

RESUME OF DR G.NEERAJA RANI

Full Name: GADDIPATI NEERAJA RANI
Highest Qualification: Doctor of Philosophy in Physics
Date of Birth: 24 April 1968
Subject & Specialization: Physics (Solid State Physics)
Present Position: Professor of Physics and Head Freshman Engineering
Geethanjali College of Engineering and Technology,
Cheeryal, Medchal(Dist.) Telangana State.

Contact

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Teaching experience: 26+years

Research:

Ongoing Research Project: Co-PI

1. Title of the Project: “Development of novel carbon nanotube/polymer nanocomposite materials for EMI applications.”

Duration: Three years (From 07-2-18 to 07-2021).

Funding Agency: DRDO

- a) Broad Research Areas: Solid State Spectroscopy, Molecular Spectroscopy, and Materials Science.
- b) Research experience in years 12
- c) Number of invited talks 07
- d) Chaired International Conference(s) 03
- e) Number of publications 40
- f) Research papers accepted --
- g) Communicated 01
- h) Organized International Conference(s) 01
- i) Editor- Book of Abstracts ICMC – 2019 01 (ISBN: 9789353962067)
- j) Editor – Journal of Physics Conference Series (IOP Publishing),
Volume Number – 1495.
- k) Editor – AIP Conference Proceedings, Volume Number – 2269
- l) Acted as reviewer for International Journals 05 (**Elsevier, Springer, Journal of Electronic Materials & DAESSP Symposium 2018**)

Administration: Head of the Department

14+years

Member Academic Bodies:

- 1) Ph.D. registration committee of Visveswaraya Technological University (VTU), Belgaum (2005-2007).
- 2) Member on the panel of Examiners for Ph.D. and degree courses of V T U, Belgaum (2005-2007).

Current Responsibilities at GCET

1. Head of Freshman Engineering (formerly S and H) Department
2. Member College Academic Committee
3. Chairman BoS all subjects under the purview of Freshman Engineering department.
4. Member Academic Council*(SDMCET, GCET)
5. Member results processing committee
6. Member Question paper moderation committee

Worked under various committees

1. Coordinator, National Board of Accreditation (NBA) at (TRREC)
2. Incharge IQAC (GCET)
3. Examination (SDMCET, TRR, GCET)
4. Chairman, Time table committee
5. Cultural committee
6. Convener Women Protection cell(2014 -2018).

At University level:

- **Ph.D. registration committee** of VT University, Belgaum (2005-2007).
- Member on the panel of Examiners for Ph.D. and degree courses of VT University, Belgaum (2005-2007).

* As a member of Academic Council of GCET, Chairman BoS Physics played a major role in accomplishing the following tasks.

- Formulation of the **curriculum structure** under Autonomous status.
- Formulation of Academic regulations
- Coordinated BoS meetings of Physics, Chemistry. Mathematics and English
- Drafting the Academic regulations under Autonomous status.
- Finalization of syllabus for the courses offered by Science and Humanities Department at both UG and PG programmes.

* As a member of Academic Council of SDMCET which was going to be Autonomous in status the following tasks have been done by me.

- Formulation of the **schemes** under Autonomous status
- Conducted a **workshop on curriculum design** under Autonomous status for the first year BE course.
- **Compilation of hand book** containing the **regulations and syllabus** for the first year BE course under Autonomous status.

Other particulars:

1. Biography has been published in 23rd Edition of **Who Is Who in the World** and selected for publication in **Who Is Who in Emerging Leaders**.
2. "My name has appeared in International Biographical Center, Cambridge, England as **International Scientist of the Year for 2007**".

Desire: Use the experience of teaching and administration in further work, which may involve teaching/ administration or combination of these, which leads in better implementation of education system.

Details of Education, teaching, Research, Training and Administration

Education Qualification

B.Sc. (M.P.C.)

- RBVRR Womens College, Osmania University, Hyderabad, 1985-1988.

M.Sc. (Solid State Physics)

- Osmania University Campus, Hyderabad, 1988-1990.

Doctor of Philosophy (Spectroscopy Properties of Rare Earth Ions)

- Osmania University, Hyderabad, 1995.

Employment record

University / College	Designation	Year
Geethanjali College of Engineering and Technology, Cheeryal,	Professor	June 2014 to till date
TRR Engineering College, Medak,	Professor (Ratified by JNTU, Hyderabad) and HoD, H & S	October, 2008 to May, 2014
GNIT, Hyderabad	Professor, and HoD, H & S	June, 2008 to October, 2008
VNR Vignana Jyothi, Hyderabad	Associate professor	Jan.208 to May 08
SDMCET, Dharwad, Karnataka	Assistant Professor and HoD, Physics	March, 2005 to January, 2008
SDMCET, Dharwad, Karnataka	Lecturer	November, 1994 to Feb. 2005.
JSS Science college, Dharwad, Karnataka	Part-time lecturer	August, 1994 to November, 1994

Research

My research work involves the synthesis of dielectric, magnetic, optical materials and nano-composites using various techniques such as Sol-gel, Hydrothermal solution mixing and Solid state reaction. Synthesized materials were characterized using XRD, FTIR, FESEM, ESR, PAS, Photoluminescence, and NMR etc. Dielectric and magnetic properties are also studied using LCR meter and VNA.

Particulars of Doctoral work: *The topic of the Doctoral work was on Spectroscopy Properties of Rare Earth Ions. This research work involved the characterization of materials synthesized through Sol-Gel technique. The synthesized compounds, which are highly fluorescent finds application in Photo tubes, Photo diodes etc. The synthesized compounds were characterized through various techniques like XRD, FTIR, SEM, ESR, PAS, Photoluminescence, and NMR etc. to optimize the quantum yield. In such studies the rare-earth materials were chosen as they find special position in the various applications. This work was carried out under the guidance of Dr. K.Ravindra Nath at Department of Physics, Osmania University, Hyderabad, India. This work was also guided by Dr. V.J.Rao, Scientist, IICT, Hyderabad, India. The Ph.D. was awarded by Osmania University in the year 1995.*

Other notable contributions

- a. Two articles on “**Technical Education**” which appear as contribution to a book.
- b. Authored **e-content material (Physics) for VTU, e-learning center**
- c. Developed **lab manual** for 1st year Engineering Physics Laboratory.

Experience in University functioning's and Examination work

1. Facilitated the PG students' interaction program with **Nobel Laureate S.Lee Glashow** at VTU Belgaum.
2. Worked as deputy chief external as per the appointment of VTU, Belgaum.
3. Worked as a squad member for examinations of VTU.
4. Worked as coordinator for Central valuation of VTU held at SDMCET, Dharwad for more than a month. The work involved receiving, coding, distribution, tabulation and decoding of the answer scripts.
5. Worked as coordinator for revaluation held at SDMCET, Dharwad.
6. Worked in the evaluation part of Ph.D. registration as a member of Ph.D. registration committee of VTU.
7. Carried out confidential work of question papers entrusted by Dr. V.Sreedhar, former Registrar Evaluation VTU, Belgaum.
8. Involved in the confidential work of BCA section of Karnatak College, Dharwad at different semester examinations and entrance examination.



Member ship of Professional bodies:


- a) Life member Luminescence Society of India (249).
- b) Life member Physics Association, VTU, Belgaum.

Publications

1. Influence of rare-earth ion doping on dielectric properties of lithium zinc borate glasses, J. Anjaiah, C. Laxmikanth, Stanley Ferdinand Mwanga, P. Raju, S.K. Mohammad Ali, J. Shankar, G. Neeraja Rani, Benard Mwankemwa, Optical Materials, Volume 131, September 2022, 112718, <https://doi.org/10.1016/j.optmat.2022.112718>,
2. PANI-SWCNT Blends with PVA Nanocomposite Films: Structural, Morphological and Electrical Properties for Effective EMI Shielding Applications, Neeraja Rani G, Kanaka Durga M, and Raju P, ECS Journal of Solid State Science and Technology, 2022 11 073005, <https://doi.org/10.1149/2162-8777/ac7f57>,

3. Synthesis, microstructure and ferroelectric properties of PbO-TiO₂-B₂O₃ based glass ceramics, J. Shankar, A. Shiva Kumar, P. Raju, J. Anjaiah, Sk. Mahammad Ali, G. Neeraja Rani, V.K. Deshpande, Materials Today, <https://doi.org/10.1016/j.matpr.2022.05.120>,
4. Ultrasonically induced insitu polymerization of PANI-SWCNT nanocomposites for Electromagnetic Shielding Applications, P.Raju, G.Neeraja Rani, Udaya Kumar Susarla, Andrews Joseph, K C James Raju, Journal of Materials Science: Materials in Electronics, <https://doi.org/10.1007/s10854-022-07702-2>, 27 January 2022. (Corresponding Author).
5. Enhanced microwave absorption properties of Ni_{0.48}Cu_{0.12}Zn_{0.4}Fe₂O₄ + polyaniline nanocomposites, P. Raju, P. Neelima, **G. Neeraja Rani**, M. Kanakadurga, Journal of Physics and Chemistry of Solids, 154(2021) 110048.
6. Effect of annealing on photoluminescence of MgAl_{1.8}Y_{0.14}Eu_{0.06}O₄, Kodam Ugendar, **G. Neeraja Rani** Journal of Chemical Physics, 539, 2020, 110937.
7. Quenching effect of co-dopant Pr³⁺ on red emitting yttrium vanadate phosphor doped with Eu(III) G. Neeraja Rani, J. Shankar, P. Raju, J. Anjaiah, B. Mamatha, and N. H. Ayachit Journal of American Institute of Physics (AIP), 2269, 030063-1-030063-6(2020).
8. Complex permittivity and permeability properties analysis of NiCuZn Ferrite-Polymer nanocomposites for EMI suppressor applications. P.Raju, Ch.Kalyani, J.Shankar, J.Anjaiah, **G.Neeraja Rani**, Journal of Physics: Conference Series, 1495, 012001(2020).
9. Solid State root preparation, Characterization and Electrical properties of NiCuZn, P.Raju, S.Rajesham, J.Shankar, J.Anjaiah, **G.Neeraja Rani** Journal of Physics: Conference Series, 1495(2020)012004.
10. Enhanced electrical properties of Sr(Bi_{3.9}La_{0.1})(Ti_{3.975}Zr_{0.025})O₁₅ ceramic with doping of Nd, B.Mamatha, K.Ashok, **G.Neeraja Rani**, A.R.James, Journal of American Institute of Physics (AIP) 2269, 030069-1-030069-4(2020).
11. Study of Microstructure and Thermal Properties of PbTiO₃ based Glass Ceramics, J.Shankar, A.Shiva Kumar, J.Anjaiah, P.Raju, **G.Neeraja Rani**, V.K Deshpande, Journal of American Institute of Physics (AIP), 2269, 030077-1-030077-4(2020).
12. Preparation and Characterization of Red Emitting Yttrium Vanadate Phosphor Doped with Eu(III): Y_{1-x}VO₄: Eu_x, **G. Neeraja Rani**, J. Shankar, J. Anjaiah, B. Mamatha, and N. H. Ayachit Journal of American Institute of Physics (AIP) 2162, 020117, 2019.
13. Study of Microstructure and Dielectric Properties of PbTiO₃ based Glass Ceramics, J. Shankar, **G. Neeraja Rani**, J. Anjaiah, P. Raju, and V. K. Deshpande Journal of American Institute of Physics (AIP) 2162, 020045 2019.
14. Thermoluminescence Characteristics and dosimetric aspects of Li₂O-CaO-B₂O₃ glasses doped with rare earth ions, J. Anjaiah, **G. Neeraja Rani**, J. Shankar, P.Raju, Journal of American Institute of Physics (AIP), 2162, 020043, 2019.

15. Application of Dielectric Mixtures Formulae to PbTiO₃ Based Glass-Ceramic Systems. J.Shankar, **G.Neeraja Rani**, and V.K.Deshpande, Journal of American Institute of Physics (AIP), Vol.2100, 020004-1-02000404, Year 2019.
16. Enhanced Electrical Properties of SrBi₄Ti₄O₁₅ ceramic with addition of ZrO₂, B.Mamatha, **G.Neeraja Rani** and J.Shankar, Journal of American Institute of Physics (AIP), Vol.1942, Pages 120007-1-120007-4, Year 2018.
17. Dielectric and Impedance Properties of NiFe_{1.95}R_{0.05}O₄ (R = Y, Yb and Lu), Kodam Ugendar, Hanuma Kumar, G. Markaneyulu, and **G. Neeraja Rani**, Journal of American Institute of Physics (AIP), Vol.1942, Pages 110004-1-110004-4, Year 2018. Corresponding author.
18. Structural, Magnetic and Magnetoreactance Studies In NiFe_{2-x}R_xO₄ (x = 0, 0.05; R = Y, Yb and Lu), Kodam Ugendar, Venkatrao Chunchu, **G. Neeraja Rani**, and G. Markaneyulu, Journal of American Institute of Physics (AIP), Vol.1942, Pages 130016-1-130016-4, Year 2018.
19. "Crystallization and Dielectric Properties of PbTiO₃ based Glass Ceramics" J.Shankar, V.K.Deshpande and **G.Neeraja Rani**, Journal of American Institute of Physics (AIP), Vol.1942, Pages 070001-1-070004-4, Year 2018.
20. Synthesis and Characterization of PbTiO₃ based Glass Ceramics, J. Shankar, **G.Neeraja Rani**, B.Mamatha and V.K.Deshpande, Journal of American Institute of Physics (AIP) 1832, 070016-1-3, Year 2017. Published by American Institute of Physics.
21. Low temperature synthesis of MgAl₂O₄ Spinel through sol-gel technique and its characterization, **G. Neeraja Rani** and N.H. Ayachit vol. 92, 2015, 561-564, Canadian journal of Physics.
22. Excited State Electric dipole moment of 5-Hydroxy Indole and 5-Hydroxy Indole 3-Acetic Acid through solvatochromic Shifts, **G.Neeraja Rani** and N.H.Ayachit, Journal of Electron Spectroscopy and Related phenomena, 182(2010)1-3, Elsevier Journal.
23. Density measurements and thermodynamic parameters of 4-4' dibutoxy azoxy benzene, JS Doddamani, SB Kapatkar, Narasimha H Ayachit, **G.Neeraja Rani**, Molecular Crystals Liquid Crystals, Vol.528;pp.74-80, 2010 Taylor and Francis Journal.
24. Excited state electric dipole moments of two exalite dyes from solvatochromic shift measurements, N.H.Ayachit and **G.Neeraja Rani**, Physics and Chemistry of Liquids,  Vol. 45, No. 6, December 2007, 615-621.
25. Excited state polarizabilities from solvatochromic shift measurements, N.H.Ayachit and **G. Neeraja Rani**, Physics and Chemistry of Liquids,  Vol. 45, No. 1, February 2007, 41-45.
26. Preparation and Characterization of Eu⁺³ doped powder spinel Phosphorous (MgAl_{1.8}Y_{0.2-x}O₄), **G. Neeraja Rani**, N H Ayachit, V J Rao, K Ravindranath J. of Spectrochimica Acta A, Vol.60, Issue 11, 2481-2485, Sept-2004.
27. Structural and Electrical Properties of PANI+SWCNT Nanocomposites prepared by Chemical Mixing Method, P.Raju, A.Geetha, S.Udaya Kumar, **G.Neeraja Rani**, International Conference on Multifunctional Materials, December 19-21, 2019, GCET, Cheeryal, Hyderabad.

28. Enhanced Electrical Properties of Sr (Bi_{3.9}La_{0.1})(Ti_{3.975}Zr_{0.025})O₁₅ Ceramic with the Substitution of Nd, B.Mamatha, **G.Neeraja Rani**, J.Shankar and V.Naveen Reddy, presented at International Conference on Advances in Humanities Sciences and Management (ICAHSM), Malla Reddy College of Engineering, Dhulapally, Secunderabad, 25th and 26th Nov, 2016.
29. On Characterization of a liquid Crystal through Acoustic and Thermodynamic parameters” International Conference on Recent Trends in Material Characterization, NITK, Suratkal, Feb.14-15, 2010
30. Excited state electric dipole moment of two substituted indoles through solvatochromic shifts International Conference on Recent Trends in Material Characterization, NITK, Suratkal, Feb.14-15, 2010
31. Thermodynamic functions of a liquid crystal through density measurements, N.H.Ayachit and **G.Neeraja Rani**, International conference on Condensed Matter Physics, Nov. 25-28, 2007, Jaipur.
32. Excited state electric dipole moment of two substituted indoles through solvatochromic shifts, **G.Neeraja Rani** and N.H.Ayachit presented at International symposium on Molecular Spectroscopy, Ohio University, Columbus, USA, 18th -22nd June, 2007
33. On The Orientation of substituents in N-Methyl and N, N-Dimethyl-Anilenes in the excited states, N.H.Ayachit and **G.Neeraja Rani**, presented at International symposium on Molecular Spectroscopy, Ohio University, Columbus, USA, 18th -22nd June, 2007.
34. Internal Assessment- its role, Characterization & Problems, **G.Neeraja Rani** and N H Ayachit, Workshop on Faculty development 26-28 Aug 2004, SDM College of Engineering & Technology. 
35. Evaluation through Rationalized Grading System, N H Ayachit and **G.Neeraja Rani**, Workshop on Faculty development 26-28 Aug 2004, SDM College of Engineering & Technology.
36. Preparation and Characterization of Red Emitting Yttrium Van date Phosphor Doped With Eu (III) and Co doped With Pr (III) [Y_{1-x}VO₄: Eu_{x-y}⁺³:Pr_y⁺³], **G. Neeraja Rani** et al, International conference on Luminescence and Applications, Mumbai, Feb 9-12, 2004.
37. Photoluminescence spectra of Spinel MgAl₂O₄ doped with Eu⁺³, **G. Neeraja Rani** et al National Seminar on recent trends in optical materials and Devices, November 21-22, 2002, Department of Physics, University, Tirupati.
38. Characterization of Phosphors – Photo Acoustic Spectroscopy, **G. Neeraja Rani** et al, VAGM MRSI Hyderabad 1994.
39. Order – disorder transition in spinel Mg Al₂O₄, **G. Neeraja Rani** et al, XXV National Seminar on Crystallography Madras Dec. 1993.
40. Intensity analysis of p-C₆H₄Cl₂, G. Neeraja Rani et al, XIII International Conference on Raman Spectroscopy, Germany, Aug 1992.

Books Published

1. Book of Abstracts: International Conference on Multifunctional Materials (ICMM-2019), December 19-21, 2019. ISBN: 9 789353962067

Organized International Conference(s)


1. International Conference on Multifunctional Materials, December 19-21, 2019, GCET, Cheeryal, Hyderabad.

Guest Lectures / Conferences attended as invited speaker

1. Invited to **I²IT Pune**, as a part of the DST sponsored project **INSPIRE-2010 and 2011**.
2. National conference on Homoeopathy at Bharateersh Vidyapeeth, Belgaum, India January 8th, 2006.
3. National conference on Homoeopathy at Kolhapur, India April 10th 2006.
4. Guest faculty at Karnatak College Dharwad, from 2004 to 2007.

Short-Term courses /Workshops / FDPs attended

1. FDP on Incorporating Human Values in Technical education, 18-22, July 2020, SWRO, SRO, AICTE
2. Workshop on Mossbauer spectroscopy and X ray diffraction Techniques. 1 day Workshop, 23 July 2020, Palamuru University PG college
3. FDP on Nano science and Nonao technology-Current perspectives, 27 July- 1 Aug.-2020, G H Raisonni College of Engineering, Nagpur.
4. FDP on Modern Characterization Techniques for Scientific and Engineering Applications 04 to 08 Aug 2020, Kakatiya Institute of Technology and Science, Warangal.
5. STTP on Synthesis Charecterization and its applications of nanomaterials 24 to 29 Aug 2020, JNTUH, Hyderabad.
6. FDP on Emotional Intilligence 5 Sep-21-25, 2020, ATAL-AICTE.
7. Regional Research Symposium on PBL November 21-23, 2019, KLE Technological University, Hubballi.
8. One week Faculty Development Programme on "Logic Building and C – Programming:", 9 - 14 May, 2016, Jointly organized by Tech Mahindra, Computer Society of India and GCET.
9. Workshop on NBA Washington Accord, JNTU, Hyderabad, June-2009.
10. Workshop on Educational Excellence, under TEQIP, SDMCET, Dharwad, Karnataka, August 6-7, 2007.
11. Funding Opportunities for Sponsored Research" held on May 5th, 2007 at JSSATE, Bangalore.
12. Three Days Refresher Course on Linear Algebra and Wavelet Transforms, SDMCET, Dharwad, Karnataka, December 9-11, 2006.

13. Nanoscience & Technology at NITTTR, Chandigarh, Nov 6 - 10, 2006. 
14. Nanotechnology and Engineering organized by VTU, Belgaum at MSRIT, Bangalore, September October 29- November 08, 2005.
15. Recent trends in Analytical Instrumentation at Bapuji Institute of Engineering and Technology, Davangere, August 30- September 3, 2004.
16. Workshop on Engineering Physics Teaching Methodology in Theory and Practicals, Sapthagiri College of Engineering, Bangalore, September 5-6, 2002.
17. One Day Workshop on Uniform Teaching Methodology, BEC, Bagalkot, Karnataka, May 1st, 2002.

Seminars / Work Shops / FDPs/ SDPs Conducted

1. Features of Google form and Google class room, 1- 2, July 2020, GCET.
2. Three day work shop on design thinking, 28 Feb. to 2 mar. 2021, GCET.
3. Organizing Orientation program for B.Tech. first year students every year since 2014.
4. Organizing Science fest Vaisheshika and Alfamatica every year since 2014.
5. Information and Communication Technology in English Language Teaching, 25-27, July 2017.
6. Writing Course outcomes designing Assesment techniques, Mapping course outcomes with program outcomes, 06th June 2016, GCET.
7. Outcome based education and Bloom's Taxonomy, 12th May 2016, GCET.
8. Two day workshop on Mat-lab, 26-27 April, 2016, GCET
9. Workshop on "Philosophy of life and work ethics" 13th December 2014, GCET.
10. Three Day in-house faculty development program, 25-27 June 2014.
11. One day Workshop on Cloud Seeding 2014 at GCET.
12. One day National seminar on Nanoscience and nanotechnology 2014 at GCET.
13. Work shop on "Curriculum design for first year BE (2007)" under TEQIP at SDMCET, Dharwad, Karnataka.
14. Work shop on Research Methodology (2006) under TEQIP at SDMCET, Dharwad, Karnataka.