014
- Vice-Chairman, Committee on 16-bit Tamil All Character Encoding: TACE-16, constituted by the Government of Tamil Nadu, March 2007.
- Chairman, Committee on Tamil in Mobile phones, constituted by the Government of Tamil Nadu, March 2007.
- Member, First Class Administrative Reforms Committee, constituted by the Government of Tamil Nadu, March 2007.
- **Member, Subcommittee** to Examine the encoding of Tamil and other scripts of India, constituted by the **Unicode Consortium, USA**, 2007.
- Chairman, Expert Committee, Cell Phone Keyboard Standardization Committee, constituted by Tamil Nadu Government, 2014.

Countries Visited

S.No.	Country	Period	Purpose
1	United States of America	Sep-Oct.	Paper Presentation at IEEE Conference in Minneapolis
	America	Jun-Jul. 2003	To award Certificates to the students of TVU at the California Tamil Academy and to present TVU at FETNA Conference in New Jersey.
		Sep-Oct. 2004	Visit to MIT, Carnegie Mellon University and Stanford University.

S.No.	Country	Period	Purpose
		June, July. 2006	Visit to MIT, Stanford University, University of California, Berkley, Brown University, Rode Island, Johnson & Wales University, Rode Island, . Rode Island School of design, Bryant University, Rode Island, Partners Health Services, Boston and Massachusetts General Hospital for Academic collaboration. Also attended and delivered a talk in the Annual conference of the Federation of Tamil Sangams in North America, held in New York during 1 st to 3 rd July.
		March 2007	Deputed by the Govt. of Tamil Nadu to participate in the UTC meeting of the Unicode Consortium in Mountain View, California.
		June 2011	Participated in the TamilNet 2011 at the University of Pencilvania during 17 th to 19 th June. Visited PenState University, Dayton University, University of Georgia during 20 th to 23 rd June and Virginia Common wealth University on 27 th and 28 th June.
		Sep. 1981	Visit to Niagara as a tourist.
2	Canada	June 2006	Visit to Queen's University, Kingston and Waterloo University, Waterloo for academic collaboration. Also attended IIT Alumni meet at Toranto.
3	United Kingdom	Sep. 1981 Jun-Jul. 1987	Visit to London Discussion with Westing House
4	France	Jun. 1987	Visit to Paris as a tourist
5	Switzerland	Jun. 1987	Visit to the Country as a tourist
6	Italy (Rome)	Jul. 1987	Visit to Rome as a tourist
7	Malta	Jun. 1987	Visit to the Island as a tourist
8	Libya	Feb 1984 - Sept 1989	Employment initially in an Indo-Libyan joint venture, Tripoli, as Advisor and later at the Higher Institute of Mechanical and Electrical Engg., Hoon, as Visiting Professor.
9	Nepal	Jul. 1982	Discussion with the Energy Ministry of Nepal
	Sri Lanka	Aug. 1999 Nov. 2000 Jul. 2002	To participate in the pre-Conference Meeting of Tamilnet 2000. Invited by the Sri Lankan Government to participate in the conference on Tamil Computing and Inaugurating Tamil Information Technology, Sri Lanka. To participate TVU programmes and to start TVU Study
11	Japan	Jul. 2000	Centres. To Participate in INET 2000, an international Conference on Internet Visited Tokai University and Union of Japanese

S.No.	Country	Period	Purpose
		2007	Scientists and Engineers (JUSE) for academic
			collaboration.
12	Singapore	Jul. 2000	To Participate and Chair Technical Sessions at Tamil Iniyam 2000, an International Conference on Information Technology in Tamil
		Aug. 2001	To Participate and Chair Technical Sessions at Tamil Iniyam 2001, an International Conference on Information Technology in Tamil
13	Malaysia	March 2007	Attended IEEE R-10 Annual meeting in Chiang Mai, as the Chairman, IEEE Madras Section.
13		May 2007	To discuss with the Ministry of Higher Education in connection with starting an off-shore campus of SRM University.
		March 2014	To attended IEEE R-10 Annual meeting at Kuching as the Chair, IEEE India Council.
	South	Feb. 2002	To popularize TVU Programmes and to start TVU Study Centres
14	Africa		To inaugurate Diaspora Tamil Teacher Diploma course in Durban.
		Jan. 2014	
15	Mauritius	Feb. 2002	To popularize TVU Programmes and to start TVU Study Centres
16	Thailand	March 2006	To participate in the IEEE R-10 Annual meeting as the Chairman, IEEE Madras Section.
17	Ghana	Feb. 2007	Attended the Graduation Day of the All Nations University College, Ghana as a Guest of Honour.
18	Germany	Feb. 2007	Visited Karlsruhe Technical University for academic collaboration.
	Dubai	Feb. 2007	Visited to study the feasibility of opening an off-shore campus of SRM University in Dubai.
20	China	May 2007	Visited Ghuangdong Polytechnic Normal University and Huanghe College of Science & Technology for academic collaboratio
	Taiwan	Dec. 2012 Dec. 2013	Visit to NTHU Visit to NTHU
21	Australia	Feb. 2013	Visited Universities for academic Collaboration
22			

Publications

(i) Books Authored / Edited : 22

(ii) Papers published (Total) : 110

(iii) Journal Papers : 54

(vi) Conference Papers : **56**

(v) Reports on Projects undertaken: 40

(v) Endowment Lectures : **05**

Books (Authored / Edited)

- A.1 'Computer Science' a Text Book in **English** for +2 Students, 1996, TamilNadu Text Book Corporation.
- A.2 'Computer Science' a Text Book in **Tamil** for +2 Students, 1996, TamilNadu Text Book Corporation.
- A.3 'Computer Science (Revised)' a Text Book in **English** for +2 Students, 2000, TamilNadu Text Book Corporation.
- A.4 'Computer Science (Revised)' a Text Book in **Tamil** for +2 Students, 2000, TamilNadu Text Book Corporation.
- A.5 'Star Office' in **English** for School Education, 2001, TamilNadu Text Book Corporation.
- A.6 'Star Office' in **Tamil** for School Education, 2001, TamilNadu Text Book Corporation.
- A.7 'HTML an Introduction in **Tamil**' for School Education, 2001, TamilNadu Text Book Corporation.
- A.8 Java' in **Tamil** for School Education, 2001, TamilNadu Text Book Corporation.
- A.9 'Visual Basic' in **Tamil** for School Education, 2001, TamilNadu Text Book Corporation.
- A.10 'Computer and Information Technology' in **Tamil** for School Education, 2001, TamilNadu Text Book Corporation.
- A.11 'C-language' in **Tamil** for School Education, 2001, TamilNadu Text Book Corporation.
- A.12 'Computer Science, Vol I Tools' in **Tamil** for Higher Secondary Second year. 2006, TamilNadu Text Book Corporation.
- A.13 'Computer Science, Vol I Tools' in **English** for Higher Secondary Second year. 2006, TamilNadu Text Book Corporation.
- A.14 'Ariviyal Poonga', a quarterly **Tamil Technical Magazine**, publishing as **Chief Editor**, Mayilai ThiruvaLLuvar Thamizh Sangam, from October 2005.
- A.15 'INaiya Thamizh', a book in **Tamil**, published by All India Tamil Science Society, Thanjavur, 2003.
- A. 16 'INaiyathamizh varalAru', Published by Bharathidasan University, 2010.

- A.17 'Ponnavaikko kavithaikal', Published by Bharathidasan University, 2010.
- A.18 'Mella Thamizh yini vellum', Published by Bharathidasan University, 2010.
- A.19 'Ayurveda for Diabetes mellitus'. Edited by Dr.Aruna Agrawal, Prof.M.Ponnavaikko and Prof. G.P.Dubey and published by SRM University, 2011.
- A.20 'thuNai vEndar sollum seyalum' Published by Sekar Pathippagam, 2011.
- A.21 'Reference Manual for Teachers', Published by SRM University, 2011.
- A.22 'Kanipori Ariviyal Thagaval thodarbu thozhilnutpam', a Book in Tamil published by the Thamizh valaRchikkazhagam, Chennai, 2012.

Languages known:

a. Tamil
b. Hindi
c. English
d. French
Read, Write and Speak (proficient)
e. Read, Write and Speak (proficient)
f. Read, Write and Speak (a little)

e. Malayalam
f. Telugu
g. Kannada
h. Arabic
Can speak and understand
can speak and understand
can speak and understand

M. PONNAVAIKKO