



## CONSOLIDATED BIO-DATA OF DR.M.PONNAVAIKKO

### 1.1 Personal data

- 1.1.1 Name (in Full) : **Dr. MURUGESAN PONNAVAIKKO**
- 1.1.2 Specialization : **Computer Sc. & Engg., & Power systems Engg.**
- 1.1.3 Nationality : **Indian**
- 1.1.4 Father's Name : **S. Murugesu Udaiyar**
- 1.1.5 Date of Birth : **March 7, 1946**
- 1.1.6 Marital Status : **Married with two Sons**
- 1.1.7 Contact Details
- (a) Residence : **Dr. M. Ponnaivaikko,  
2/203, Anna Street,  
Kurunji Nagar, Vandalur,  
Chennai - 600 048,  
Tamilnadu,  
India.**
- (b) Office : **Vice-Chancellor,  
Bharathidasan University, Tiruchirappalli,  
Tamil Nadu, India.**
- (c) Phone
- Chennai House : **0091 – 44 22750959 (Res.)**
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[ponnav@gmail.com](mailto:ponnav@gmail.com)**

## 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

## 1.3 Awards and Recognition

- **“Knights of Sovereign order of Princes and Knights of Antarctiland” of the Sovereign Order of Knights of Antarctiland**, was awarded to Dr.M.Ponnaivaikko by His Highness Sir Giovanni Caporaso Gottlieb, elected 42<sup>nd</sup> Grandmaster of Sovereign Order of Knights of Antarctiland State, USA, in the Nobility Awarding ceremony held on the 7<sup>th</sup> November 2009. With this Honor he is entitled to use the title **Sir** affixed to his name, **H.E. Sir M.Ponnaivaikko**.
- **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 6<sup>th</sup> November 2009.
- **Certificate of Appreciation** awarded by IEEE Inc. USA to Dr.Murugesan Ponnaivaikko, 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 Summit held on 13-14 March 2008.
- **“Achievement Award”** presented by the **Indian Science Monitor** at the 5<sup>th</sup> Annual Achievement Award Function during the National Science Day Celebration on 28<sup>th</sup> 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.
- **Expert Member** in the National Committee on **“National Initiatives on Engineering Experimentation”** constituted by AICTE, New Delhi.
- **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 (86<sup>th</sup>) Amendment, making education as fundamental right for children of 6-14 age group.
- **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 3<sup>rd</sup> January 2006 to 2<sup>nd</sup> January 2009.
- **Chairman, IEEE Madras Section**, 2006, and 2007.
- **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.

## 1.4 Brief Statement of Work Experience

A total of over **40 years** of experience, as on June 2009, having served at different levels, as Vice-Chancellor, Bharathidasan University, Tiruchirappalli, Tamil Nadu, **Director** at the level of **Vice-Chancellor, Board Secretary and Advisor**, Design Engineer, Divisional Manager, Consultant, R&D Personnel, teaching faculty (Professor) and Administrative Head in different Organization such as Power Industries (Private & Public Sectors), Educational Institutions and Government departments in **India and Abroad** in the various fields of Electrical and Electronics Engineering and Computer Science Engineering. Also served as a **Chairman**, Board of Studies in Computer Science and Engineering at REC, Trichy (1993-1995), **Chairman**, Board of Studies in Computer Science (UG and PG), **Bharathidasan University** Trichy (1993-96), **Member, Academic Council, Bharathidasan University** (1993-96), **Member**, Board of Studies in Computer Science (PG), **University of Madras** (1995-98), **Member**, Academic Council, **University of Madras** (1995-97) and **Member**, **Sub-Committee, State level task force on Information Technology**, Government of Tamilnadu (1998 - 2000). **Chairman**, Board of Studies in Computer Science and Engineering (UG and PG), **University of Madras** (1999 - till date), **Chairman**, Research Advisory Board ( 2003 – till date ), SRM University, **Chairman**, Board of Studies in Computer Science & Engineering, IT and Computer Application (UG & PG) ( 2003 – till date ), **Chairman, IEEE Madras Section** ( 2006 & 2007), SRM University, and **Member, Academic Council, Anna University** ( 2006 – 09 ).

## 1.5 Analysis of Experience

Sl.No.	Position - Held	Organisation	No. of Years
1	Vice-Chancellor	Bharathidasan University, Thiruchirappalli	July 2007 – till date
2	Director ( Research, Virtual Education & International Initiatives)	SRM University, Chennai	Sept 2003 – June 2007
3	Director (at the level of Vice-Chancellor)	Tamil Virtual University, Govt. of Tamilnadu	3 Years (Jul.2000-Sep.2003)
4	Prof. & Head, Dept. of Comp. Sc. & Engineering	Crescent Engg. College, Chennai (1995-2000), REC Trichy (1993-1995), Mookambikai College of Engg., Trichy (1989 - 1993)	10.5 Years (1989 - 2000)
5	Prof. (Elect. Engg.)	HIMEE, Hoon, Libya	3.0 Years (1986 - 1989)
6	Board Secretary & Advisor (Engineering)	ECCO, Tripoli, Libya	2.5 Years (1984 - 1986)
7	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)
8	Design Engineer (Computer Aided Analysis, Design and Planning of Power Systems)	BHEL / PED, New Delhi	1 Year (1976 - 1977)
9	Assistant Engineer	Tamilnadu Electricity Board and on deputation at IISc, Bangalore and SREB, Bangalore	4.5 Years (1972 -1976)
10	PG Studies (on Leave)	College of Engg., Guindy	1.5 Years (1970-1972)
11	Field Engineer	TNEB, Crompton Engg. Co	1 Year (From July1969 – 1970)

## Demonstration of Leadership:

**Involvement, Initiative, commitment, and Contribution are the innate Leadership qualities in him.** He has left his foot prints in every organization where he served. He led the **Distribution system planning initiative** in Tamil Nadu State Electricity Board to start with and later as a pioneer **in the country through Rural Electrification Corporation**. As the Chairman, Technical Journal Committee and the Chief Editor, he was the **first** to start a **Technical Journal in the Higher Institute of Mechanical and Electrical Engineering (HIMEE), Hoon, Libya**. He led Mookambigai College of Engineering to start **Mookambigai Industrial Liason Centre (MILC) for Industry – Institute Interaction**. Provided the leadership to launch a **Summer Sequential M.Phil.(CS) Program in Bharathidasan University** for the benefit of the Computer Science Faculty Members in the Arts & Science Colleges affiliated to the University. Through his leadership he **strengthened the Computing infrastructural facilities** at Mookambigai College of Engineering, Keeranur, REC, Trichy, Crescent Engineering College, Chennai, and SRM University, Chennai. As Chairman, Board Studies in Computer Science, he has made original contributions in the **Computer Curriculum for UG and PG programs** in Bharathidasan University, REC, Trichy and Madras University. The specific leadership contributions listed below have the **National and International recognition**:

1. **Rural Electrification Corporation (REC), New Delhi** gave him the first opportunity to demonstrate his professional abilities and leadership. As Special Officer (System Improvement), he pioneered a scheme on all India basis for improving the power distribution systems in the country for energy conservation, by framing standards and norms for project formulation, appraisal, implementation and monitoring. He administered the scheme in the then-24 State Electricity Boards (SEBs) for **seven** years from 1977 to 1984. His methods and models are followed even now by the REC and SEBs as “**Ko models**”.
2. The second great opportunity was his appointment as the first Director of **Tamil Virtual University (TVU), Chennai** in the scale of a Vice-Chancellor. With no examples to follow he had to start from conceiving the concept till completion for delivering Web based courses on Tamil from Pre-KG till higher education. Within a period of less than three years, courses on Tamil were offered from Pre-KG to B.A. Degree in through web along with a large digital library having over 2,00,000 pages of literatures, dictionaries with search facilities and video galleries of 125 temples and cultural events. Tamils from over 90 countries became the beneficiaries. To promote Tamil Virtual Education around the world, nine Study Centres in five countries were set up to start with. Commonwealth of Learning came forward with its overwhelming appreciation and sponsored a project with a financial aid of Canadian \$75,000 to train 40 Malaysian students in B.A. Tamil programme. He could proudly say that Tamil Virtual University is a unique and pioneering effort in distance education achieved through his enormous initiatives and leadership.

## Innovation and Creativity:

1. Developed original **mathematical models** for Distribution System Components and **tools (O.R. Techniques) & methods** for Optimal Distribution System Planning.
2. Developed **Nomograms** as ready-reckoner for Distribution System Analysis and Planning to help the practicing Distribution Engineers as planning aids (known as “**Ko models**”)
3. Developed a **computer based method for assessing the load generation balance** on long-term basis for a regional grid, covering, long-term load forecast, rainfall forecast, water management in power station reservoirs and maintenance scheduling of generating units in the Thermal, Nuclear and Hydel Power Stations in the region to even out the shortage of power and energy, if any in the region. This study was carried for all the regions in the country.
4. Developed a “**Walking-Aid for Blind**” through a student project at Regional Engineering College, Trichy during 1994 (won Best Project Award from Tamilnadu State Council for Science & Technology).
5. Developed **Tamil softwares like ‘Tamil C’ and ‘Tamil Java’** and a **Bi-lingual Search Engine** for Tamil and English Portals through a student project.

### 1.6 Publications

(i)	Books Authored / Edited	:	<b>18</b>
(ii)	Journal Papers	:	<b>41</b>
(iii)	Conference Papers	:	<b>53</b>
(iv)	Reports on Projects undertaken	:	<b>40</b>
(v)	Endowment Lectures	:	<b>05</b>

### 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.

## 1.8 Research Works Guided

### 1.8.1 Ph.D. Research Works :

#### (a) Ph.D. Programmes (Completed)

- Ph.D. dissertation by T.Thyagarajan on “Neuro Fuzzy Model using Genetic Algorithm for Model Based Control of Drying Process” - supervised as co-guide, Anna University, July 1999,
- Ph.D. dissertation by Mrs. Jayam Shakthi, on “**Security Issues in E-Commerce**”, under my direct supervision, BITS, Pilani, March 2008.
- Ph.D. dissertation by Mrs. A. Josaphine Amala, Assistant Professor, JJ Engineering College, on '**Optimal Distribution System Planning**' at Bharathidasan University under my direct supervision, June 2009.
- Mr.M.Chandrasekar, HOD/CSE, JJ Engineering College, pursuing Ph.D. research on '**Speech to Text Processing in Tamil**' at Bharathidasan University under my direct supervision, November 2009.
- Ph.D. dissertation by Mrs.Santhi S.Kumatran, on “Development of Improved Methods for the Stabilization of 2-D NSHP Recursive Digital Filters”, SRM University, Chennai, under my direct supervision, December 2009.

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

- Mr. S.S.Sridhar, Prof. of CSE, SRMIST, pursuing Ph.D. research on “**Neural Network**” under my direct supervision, since September 2004.
- Mrs.C.Lakshmi, Sr.Lecturer (CSE), SRMIST, pursuing Ph.D. research on “**Pattern Recognition**” under my direct supervision, since September 2004.
- Ms.B.Amudha, Sr.Lecturer (CSE), SRMIST, pursuing Ph.D. research on “**Wireless Communication**” under my direct supervision, since September 2004.
- Ms.E.Poovamal, Sr.Lecturer (CSE), SRMIST, pursuing Ph.D. research on “**Data Mining**” under my direct supervision, since September 2004.
- Ms.Arputha Ratna, Asst. Professor, B S Abdur Rehman University, Chennai, pursuing Ph.D. research on “**Pattern Recognition**” under my direct supervision, since November 2009.

**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)**

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

## 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 including Genetic Algorithm.
- Neural Network and Fuzzy Logic.
- Computer curriculum Development.

## 1.10 Affiliation to Technical and Other Societies

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

## 1.11 Countries Visited

S.No.	Country	Period	Purpose
1	<b>United States of America</b>	Sep-Oct. 1981	Paper Presentation at IEEE Conference in Minneapolis
		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
		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 <sup>st</sup> to 3 <sup>rd</sup> July.
		March 2007	Deputed by the Govt. of Tamil Nadu to participate in the UTC meeting of the Unicode Consortium in Mountain View, California.
2	<b>Canada</b>	Sep. 1981	Visit to Niagara as a tourist.
		June 2006	Visit to Queen's University, Kingston and Waterloo University, Waterloo for academic collaboration. Also attended IIT Alumni meet at Toranto.
3	<b>United Kingdom</b>	Sep. 1981 Jun-Jul. 1987	Visit to London Discussion with Westing House
4	<b>France</b>	Jun. 1987	Visit to Paris as a tourist
5	<b>Switzerland</b>	Jun. 1987	Visit to the Country as a tourist
6	<b>Italy (Rome)</b>	Jul. 1987	Visit to Rome as a tourist
7	<b>Malta</b>	Jun. 1987	Visit to the Island as a tourist
8	<b>Libya</b>	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	<b>Nepal</b>	Jul. 1982	Discussion with the Energy Ministry of Nepal
10	<b>Sri Lanka</b>	Aug. 1999	To participate in the pre-Conference Meeting of Tamilnet 2000.
		Nov. 2000	Invited by the Sri Lankan Government to participate in the conference on Tamil Computing and Inaugurating Tamil Information Technology, Sri Lanka.

S.No.	Country	Period	Purpose
		Jul. 2002	To participate TVU programmes and to start TVU Study Centres.
11	Japan	Jul. 2000	To Participate in INET 2000, an international Conference on Internet
		March/April 2007	Visited Tokai University and Union of Japanese 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
13	Malaysia	Aug. 2001	To Participate and Chair Technical Sessions at Tamil Iniyam 2001, an International Conference on Information Technology in Tamil
		March 2007	Attended IEEE R-10 Annual meeting as the Chairman, IEEE Madras Section.
		May 2007	To discuss with the Ministry of Higher Education in connection with starting an off-shore campus of SRM University.
14	South Africa	Feb. 2002	To popularize TVU Programmes and to start TVU Study Centres
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.
19	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 collaboration.

### 1.12 Languages known :

- a. **Tamil** : Read, Write and Speak (proficient)
- b. **Hindi** : Read, Write and Speak (proficient)
- c. **English** : Read, Write and Speak (proficient)
- d. **French** : Read, Write and Speak (a little)
- e. **Malayalam** : Can speak and understand
- f. **Telugu** : Can speak and understand
- g. **Kannada** : Can speak and understand

(M. PONNAVAIKKO)