

Curriculum Vitae

M.P. JAYAKRISHNAN



General Details

Name Expanded : Methapettyparambu Purushothama Jayakrishnan
Current Position : Doctorant (PhD Student)
Laboratoire de Conception et d'Intégration des
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Academic Record

Level	Course and Year	Institution	Score	Remarks
Post-Graduation	M.Sc Electronics Science (2012-2014)	Cochin University of Science and Technology, Cochin-682022, Kerala.	CGPA 9.58/10	University Rank Position 1
Graduation	B.Sc Electronics (2009-2012)	Aquinas College, Edacochin, (Affiliated to M.G. University Kottayam, Kerala)	CGPA 3.73/4	University Rank Position 1
Higher Secondary	Plus Two (ISC) (2007-2009)	St. Aloysius Convent ISC School Cochin-6 (CISCE, New Delhi)	65.16% (391/600)	-
Matriculation	Class X (ICSE) (2007)	St. Aloysius Convent ISC School Cochin-6 (CISCE, New Delhi)	64.57% (452/700)	-

Scholastic Achievements

- 1. University Rank Position 1 for Post-graduation course among the 21 students who attended the examination (Please see also the point 4).**
- 2. Qualified UGC-JRF/NET June 2013 (Reg.No.16880030)**
(The National Eligibility Test (NET) is a National level examination conducted by the University Grants Commission (UGC), Govt. of India, to determine the eligibility of Indian Nationals for Assistant Professorship in Indian Universities, Colleges, Indian Institute of Technologies, etc. Candidates who score among the top 15% are considered for the Junior Research Fellowship (JRF), under reputed research centers in India. In the exam of June 2013, 574448 candidates appeared for the examination and 3684 were qualified for both NET and JRF, in total 78 subjects).
- 3. University Rank Position 1 for Graduation course among the 645 students who attended the examination.**
- 4. Qualified the Common Admission Test (CAT-2012) with Rank position 5, for admission to M.Sc courses of the Cochin University of Science and Technology.**
(The CAT is a national level eligibility test conducted by the Cochin University of Science and Technology, Kerala, India, for admissions to various Undergraduate and Post-Graduate level programmes offered by the University, in 2012, 1370 students were ranked for M.Sc Electronics course from the total number of students who attended the examination)
- 5. Won the Parent Teachers Association (PTA) award from Aquinas College for the topper in university examinations 2009-2012.**
(Aquinas College is an Arts and Science College Affiliated to the Mahatma Gandhi University, Kerala, India, offering various UG and PG Courses. I completed my Bachelor Degree from this college, and the PTA of the college has instituted an award annually for the Graduating student who tops in the University Exams among all the streams of Science)
- 6. Won the Proficiency prize from Aquinas College for the year 2009-2010.**
(A one-time award constituted by the College Management for Academic Excellence in each batch, annually. My batch constituted 25 students).

7. Won the first prize and ever rolling trophy in K.C.Shanmughan memorial Quiz competition in electronics (2011), M.A. College Ramapuram, Kottayam, Kerala.
(A quiz competition conducted annually among the UG and PG students in Electronics across the state, to promote scientific awareness and knowledge, by the Mar Athanasius College, Kerala. Approximately 200 students from the state participated in the competition).
8. Won second place in novel and innovative working model/project presentation competition in LUMIERE-2012 Conducted by College of Engineering Kidangoor, Kerala.
(Lumiere is a prestigious national level technical and cultural fest hosted by the College of Engineering Kidangoor, established by the Govt. of Kerala. Approximately 50 teams from colleges all over India participated in the competition).

Employment Record

Period	Position
October 2016 – till date	Doctorant (PhD Student) Laboratoire de Conception et d'Intégration des Systèmes (LCIS), Grenoble-INP/ESISAR, Valence, France
April 2015 – September 2016	Junior Research Fellow, Department of Electronics , Cochin University of Science and Technology, Cochin , Kerala
September 2014 –March 2015	Project Assistant , DAE-BRNS Project, Department of Electronics , Cochin University of Science and Technology, Cochin , Kerala

Areas of Interest

RFID, Microwave based Bio-Sensors, Implantable Antennas, Frequency Selective Surfaces, Metamaterial, RCS studies, Dielectric Characterization etc.

Work Experience

- Three+ years active research experience in the field of Microwave Electronics.
- Experience in various types of Microwave device and Antenna measurement using sophisticated instruments like the Network Analyzer, Spectrum Analyzer, Anechoic chamber measurements, Microwave Power Measurements etc.
- Experience in operating Ultra-High-Vacuum Plasma chambers and Turbo-Molecular Pumps, Thermal Vapor deposition units.
- Experience in Antenna and Microwave devices designing using tools such as the Ansoft HFSS, CST Microwave Studio, Agilent ADS, and ORCAD-Pspice etc.

Internship Attended

- National Fusion Program - Internship under the Board of Research in Fusion Science and Technology at the Institute for Plasma Research, Govt. of India, Ahmedabad, Gujarat. (January – April 2014)
- Familiarization Workshop on Nanofabrication, Indian Nanoelectronics User Program (INUP), Indian Institute of Science Bangalore, July 2015.
- Hands-on-Training workshop on Nanofabrication Technologies, Indian Nanoelectronics User Program (INUP), at the Centre for Nano Science and Engineering, Indian Institute of Science Bangalore, November 2015.

Publications

International Journals

1. VP Sarin, **MP Jayakrishnan**, PV Vinesh, CK Aanandan, P Mohanan, K Vasudevan, “An Experimental Realization of Cylindrical Cloaking using Dogbone Metamaterials”, Canadian Journal of Physics, pp. 1-6, April 2017. <https://doi.org/10.1139/cjp-2016-0876>
2. Sarin V. Pushpakaran, **Jayakrishnan M.P.**, Pezholil Mohanan, C.K Aanandan and Vasudevan Kesavath, “Extraordinary Transmission Technique for Microwave Antenna Applications”, Journal of Physics D: Applied Physics, vol. 49, no. 18, April 2016.
3. Sarin V. Pushpakaran, Anju Pradeep, **Jayakrishnan M.P.**, Pezholil Mohanan and Vasudevan Kesavath, “Tailoring the spectral response of a dog-bone doublet metamaterial”, Microwave and Optical Technology Letters, vol.58, no.6, 1347-1353, June, 2016.

4. Sarin V. Pushpakaran, Nishamol M.S, **Jayakrishnan M.P**, C.K Aanandan, Pezholil Mohanan and Vasudevan Kesavath , “A metamaterial Backed dipole antenna for directional applications”, *Advanced Electromagnetics*, vol.5, no.1, March 2016.
5. Karavilavadakkethil C. Prakash, Sumitha Mathew, Ramachandran Anitha, Puthiyapurayil V. Vinesh, **Methapettyparambu P. Jayakrishnan**, Pezholil Mohanan, and Kesavath Vasudevan, “Circularly Polarized Dodecagonal Patch Antenna with Polygonal Slot for RFID Applications”, *Progress In Electromagnetics Research C*, Vol.61, 9-15, 2016.
6. Sarin V. Pushpakaran, **Jayakrishnan M. Purushothaman**, C.K Aanandan, Pezholil Mohanan and Vasudevan Kesavath , “An extraordinary transmission analogue for enhancing microwave antenna performance”, *AIP Advances* 5, 107239 (2015).
7. Nishamol M S, **Jayakrishnan M P**, Sarin V P, Sreejith M Nair, P Mohanan and K Vasudevan, “ Coplanar Waveguide Fed Wideband Minoan Double Axe Antenna for Wireless Applications” , *European Journal of Advances in Engineering and Technology*, 2015, 2(10): 56-60, ISSN: 2394-658X
8. T.K. Bindu Sharmila, Jolly V. Antony, M.P. Jayakrishnan, P.M. Sabura Beegum, Eby Thomas Thachil, “ Mechanical, thermal and dielectric properties of hybrid composites of epoxy and reduced graphene oxide/iron oxide”, *Materials and Design* 90 (2016), 66-75. ISSN: 0264-1275

International level Conferences

1. **M.P. Jayakrishnan**, Arnaud Vena, Brice Sorli and Etienne Perret, “Fully Passive Conductive-Bridging Solid State RF Switch” , 32nd URSI GASS, Montreal, 19-26 August 2017.
2. **Jayakrishnan M.P**, Sruthy Scariya, Divya Sathyanath and P. Mohanan, “RF Assisted Non Invasive Method for Blood Glucose Monitoring – A Feasibility Study”, AEMC 2015, IIT Guwahati, India.
3. Prakash K.C, Vivek R. Kurup, Vinesh P.V, Mohammad Ameen, **Jayakrishnan M.P.**, Anitha. R, Sumitha Mathew and K. Vasudevan “Dodecagonal Circularly Polarized Patch Antenna for RFID Applications”. AEMC 2015, IIT Guwahati, India.
4. **M.P. Jayakrishnan**, Divya Sathyanath, Sruthy Skaria, Thushara H.P., Karthika S. Nair, Anju Pradeep, S. Mridula and P. Mohanan, “Investigation of Microwave Resonators for Monitoring Biological Parameters”, *Proceedings of the International Symposium on Antennas and Propagation, APSYM 2014*, ISBN: 978-93-80095-60-8

5. Divya Sathyanath, **M.P. Jayakrishnan**, Thushara H.P., S. Mridula and P. Mohanan, "Microwave Based Biosensor for Blood Glucose Monitoring", 2015 Fifth International Conference on Advances in Computing and Communications, RSET, Cochin, Kerala, ISBN: 978-1-4673-6994-7/15
6. Nishamol M. S., Sarin V. P., and Sreejith M Nair, **Jayakrishnan M. P.**, P. Mohanan and K. Vasudevan "CPW fed Wideband Printed Antenna for Wireless Communications", Fifth International Conference on Advances in Computing and Communications, 2015, RSET, Cochin, Kerala, ISBN: 978-1-4673-6994-7/15
7. S.K. Karkari, **M.P. Jayakrishnan**, and P. Mohanan, "Application of Resonance Microwave Probes as Electron Density Sensors", Proceedings of the International Symposium on Antennas and Propagation, APSYM 2014, ISBN: 978-93-80095-60-8
8. Sarin V. Pushpakaran, Anju Pradeep, Anila P.V. **Jayakrishnan M.P.**, Mridula Haridas , C.K. Aanandan, P. Mohanan, and K. Vasudevan "Electromagnetic Frozen Modes in Cascaded Frequency Selective Surfaces", Proceedings of the International Symposium on Antennas and Propagation, APSYM 2014, ISBN: 978-93-80095-60-8

National level Conferences

1. Sarin V.P., **M.P. Jayakrishnan**, Dinesh R., C.K. Aanandan, P. Mohanan and K. Vasudevan, "A Dog Bone Metamaterial Absorber", UGC & KSCSTE Sponsored National Level Seminar on Recent Advancements in Electronic Communication and Allied Areas, NSS College Rajakumari, Kerala, 2015, ISBN : 978-81-923777-0-4
2. **M.P. Jayakrishnan**, Nijas C.M., Shantanu Kumar Karkari and P. Mohanan "Investigation of Split-Ring-Resonator as a Sensor for Diagnosing Electron Density for Plasma Applications", Proceedings of the UGC sponsored National Seminar on Current Trends in Material Science, Aquinas College, Cochin-10, Kerala, August 2014.
3. Dinesh R, Anila P V, **M P Jayakrishnan** and P Mohanan "CRLH Based ACS Fed Zeroth Order Directional Antenna for WLAN Applications", Proceedings of CECASP-2013, Sree Ayyappa College, Eramallikkara, Kerala, ISBN 978-81-925229-4-4

Academic Project

1. Investigation of Split-Ring-Resonator as a sensor for diagnosing Electron density for Plasma applications (Post Graduation Course 2012-2014)

2. GSM enabled gas leakage detection cum prevention system – i-Guard (Graduation Course 2009-2012)

Software Skills

1. Microwave and RF design tools such as the Ansoft HFSS, CST Microwave Studio, Agilent ADS.
2. Programming Languages: C, C++, Basics of MATLAB, Basics of Python.
3. Platforms and IDE: MATLAB, NI-Multisim, Orcad, Ki-Cad, Keil-IDE, MpLab IDE.

Participation in organizing committee of Seminars and Symposia

1. Active member of the organizing committee of Symposium on Ocean Electronics (SYMPOL) 2015, organized by the Dept. of Electronics , Cochin University of Science and Technology.
2. Active member of the organizing committee of International Symposium on Antennas and Propagation (APSYM) 2014, organized by the Dept. of Electronics , Cochin University of Science and Technology.
3. Actively participated in the organizing committee of two day workshop on Electromagnetic Education, organized by the IEEE-APS Kerala chapter and the Dept. of Electronics CUSAT in December 2014.
4. Active Member of the organizing Committee of two day National Level seminar on “Design with Embedded Processors” , organized by the Dept. of Electronics, Aquinas College , Edakochi, in September 2011.

Co-Curricular and Extra Curricular Activities

1. **NCC-Army wing ‘C’ and ‘B’ Certificate Holder.**
(The National Cadet Corps (NCC) in India is a voluntary organization, under the Ministry of Defense, Govt. of India, which recruits cadets from high schools, colleges and universities all over India. The Cadets are given basic military training, weapon training in small arms and training in parades. The NCC conducts certificate exams based on the training given and military knowledge and passing these exams gives preference and bonus marks for selection to defense services in India)
2. Martial Arts – Karate (Shotokan Style) Won various prizes in school level science exhibitions, elocutions, extempore-speech etc.
3. Design and development of hobby electronic circuits.
4. Active participant in the school band-set (2002-2009).

Personal Information

Date of Birth : 26 – April – 1992
Gender : Male
Marital Status : Single
Languages Known : English, Malayalam, Konkani, Hindi and Tamil
Nationality : Indian

References

Dr. Etienne Perret

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