

## Curriculum Vitae

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**Dr. GEORGE VARUGHESE**, Ph.D in Physics, Masters of Science Degree in Physics (Electronics), Bachelor of Education

### CONTACT DETAILS

#### **Dr. GEORGE VARUGHESE**

PRINCIPAL

Catholicate College, Pathanamthitta - 689 645,  
Kerala, INDIA

Tel: +91 468 2325 223(College), +91 468 2350 475 (Res), +91 9447248977(Mob)  
+91 468 2325 223(Fax)

### **31 YEARS OF EXPERIENCE IN THE EDUCATION FIELD** including major roles as:

Principal, Catholicate College, Mahatma Gandhi University.

Member, Syndicate, MG University, Kottayam 2010-12

Reader in Physics (Electronics & Material science), Catholicate College, Mahatma Gandhi University.

Research Supervisor MG University, Kottayam and Bharathiar University, Coimbatore

### **5 YEARS OF ADMINISTRATIVE EXPERIENCE**

- Principal, Catholicate college, Pathanamthitta ,Since April 2010
- Member ,Syndicate, M.G.University, Kottayam. Feb.2010-Jan 2012
- Bursar, Catholicate college, Pathanamthitta,2008-10
- Member, Governing Board, Catholicate college,Since 2006
- Member, Governing board, MOC Management,Kottayam,Since 2010
- President, Cooperative bank Ltd, Chandanappally, 1991-2002
- President, Employees cooperative bank Ltd, Catholicate college, Since 2010
- President, District Tourism cooperative society Ltd, Since 2005

## 8 YEARS OF RESEARCH EXPERIENCE

Secured Ph.D in 2005

Research Supervisor of MG University in 2009

Research Supervisor of Bharathiar University, Coimbatore in 2011

Ongoing Minor projects since 2006

## OBJECTIVE & KEY SKILLS

⇒ **Objective:** Seeking Top-Level Assignments in Education Field, while integrating teaching skills, research expertise and leadership skills that drives education institutions performance to international standard.

⇒ **Key Skills:**

- Teaching Skills
- Administrative skills
- Management Skills
- Research activities including Environmental issues, elastic study of crystal etc...

## EDUCATIONAL QUALIFICATIONS

**Ph.D in Physics,2005**, Mahatma Gandhi University, Kottayam, Kerala, India

Advisor: Dr. Godfrey Louis, Pro Vice Chancellor, Cochin University of Science and Technology, Kochi.

Thesis: Ultrasonic investigation of elastic properties and phase transition in mixed sulphate and sulphamate single crystals

**Masters Degree in Physics (Electronics)**, 1980, University of Kerala, India

**Bachelor of Education, (B.Ed)**1981, University of Kerala, India

**Bachelor of Science in Physics**, 1978, University of Kerala, India

## PROFESSIONAL EXPERIENCE

- *Principal* (March 2010 onwards): Catholicate College,Pathanamthitta, Mahatma Gandhi University
- *Reader in Physics* (Electronics & Material science), (March 2007- Present): Catholicate College, Mahatma Gandhi University
- *Research Supervisor* (June 2011 onwards): Bharathiar University,Coimbatore, Area of specialization( Matrial science)

- *Research Supervisor* (August 2009 onwards): M.G.University, Kottayam ,Area of specialisation (Material science)
- *Lecturer selection grade* (1997 – 2007 March ): Catholicate College, Mahatma Gandhi University
- *Lecturer senior grade* (1981 - 1997): Catholicate College, Pathanamthitta, Mahatma Gandhi University, Catholicate College, Pathanamthitta, Mahatma Gandhi University
- *Junior Lecturer* (1981 - 1983): Catholicate College, Pathanamthitta, Mahatma Gandhi University, Catholicate College, Pathanamthitta, Mahatma Gandhi University.

## TEACHING AND ADVISING

- Developed and taught a new laboratory course in integrating Photonics ,Crystallography and Nanomaterials
- Developed and taught a new advanced Experimental Physics Lab. Course
- Developed and taught a advanced diploma course in Computer technology
- Developed a new lecture course on Material science (viz, Ultrasonics, Photoacoustics, Instrumentation, and Solid state Physics)
- Taught lecture course in introductory physics, Atomic and molecular physics., electrodynamics, and electronics
- Taught introductory laboratories.Served as academic advisor for second year B.Sc , and second year M.Sc students

## RESEARCH ACTIVITIES

- Research Supervisor of Mahatma Gandhi university ,Kottayam-Centre, Catholicate college-Area-Nano crystalline materials
- Research Supervisor of Bharathiar University,Coimbatore. Area,Material science- centre, Catholicate college
- Managing editor ,International journal of Commerce and Mangement explorer ISSN 2230-9187
- Chief editor, National journal of Catholicate Journal of Studies and Research ISSN:2249-149X
- Reviewer of the International journal of Elsevier Science, Solid State chemistry
- Reviewer of the international journal of chemical science
- Designed and constructed a solution growth apparatus for crystal growth in the Crystalline material Laboratory, catholicate college on the basis of a successful postgraduate research program for studies of thermal and electrical conductivity of Lithium based materials
- Developed Nanomaterial lab for growth and characterization of technologically important nanomaterials
- Developed a crystal polishing unit for polishing single crystals, essential for property studies
- Developed new experiments in optics and electronics for advanced undergraduate physical labs.
- *Interested areas*-Macro Crystal Growth, Solution Growth technique - Elastic studies-Conductivity studies-Thermal studies-TGA and DTA-Micro crystal growth-Gel method-Nano crystalline materials-Chemical precipitation method – XRD,FTIR, SEM, TEM and EDS analysis- Characterization of macro, micro and nano crystals-UV-Vis studies

**PROFESSIONAL DEVELOPMENT**

- Principal, Catholicate college, Pathanamthitta ,since April 2010
- Member, Syndicate,M.G.University,Kottayam, 2010-12
- Member,Academic council, MG University, Kottayam
- Member, senate, MG University Kottayam
- Bursar, Catholicate College, Pathanamthitta ,2008-10
- Reviewer of the International journal of Elsevier Science, Solid State chemistry
- Reviewer of the international journal of chemical science
- Member, Board of Studies of Physics, P.G.Level Mahatma Gandhi University
- Member, Board of studies of Environmental science Calicut University,
- Chairman, Board of Question Paper setters of M.Sc. Physics, Kannur Univeristy,
- Chairman, Board of Question Paper setters of M.Sc.Physics Advanced Materials, Kannur University, Kannur
- Chairman ,M.Sc Physics Material Science Board of Examiners, M.G.University, Kottayam
- Editorial Board member, APTunes, Physics Journal
- Co-ordinator. ADD-ON Course in Computer technology (UGC sponsored)
- Addl.Chief supt. of Examination of Distance Education centre in Dubai 2007

**PROFESSIONAL MEMBERSHIP**

- Member, Indian Laser association
- Member, Indian Crystallographic association
- Member, Indian Material Science Research association
- Member, Global Nano science community
- Member, Academy of Physics Teachers (APT), Kerala
- Executive member,council of Principals of College in Kerala

**ACADEMIC AWARDS**

- Best College performance award of MOC Management was secured by Catholicate college during the year 2010-11
- Merit award on 2010 by Malankara Orthodox Syrian Church
- DST awarded FIST funding to college for best performance of science departments 2011
- Best college state award for Blood donation instituted by Govt of Kerala.
- Award was given for Best research worker by Y's men, Pathanamthiita
- Best co-operative sahakari award from State Co-operative Bank

**PAPER PUBLISHED IN INTERNATIONAL JOURNALS**

1. Electrical conductivity and dielectric properties of Potassium Sulphamate single crystals  
DOI:10.1002/crat.2010000135,*Cryst.Research Tech*,22 Jul.2011
2. Conductivity studies in Sulphamic acid single crystal,(*Crys.Research Tech*,45,8,879-882,,2010)
3. Detection of phase transition in  $\text{KNH}_2\text{SO}_3$  single crystal by temperature variation of elastic constants.( *Physica B*,405,1813-16,2010,( IF : 1.2)
4. Anisotropy in the elastic properties of Lithium sodium sulphate hexahydrate single crystal-An Ultrasonic study(*Bulletin of Material Science*,32,5,612-16, 2010) (IF : 0.803)
5. Elastic study of Potassium sulphamate crystal using ultrasonic Pulse echo overlap technique ,  
*Solid State Commun.* 149,645-47,2009. (IF : 1.629)
6. Elastic constant measurements of super ionic  $\text{LiKSO}_4:\text{Na}$  single crystals-An ultrasonic study  
*J. Crys. Res. Tech.*,44,3,300-304,2009. (IF : 0.987)
7. Elastic anomalies in  $\text{LiKSO}_4:\text{Na}$  single crystal –An ultrasonic study, *J Ferroelectrics*, 377,1-8,2008. (IF : 0.625)
8. Ultrasonic study of elastic anomalies in  $\text{Li}_2\text{Na}_3(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$  single crystal (*Journal of Pure and Applied Ultrasonics*, 2,30,2008. (IF : 0.514)
9. Lithium Potassium Hydrogen Sulphate single crystal.an ultrasonic study,*J Ferroelectrics*,323,133-137,2005.(IF : 0.625)
10. Elastic and thermal anomalies in Lithium sodium sulphate hexahydrate single crystal( in press  
*International journal of pure and applied physics*)
11. Elastic properties of super ionic lithium sodium sulphate single crystal –An Ultrasonic study ( Communicated to *Material Research Bulletin*)

**PAPER PUBLISHED IN INDIAN JOURNALS**

1. Growth and optical studies on ZnS:La Nanostructured crystals,Cathollicate journal of studies and research,1,1,2011 p.110
2. Kerala development, an analysis,*Yojana*, A journal of Publication division Govt of India, 38,8, March 2010

3. Express high way and metro rail for the development of Kerala , Journal of Kerala institute of languages,*Vignankairali*,41,5,May 2010
4. Compact Fluorescent lamps, Is it a villain or not , *Vignanakairali*, Journal of Kerala institute of languages, 41,2, Feb 2010,p.55-56
5. Railway and sustainable growth *Vidyaramgam*,A Journal of Kerala state Public Instruction department, Jan 2010,p.41-42
6. Packing, appropriate to Environment sustainability, *Janapadam*, A journal of Information and Public relations department, Govt. of Kerala, 41,7,July, 2009, p.22-23
7. Environment responsive padding for the sustainability of life on earth, *Yojana*,A journal of Publication division ,Govt of India,37, 9 May, 2009, p.49-50
8. Is CFL Lamps hazardous to human life, *Vidyaramgam*, Journal of Kerala state Public instruction department, June 2009,p.31-32
9. Eco friendly Packing, *Vidyaramgam*, Journal of Kerala state Public instruction department ,34,11,Nov.2008, p.15
10. Green consumer Packing for the existence of life on earth,in *Vijnana Kairali*, Journal of Kerala State institute of languages, 39,10, oct 2008.,p.69
11. Protect the earth from increase of CO<sub>2</sub>, *Vidyaramgam*, A Journal of Kerala state Public instruction department, Aug 2008, p10-11
12. Dielectric and conductivity anomaly near 370K in Lithium Hydroxylammonium Sulphate single crystal ( Ferroelectric and dielectric-new perspectives, *special issue of McMillan Co. Ltd,2007,p 213*),
13. Growth and elastic constants measurements id Li<sub>2</sub>Na<sub>3</sub>(SO<sub>4</sub>)<sub>2</sub>.6H<sub>2</sub>O single crystal, *Macmillan India Ltd ,N.Delhi*),2007, p.145,
14. Ozone hole and life on earth, *Vidyaramgam*,Journal of Kerala state Public instruction department, Ocober, 2007, P 22-23
15. Depletion in the layers of life,*Aksharakairali* magazine,Journal Kerala state literacy mission, sep.2007,P 18-19

**PAPERS PUBLISHED IN INTERNATIONAL SEMINAR PROCEEDINGS**

1. Temperature dependent AC conductivity and dielectric studies of Nickel selenate hexahydrate single crystal. (Proce. of 3<sup>rd</sup> International confernce on ionic devices ICID2006,held at Anna university ,Chennai,on Dec.7-9,2006,p.105)
2. Elastic anomalies in the superionic  $\text{LiK}_{0.9}\text{Na}_{0.1}\text{SO}_4$  single crystal-An Ultrasonic study (Proce. of 3<sup>rd</sup> International conference on ionic devices ICID2006,held at Anna university ,Chennai,on Dec.7-9,2006,p.109)
3. Dielectric and conductivity anomaly near 260K in Potassium sulphamate single crystal) Proce. of 3<sup>rd</sup> International conference on ionic devices ICID2006,held at Anna university ,Chennai,on Dec.7-9,2006,p.103
4. Anisotropy in elastic properties in Potassium Lithium Hydrogen Sulphate (Proce.of the International conference of Ferroelectric and dielectrics,AMF-4,Dec.12-15,2003 at IISc Bangalore p.47)
5. Growth and optical studies in CuO:La Nanomaterials (Proc. of the intenational seminar on nano structures held in St.Thomas College,Pala on 15-17 th June 2012, p.23)
6. Optical Band gap on wurtzite Zinc Sulphide nanocrystallites doped with lanthanum ions( Proce. Of International conference on Nanoscience, naonomaterials, and nanoengineering (ICNNN\_2012) held in Singapore on 6-7<sup>th</sup> Oct.2012 p.125)

**PAPERS PUBLISHED IN NATIONAL SEMINAR PROCEEDINGS**

1. Growth and characterization of ZnO nanomaterial doped with Ce, (Proc. of National seminar on recent trends in nanomaterials held in catholicate college,pathanamthitta on Nov.24-26, 2011,p.23)

2. Synthesis and characterization of ZnS nanomaterial doped with Ce, (Proc. of National seminar on recent trends in nanomaterials held in catholicate college,pathanamthitta on Nov.24-26, 2011,p.42)
3. Optical and Physical characterization of ZnS nanomaterial doped with Nd, (Proc. of National seminar on recent trends in nanomaterials held in catholicate college,pathanamthitta on Nov.24-26, 2011,p.56)
4. Elastic constant measurements of Sulphamic acid single crystal- An ultrasonic study (Proceeding of 6<sup>th</sup> DAE-BRNS National seminar on Pulsed laser deposition of thin films and nanostructured materials held at IISc Bangalore on 8<sup>th</sup> Nov.2011,p.78)
5. Ultrasonic study of elastic anomalies in Lithium Sodium Sulphate Hexa hydrate single crystal (Proceedings of XVI National Conference on Ultrasonics NCU 2007,held at STIC, CUSAT, Kochi on Dec,17-19,2007,p.43)
6. Growth and elastic constants measurements in  $\text{Li}_2\text{Na}_3(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$  single crystal (Proc.of 7<sup>th</sup> national conference on solid state ionics,held at Bharathiar University,Coimbatore,June 6-8,2006,p.145, Macmillan India Ltd ,N.Delhi)
7. Growth and thermal studies of Lithium Sodium Sulphate Hexa Hydrate single crystal(Proc. of BRNS-ITAS 15<sup>th</sup> National symposium on Thermal analysis, THERMANS-06 held at University of Rajasthan, Jaipur, Feb,6-8,2006,p.140-142)
8. Elastic anomalies near 355K for NLO Potassium Sulphamate single crystal-An Ultrasonic study,(Proce. of the 5<sup>th</sup> DAE-BRNS National laser symposium NLS-5 on, Dec.7-10,2005 held at VIT,Vellore,Tamil Nadu,p.63 , Allied Publishers Ltd,N.Delhi)
9. Elastic properties of NLO Sulphamic acid crystal (Proc.of DAE\_BRNS National Laser Symposium held in TVM on14-11-2002, p.493, Allied Publishers. N.Delhi)
10. Thermal studies on phase transition in Sulphamic acid crystal (Proce.of DAE-BRNS Laser Symposium on Dec.22-24, 2003 held at IIT Khargpur, p.325)



11. Elastic properties of potassium sulphamate single crystal –an ultrasonic study. (Proce. of the 12<sup>th</sup> National Seminar on Ferroelectrics and dielectrics NSFD-XII held Dec.16-12,2002 in IISc Bangalore, p.57.)
12. Elastic properties of sodium doped Lithium Potassium Sulphate crystal. (Proce. of the 31st National Seminar on Crystallography. held in June 19-21,2001 at BARC Mumbai p.65)
13. Growth and Micro hardness study of Lithium Sodium Sulphate, (Proce. of the National Seminar on Current Trends in Material Science held in March 23-25, 2001 at MGU, Kottayam, p.41)

#### ARTICLES PUBLISHED IN DAILIES

1. Green consumer day, in *Deepika daily* sep 28,2008
2. New organic farming -Bio dynamic farming, *Desabhimani daily* 13, Mar 2008,
3. Charles Darwin @200,*Deepika daily*,12, Feb, 2008
4. Global warming and world ozone day ,*Deepika,Malyalam Daily*,15,Sep,2007
5. Plastic verses Bioplastics, *Deepika, Daily*, Oct, 29,2007
6. Plastic a necessary evil, and its alternative *Desabhimani daily*,25,Oct,2007
7. High speed rail to western corridor, *Desabhimani Daily*, 28, Jan 2007
8. Bullet train, a dream of kerala, *Deepika Daily*, 8, Jan 2007
9. For development of kerala High speed rail is a necessity, *Mangalam Daily*, 28, Jan 2007

#### ARTICLES PUBLISHED IN REPUTED MAGAZINES

1. Ten Mantras from Japan, *Malankara Sabha magazine* ,68,8,Aug 2011, p.45-46
2. Nuclear power station ,Is it a necessity for the scarcity of energy in India, *Malankara Sabha magazine* ,68,5,May 2011, p.10-11
3. Is kitchen hazardous to life,*Malanakara sabha magazine*,Dec.2009,p 13-14
4. Time in perspective with bible,*Malankara sabha magazine*,Nov.2009 p.15-
5. Your planet neds you,*Bethel patrika*,Oct.2009,p 4-5
6. Compact fluorescent lamps, special attention, *Malankara sabha magazine* May,2009,p.15-16
7. Expansion of Universe and God's particle experiment in Bible, in *Malankara sabha*, Oct. 2008
8. Big bang theory and supernatural power,in *Malankara sabha* sep.2008

9. Big bang theory and bible I ,*viswadarsanam* in ,July,Aug,Sep.2008
10. Bio dynamic farming, *Voice of Voiceless Magazine*, 28 Feb 2008,P 10-11
11. Is ozone depletion hazardous to life on earth, *Malankara Sabha* magazine,Sep.2007,P.16-17
12. Role of ozone depletion in global warming, *Voice of Voiceless Magazine*,20 Sep 2007,P 50-51
13. Basil( Thulasi),a divine plant, *Voice of Voiceless Magazine*,18 oct 2007,P 20
14. Bible reveals the big bang theory,*Viswadarsanam* magazine,Dec-2007P. 24
15. BioPlastics redeemer of plastic paradoxy, *Malankara Sabha* magazineNov.2007,P.28-29
16. High speed rail corridor, a dream of western coast, *Voice of Voiceless Magazine*, 20 Dec 2007,P 10-11

## BOOKS PUBLISHED

1. Jaivam Jeevanam, Published by DC Books ,Kottayam, Kerala (2010) ISBN:978-81-264-2936-3
2. Dhikhanashalikal, Catholicate Publications, Pathanamthitta, Kerala, (2009) ISBN:
3. Yoga and Stress management Ed: George Varughese and Sosamma John ,Catholicate Publications,Pathanamthitta, kerala,(2012) ISBN

## PROJECTS

### Minor projects

1. Fabrication of crystal growth apparatus and study of physical properties of single crystals.(Submitted to UGC)

### Ongoing projects (Management sponsored)

1. Growth and optical study ZnO : La nano materials
2. Growth and Characterization of CuO :Gd nano materials,
3. Ultrasonic and Flourescent study of ZnS : La nano materials.

## CONTINUING PROFESSIONAL DEVELOPMENT (Training/Workshop/Seminar Attended)

1. International conference on Higher Education sponsored by International Academy for Promotion of Christain Higher Education (IAPCHE),held in Goa on 18-21 Aug 2012.
2. Orientation programme of Principals of colleges in Kerala held at Kalpetta,Wayanad on May 1-2, 2011 by council of Principals of in Kerala and chief resource person was Sri.Sreyas Kumar MLA
3. Orientation Programme of IQAC co coordinators, NAAC of M.G. University held at Maharajas college, Ernakulam on 20 th March 2009.Talk by Prof. Rawther, Kerala co ordinator QAC

4. National conference on NAAC, held at Dandeli, Bangalore, April 12-15,2008.
5. M.O.C.Academic conference on Educational excellence, held at Catholicate college, Pathanamthitta on 6th Dec. 2008(Talk-Dr.george samuel)
6. National Seminar on NMR and mass spectrography,held at catholicate college,on Nov. 25-27 2008.
7. National seminar on Folklore held at catholicate College,Pathanamthitta,Dec.11-13,2008
8. National seminar on Malayalam literature,held at catholicate college Pathanamthitta under the auspices of Dist.library council.on Dec17-19,2008.
9. XVI National Conference on Ultrasonics NCU 2007,held at STIC, CUSAT, Kochi on Dec,17-19,2007,p.43)
10. IIIrd International conference on ionic devices ICID2006,held at Anna university ,Chennai,on Dec.7-9,2006.
11. VIIth national conference on solid state ionics,held at Bharathiar University,Coimbatore,June 6-8,2006,
12. BRNS-ITAS XVth National symposium on Thermal analysis, THERMANS-06 held at University of Rajasthan, Jaipur, Feb,6-8,2006
13. Vth DAE-BRNS National laser symposium NLS-5 on, Dec.7-10,2005 held at VIT,Vellore,Tamil Nadu
14. DAE\_BRNS National Laser Symposium held in TVM on14-11-2002
15. DAE-BRNS Laser Symposium on Dec.22-24, 2003 held at IIT Khargpur
16. IIIrd International conference of Ferroelectric and dielectrics,AMF-4,Dec.12-15,2003 at IISc Bangalore
17. XIIth National Seminar on Ferroelectrics and dielectrics NSFD-XII held Dec.16-12,2002 in IISc Bangalore
18. XXXIst National Seminar on Crystallography. held in June 19-21,2001 at BARC Mumbai .
19. National Seminar on Current Trends in Material Science held in March 23-25, 2001 at MGU, Kottayam.
20. Refresher course on ' Opto electronics' in CUSAT 1994
21. Workshop on 'Condensed matter physics' in Maharajas College, Ernakulam in 2003.
22. Workshop on 'Micro-processor', in Catholicate Collge,Pathanamthitta.2003
23. Refresher course on 'Computer applications' held in M.G.University,Kottayam,2005
24. Seminar on 'Radiation Physics' conducted by BARC in Catholicate college,2002.
25. Seminar on 'Bifurcation theory' held in Catholicate college.2004
26. Seminar on 'Condensed matter physics' held in St.Cyrils College 2003
27. Seminar on 'Science and ethics' held in Catholicate college2004
28. Seminar on 'Transit of venus' held in Catholicate college2004
29. Seminar on 'Einstein and society' held in Town hall,Pathanamthitta.2005
30. Seminar on NAAC held in Catholicate college2005-Dr.Rajan Varghese,2005
31. Seminar on 'Cancer awareness programme' held in Catholicate college,MGOCSM,2005
32. Seminar on 'influence of media on students', held in Catholicate college MGOCSM,2005.
33. Seminar on NAAC held in Catholicate college-Dr.M. Mathew, Marthoma College TVLA

### **DISTINCT INTEREST**

- Solid State Physics, Astronomy, Astrobiology and Extraterrestrial life.

## PERSONAL PARTICULARS

**Date of Birth: 2<sup>nd</sup> November 1957** in Koppara Vadakkadathu, Chandanappally  
Pathanamthitta, 689648, Kerala, India.

Married to: Prof.Usha K.T.,on 29th April, 1984

Children: Paul and Jeevan

Religion: Christian, Orthodox

## REFERENCE

1. H.G.Kuriakose Mar Clemis Metropolitan,Manager,Catholicate college, Pathanamthitta.Mob. 9847802469
2. Dr. Godfrey Louis, Pro-Vice chancellor, Cochin University of Science and Technology ,Kochi, Kerala,Mob.9847124092
3. Prof.V.I.Joseph, Former Principal,Catholicate college,Pathanamthitta..Mob:944 7798494