

# CURRICULUM VITAE



**V. Manickam**

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Trichy-620005

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## **Educational Qualifications:**

### **Qualified UGC – NET exam for Assistant Professorship**

Branch : Electronic science  
Month &Year : December 2014

### **Doctor of Philosophy (Ph.D)**

Branch : Interdisciplinary Electronics-Chemistry  
Title of PhD Thesis : **Fabrication of Solid State Sensors and Development of Electronic Instrumentation for Humidity and Industrial Gases.**  
Qualified year : 2012  
College/University : Loyola College / University of Madras

### **Master of Science (M.Sc)**

Branch : Electronics  
Month / Year of passing : April – 2001  
Percentage / Class : 72 / First class  
College/University : St.Joseph's College / Bharathidasan University

### **Bachelor of Science (B.Sc)**

Branch : Electronics  
Allied subjects : Physics and Mathematics  
Month / Year of passing : April – 1999  
Percentage / Class : 65.6 / First Class  
College/University : St.Joseph's College / Bharathidasan University

**Teaching Experience:** (9 yrs and 8 months.)

- Assistant Professor, Department of Electronics, St.Joseph's College(**SJC**), Trichy-620005 from June 2011 to Feb 2018. (6 years and 8 months).
- Assistant Professor, International School of photonics, cochin university of science and technology (**CUSAT**), Kochi -22 from Feb 2018 to Feb 2021 (Three years).

**Administrative Experience:**

- **Head, Department of Electronics, St.Joseph's College, Trichy (From June 2016-Feb 2018)**
- **Assistant Coordinator, Hardware maintenance and servicing, JC- ICT centre. (2015-2017).**

**Academic Recognition:**

- Reviewer of project proposals in The Research Council of the sultanate of Oman, and Reviewer to IEEE *sensors*, Elsevier's *Sensors and Actuators B*.
- Subject expert, Question paper scrutiny board held on 28-10-2013 at PSG college of Arts and Science.
- Subject expert, Board of Studies, UG and PG board, Seethalakshmi Ramasamy College for the year 2012-2013.
- Subject expert, Board of Studies, UG and PG board, AVC college, Mayiladuthurai for the year 2014-2015.
- Staff selection panel member for the Department of Electronics and communication, Syed Hammeda Arts and Science College, Kilakkarai interview held on 27<sup>th</sup> June 2016.
- Delivered an invited lecture on " Sensor and sensor Instrumentation" at Seetalakshmi Ramaswami college on Feb 4<sup>th</sup> 2014.

**Awards/Fellowships:**

- 1) **Junior Research Fellow**, Department of Atomic Energy, Kalpakkam granted by Government of India grant No. IGC/Accts./Cash/C1266

- 2) **Dr. R. Chadrasekar memorial fellowship (RCMF)** from university of Pune for best paper in NSPTS conference.
- 3) **College Management award for 100% attendance** for the academic year 2012-2013.

#### **Patents:**

- 1) **V. Manickam**, Suman Pokhrel, Francis P. Xavier, K. S. Nagaraja, "A DIGITAL HUMIDITY SENSOR" Patent . No.207248 (2003)
2. V. Manickam, K. Vairamani, " RFID based encrypted database storage and retrieval system using single board computer" Patent Applied.

#### **Publication In Journals:**

1. **V. Manickam**, E. Prabhu, V. Jayaraman, K.I.Gnanasekar, T. Gnanasekaran and K. S. Nagaraja. "**Gas sensing properties of  $\text{Fe}_2(\text{MoO}_4)_3\text{-Fe}_2\text{O}_3$  thick film**". Proceedings of 11th National seminar on physics and technology of sensor(NSPTS-11), Pune. 2006, C27.1-C27.4.
2. **V. Manickam**, E. Prabhu, V. Jayaraman, K. I. Gnanasekar, T. Gnanasekaran and K. S. Nagaraja. "**Electrolytic sensor for trace level determination of moisture in gas streams**" Measurement 43 (2010)1636-1643.
3. J Sumathi, BA Benedict, LS Sheela, J Bhagavathsingh, **V Manickam** , Adsorption isotherms and kinetic studies for the defluoridation from aqueous solution using eco-friendly natural adsorbent like Terminalia Chebula, Sustainable Chemistry for Climate Action 4, (2024)100040
4. LS Sheela, BA Benedict, B Jebasingh, V Manickam, J Sumathi, Synthesis, characterization, and applications of lanthanide ortho ferrites" Main Group Chemistry 22 (2), 227-238 (2023)
5. LS Sheela, B Jebasingh, V Manickam, J Sumathi, BA Benedict, Electrochemical Synthesis and Characterization of MgO Nano Particles: A Comparative Catalytic Activity of Different Methods of Synthesis, SSRN 4442567 (2023)

#### **Published In Conference Proceedings & Presentations:**

1. **V. Manickam**, A.M. Edwin Suresh Raj, John Pragasam and K. S. Nagaraja. "PC based humidity sensor for environmental analysis". "National Conference on Environment, Biodiversity and Bioethics: Current trends and Future Directions". September 20-22, 2001. Loyola Institute of Frontier Energy (LIFE), Loyola College, Chennai (2001)

2. **V. Manickam**, E. Prabhu, V. Jayaraman, K.I.Gnanasekar, T. Gnanasekaran and K. S. Nagaraja. " Gas sensing properties of  $\text{Fe}_2(\text{MoO}_4)_3\text{-Fe}_2\text{O}_3$  thick film". National seminar on physics and technology of sensor (NSPTS-11), Pune. 2006, C27.1-C27.4. **(Best paper award)**
3. R. Sundaram, B. Jeyaraj and K. S. Nagaraja\*, **V. Manickam**, "Humidity Dependent Electrical Conductivity Studies On  $\text{Cu}_2\text{Zn}_2\text{O}_5 - \text{In}_2\text{O}_3$  By Synthesis Of Combustion Method" Annual IIT Madras Chemist symposium July 12 (2006)
4. J. Sherin Percy Prema Leela, K. Chitra, **V. Manickam** and K.S. Nagaraja, " Study of electrical properties of copper molybdate-copper oxide humidity and gas sensor" "National seminar on environmental biosensors" January 11-12, 2007, Loyola Institute of Frontier Energy (LIFE), Loyola College, Chennai (2007).
5. S. Dhanalakshmi, K. Chitra, **V. Manickam** and K.S. Nagaraja, " Analysis of electrical properties of Nickel molybdate as humidity sensor". "National seminar on environmental biosensors" January 11-12, 2007, Loyola Institute of Frontier Energy (LIFE), Loyola College, Chennai (2007).

#### **Conferences/Workshops conducted:**

1. **Joint Secretary of National conference on advanced materials (NCAM) organized by Department of Physics and Electronics on 6<sup>th</sup> Feb 2015.**
2. **Organising secretary of "National conference on Recent trends in Electronics (NCRE-2016) held on 18<sup>th</sup> Feb 2016.**
3. **Conducted 12 days workshop on Arduino programming for IoT under DBT star programme for undergraduate students studying computer science.**

#### **Conferences/Workshops attended**

1. International conference on Lasers and their applications, (Mar 01-04,2000)
2. National conference on Environment, Biodiversity and Bioethics: current trends and future directions, (Sep 20-22, 2001) and presented a paper on " Development of microprocessor based circuits for sensors in environmental analysis"
3. National Conference on recent advances in material science, (Dec 11-12,2002) and presented a paper on "Evaporation rate measurement by optical interference method"
4. National Workshop on principles and practice of the power X-ray diffraction, (May 30-Jun 2,2005).

5. Annual IIT Madras chemistry symposium, (Jul 12-13,2006)
6. National level preseminar workshops on updates of sensors and instruments and fabrication and packaging of sensors (Feb 25-26, 2006)
7. 11<sup>th</sup> National seminar on Physics and Technology of sensors, (Feb 27- Mar 1<sup>st</sup>,2006) and presented a paper on Gas sensing properties of  $\text{Fe}_2(\text{MoO}_4)_3\text{-Fe}_2\text{O}_3$  thick film.
8. Workshop on chemical thermodynamics (CHEMTHERM 2006), (Aug 22-26,2006).
9. National conference on conservation of biodiversity for the holistic development, (Dec 3-4,2010).
10. National conference on green energy for sustainable development, (Jan 7-8, 2011)
11. Orientation programme for junior staff, (Jun 13-14, 2011).
12. 10 days soft skills programme conducted in three phases between Aug 2012 to Oct 2012.
13. Orientation programme for junior staff, (Jun 11-14, 2012).
14. National conference on Advanced Materials, (24<sup>th</sup> Feb 2014).
15. 10 days AICTE sponsored FDP on Machine learning (7-19 Dec 2020)
16. One week AICTE sponsored FDP on Biomedical Signal Analysis and Machine Learning (11-15 Jan 2021)

**Field of Research Interest:**

- ✚ Embedded system Development (MSP 430) and IoT, Arduino sketch
- ✚ Humidity and gas sensors (chemical sensors) chemical synthesis using wet chemical, solgel and CVD.
- ✚ Development of smart sensor based on nanolithography and MEMS for technological applications in nuclear reactor, environmental pollution control etc.,
- ✚ Pulsed Laser ablation as a tool for novel nanomaterial synthesis.

**Software Exposure:**

- Embedded C, Python for hardware interfacing using protocols like CAN, IIC, SPI, UART, Machine learning packages like pandas, keras and tensorflow.

- Matlab programming and Simulink. VHDL programming.
- Proteus, Express PCB, Altium.

## **Referees**

### **1. Dr. V. Jayaraman**

Scientific Officer G

Liquid metal and structural Chemistry Division

Indira Gandhi Centre for Atomic Research

Kalpakkam – 603 102

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### **2. Dr. A. Mujeeb.**

*Professor, International school of Photonics*

*Cochin University of science and Technology*

*Kochi -22*

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Email: [mujeeb@cusat.ac.in](mailto:mujeeb@cusat.ac.in)

## **Personal Details:**

Father's Name : M. Varadharajan

Date of Birth : 30 July 1979

Sex : Male

Nationality : Indian,

Marital Status : Married

Languages known : English, Tamil.

Passport No : E9021161

**V. Manickam.**