

**Kalaignar karunanidhi Government Arts College for women  
(Autonomous), Pudukkottai-622001**

**STAFF PROFILE  
General Information**



- a) Name : Dr. R. Renuka  
b) Address (Residential) : Seriyalur Jamin,  
Keeramangalam (PO),  
Alangudi (TK)  
Pudukkottai (DT) - 614624  
c) Designation : Assistant Professor  
d) Department : Physics  
e) Date of Birth : 12.06.1981  
f) E-mail id : renuka101281@gmail.com  
g) Area of Specialization : Nanophysics

**A) Academic Qualifications**

| Exam Passed                                  | Subjects   | Board/ University                         | Year | Division/<br>Grade/<br>Merit, etc. |
|--|--|---|------|------------------------------------|
| High School                                  | Tamil, English, Maths,<br>Science, Hist. And<br>Geo. | Board of<br>Secondary<br>Education        | 1996 | I                                  |
| Higher<br>Secondary or<br>Pre-degree         | Physics, Chemistry,<br>Biology                       | Board of Higher<br>Secondary<br>Education | 1998 | I                                  |
| UG   | Physics  | Bharathidasan<br>University, Trichy       | 2003 | I                                  |
| PG   | Physics  | Bharathidasan<br>University, Trichy       | 2005 | I                                  |
| M.Phil.,                                     | Physics  | Bharathidasan<br>University, Trichy       | 2007 | II                                 |
| Ph.D.,                                       | Physics  | Bharathidasan<br>University, Trichy       | 2022 | Commended                          |
| State Level<br>Educational<br>Testing (SLET) | Physics  | Bharathiar University<br>Coimbatore       | 2012 | State first (for<br>PH Quota)      |

**i) Research Experience & Training**

| <b>Research Stage</b>  | <b>Title of work / Thesis</b>   | <b>University where the work was carried out</b> |
|--|---|--|
| M. Phil.   | Comparative study of three different oils using ultrasonic experiments                  | Bharatidasan University, Trichy                  |
| Ph.D.  | Synthesis and characterization of silver nanoparticles and its antibacterial activities | Bharatidasan University, Trichy                  |
| Post-Doctoral  |   |  |
| Publications (give a list separately)                          | <b>Annexure-I</b>   | -----  |
| Research Guidance (give names of students guided successfully) | <b>Annexure-II</b>  | -----  |
| Training (please specify)                                      | <b>Annexure-III</b>   | -----  |

**B) Seminars, Conferences, Symposia Workshops etc. attended** *(If necessary, give a separate list)*

| <b>Name of the Seminars / Conferences / Symposia / Workshops etc</b> | <b>Name of the Sponsoring Agency</b> | <b>Place and Date</b> |
|--|--------------------------------------|-----------------------|
| <b>Annexure-IV</b>   |                                      |                       |

**ii) Teaching Experience**

| <b>Courses Taught</b>   | <b>Name of the University / College / Institution</b>  | <b>Duration</b>  |
|-------------------------|--|--|
| iv) UG (B.Sc., Physics) | 1. Government Arts College for Women(A), Pudukkottai.<br>2. School of Physics, Bharathidasan University<br>3. Bharathidasan University Model College, Aranthangi<br>4. Government College for Women(A), Kumbakonam.<br>5. Government Arts College for Women(A), Pudukkottai. | 1. 01.08.2006 – 18.01.2011 (04 yrs 6 months) -Guest Lecturer<br>2. (27.07.2011 -15.09.2011) (2 months)- Guest Lecturer<br>3. (16.09.2011-01.01.2013) (1 yr 4 month)- Guest Lecturer<br>4. (02.08.2015-04.08.2016) (1 Yr)- Assistant Professor<br>5. (05.08.2016- Till Now) Assistant Professor |
| v) PG (M.Sc., Physics)  | 1. Government Arts College for Women(A), Pudukkottai.<br>2. School of Physics, Bharathidasan University<br>3. Government College for Women(A), Kumbakonam.<br>4. Government Arts College for Women(A), Pudukkottai.  | 1. 01.08.2006 – 18.01.2011 (04 yrs 6 months) -Guest Lecturer<br>2. (27.07.2011 -15.09.2011) (2 months)- Guest Lecturer<br>3. (02.08.2015-04.08.2016) (1 Yr)- Assistant Professor<br>4. (05.08.2016- Till Now) Assistant Professor  |

**Total Teaching Experience (in years and months):**

a) Under-graduate (Sci.) : 14 years

b) Post-graduate : 12 years

**viii) Innovations/ Contributions in Teaching** *(If necessary, give a separate list)*

|  |  |
|--|--|
| a) Design of Curriculum:   |  |
| b) Teaching methods:   | Chalk and Talk method,<br>Power point presentation |
| c) Laboratory experiments:   |  |
| d) Evaluation methods:   |  |
| e) Preparation of resource material including books, reading materials, laboratory manuals etc.: |  |
| f) Remedial Teaching / Student Counseling (academic) :   |  |
| g) Any other:  |  |

**a) Extension Work/ Community Service** *(If necessary, give a separate list)*

- i) Please give a short account of your contribution to:
- ii) Community work such as values of National Integration, secularism, democracy, socialism, humanism, peace, scientific temper, flood or drought relief, small family norms etc.: **Corona Awareness Program along with III B.Sc Physics students (2019-2020)-2 days.**

**b) National Literacy Mission** :

**c) Positions held / leadership role played in organizations linked with Extension Work National Service Scheme (NSS), or NCC or any other similar activity** :

**(Signature of the Teacher)**

## Annexure-I

### Publications

- “Bio-Synthesis of Silver Nanoparticles using Punicagranatum (Pomegranate) Peel Extract: A Novel Approach towards Waste Utilization” International Journal of Advanced Science and Engineering. Vol. 3 , Issue 1, 2016, 234-236, ISSN 2349 5359.
- “Synthesis and characterization of fruit mediated silver nanoparticles using tamarindus indica fruit extract” International Journal of Scientific & Engineering Research Volume 8, Issue 10, October-2017, ISSN 2229-5518.
- Biosynthesis of silver nanoparticles using *phyllanthus emblica* fruit extract for antimicrobial application, Biocatalysis and Agricultural Biotechnology, Elsevier 24,2020, 101567.
- “Solanum torvum mediated synthesis and characterization of silver nanoparticles for anti bacterial activities” Journal of plant biochemistry and biotechnology. Springer,1-6, 2021.
- “Green synthesis of magnetic nanoparticles via Cinnamomum verum bark extract for biological applications” Journal of environmental Chemical Engineering, Elsevier, 8,5, 104420.

## Annexure-IV

| Name of the Seminars / Conferences / Symposia / Workshops etc                | Name of the Sponsoring Agency   | Place and Date   |
|--|---|--|
| Curriculum Development and Evaluation Techniques                             | UGC Sponsored Training Programme  | 09.02.2006-11.02.2006<br>Government Arts College for Women(A), Pudukkottai.            |
| Quality Enhancement and sustenance in higher education through accreditation | Internal quality Assurance cell   | 19.09.2009<br>Government Arts College for Women(A), Pudukkottai.                       |
| Recent Trends in Materials Science   | Government Arts College for Women(A), Pudukkottai.                                      | 18.03.2009, Government Arts College for Women(A), Pudukkottai.                         |
| Awariness Programme on nanotechnology(APNT)                                  | Centre for Nanoscience and Nanotechnology, School of Physics, Bharathidasan University. | 27.02.2010-28.02.2010<br>School of Physics, Bharathidasan University, Tiruchirappalli. |

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|---|--|--|
| <b>Recent Advances in Laser Applications(SLS-RALA-2010)</b>   | <b>UGC Sponsored Autonomous grant one day state level seminar</b>                            | <b>01.03.2010, , Jamal Mohamed College (A), Tiruchirappalli.</b>   |
| <b>Right to Education for the differently abled persons in higher education</b>   | <b>IECD, Centre for differently abled Persons, Bharathidasan University, Tiruchirappalli</b> | <b>10.10.2011, IECD, Centre for differently abled Persons, Bharathidasan University, Tiruchirappalli</b> |
| <b>Differently abled: Challenges and opportunities in higher Education and Awareness campaign Protection of the Rights of the Differently abled</b> | <b>Centre for Differently abled persons, Bharathidasan University</b>                        | <b>06.03.2012, Jamal Mohamed College (A), Tiruchirappalli.</b>   |
| <b>Faculty development programme</b>  | <b>Internal quality assurance cell</b>   | <b>22.08.2015, Government College for Women(A), Kumbakonam</b>   |
| <b>Frontier Areas in Applied Physics (NCF AAP-2016)</b>   | <b>Faculty of Engineering and Technology, Annamalai University.</b>                          | <b>27.07.2016, Faculty of Engineering and Technology, Annamalai University.</b>                          |
| <b>Paper publication</b>  | <b>UGC, DST, TNSCST sponsored National workshop</b>  | <b>16.12.2016-17.12.2016, Physics wing, Annamalai University.</b>  |
| <b>One day Faculty Development Programme on quality Enhancement</b>   | <b>UGC Sponsored Training Programme</b>  | <b>01.02.2017 Government Arts College for Women(A), Pudukkottai.</b>                                     |
| <b>Yoga therapy on reduction</b>  | <b>UGC Sponsored Training Programme</b>  | <b>18.09.2017-22.09.2017 Government Arts College for Women(A), Pudukkottai.</b>                          |
| <b>One day workshop on XRD techniques</b>   | <b>National College, Tiruchirappalli</b>   | <b>16.12.2017, National College, Tiruchirappalli.</b>  |
| <b>Recent trends in Nano materials and thin films</b>   | <b>3 rd National conference, A.V.V.M Sri Pushpam Collge(A), Poondi, Thanjavur</b>            | <b>9.2.2018-11.02.2018, A.V.V.M Sri Pushpam Collge. (A), Poondi, Thanjavur</b>                           |
| <b>Emerging Trends in Materials-18</b>  | <b>Bon Secours College for Women, Thanjavur</b>  | <b>22.02.2018</b>  |
| <b>National Workshop on Powder X-ray diffraction and data analysis</b>  | <b>PG and Research department of Physics, Bishop Heber College (A) , Tiruchirappalli.</b>    | <b>23.02.2018-24.02.2018, PG and Research department of Physics, Bishop Heber College</b>                |

|  |  |   |
|--|--|---|
|  |  | (A) , Tiruchirappalli   |
| <b>Materials Modelling using quantum espresso- Theory and practice for beginners</b>   | <b>UGC Sponsored National level workshop</b>   | <b>29.07.2019-30.07.2019, , Government College for Women(A), Kumbakonam</b>   |
| <b>Specific Industrial and Environmental Applications of Physics</b>                   | <b>Srimad Andavan Arts and Science College</b>   | <b>18.12.2019- Srimad Andavan Arts and Science College Tiruchirappalli.</b>   |
| <b>How Nanoscience and Technology inspired from Nature and transforming the word?</b>  | <b>Cauvery College for Women(A), Tiruchirappalli</b>   | <b>03.05.2020, Cauvery College for Women(A), Tiruchirappalli</b>  |
| <b>3 days online course on biomedical nanotechnology - (A grade)</b>                   | <b>Indian Academic Researchers Association, Tiruchirappalli</b>                                      | <b>7.05.2020-09.05.2020, Indian Academic Researchers Association, Tiruchirappalli.</b>                                      |
| <b>Characterization of Materials at Nano order scale length- A SAXS Approach</b>       | <b>SNS College of Technology, Anna University, Chennai</b>   | <b>25.05.2020, SNS College of Technology, Anna University, Chennai</b>  |
| <b>Design, Develop and Deliver online courses through MOODLE platform- Two day FDP</b> | <b>Tamil Nadu State Council for Higher Education (TANSCHHE) with technical support DOTE, Chennai</b> | <b>29.05.2020-30.05.2020, Tamil Nadu State Council for Higher Education (TANSCHHE) with technical support DOTE, Chennai</b> |
| <b>Engaging Remote Learners in Higher Education</b>                                    | <b>Lady Willingdon Institute of Advanced study in education, Triplicane, Chennai</b>                 | <b>08.06.2020, Lady Willingdon Institute of Advanced study in education, Triplicane, Chennai</b>                            |
| <b>Research methodology</b>  | <b>Layola College, Chennai</b>   | <b>12.06.2020-13.06.2020, Layola College, Chennai</b>   |
| <b>Women empowerment, what does it actually stand for?</b>                             | <b>Government Arts College for Women(A), Pudukkottai.</b>  | <b>04.07.2020, Government Arts College for Women(A), Pudukkottai.</b>   |
| <b>Nanotechnology for sensors, Electrocatalyst, Materials and Medical Applications</b> | <b>Saraswathi Narayanan College, Madurai</b>   | <b>13.07.2020-14.07.2020</b>  |
| <b>Webinar on virtual Physics Laboratory</b>   | <b>Government College for Women(A), Kumbakonam in</b>  | <b>29.01.2021, Government College for Women(A), Kumbakonam in</b>   |



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|--|---|---|
|  | collaboration with Vinayaga Misson's Engineering College, Selam | collaboration with Vinayaga Misson's Engineering College, Selam |
|--|---|---|

### Papers Presented in Conferences

| <b>Name of the Author</b>                  | <b>Title of the Paper</b>   | <b>Date</b>       | <b>Conference International/National/State level</b>   | <b>Venue</b>   |
|--|---|-------------------|--|--|
| Renuka.R<br>Assistant Professor of Physics | Growth and Characterization of silicon carbide materials                      | 15.02.08-16.02.08 | National seminar on Recent Advances in Materials Science                                     | Cauvery College for Women, Trichy  |
| Renuka.R<br>Assistant Professor of Physics | Green Synthesis of silver Nanoparticles using Tamarindus indica fruit extract | 06.01.17-07.01.17 | International Conference on Advances in Materials Science                                    | PG and Research Department of Physics, Holy Cross College, Trichy.                                 |
| Renuka.R<br>Assistant Professor of Physics | Green synthesis of silver Nanoparticles and their antibacterial activities    | 20.12.18-21.12.18 | National Conference on Recent Trends in Nano and bulk superconducting and magnetic materials | PG and Research Department of Physics, Srimad Andavan Arts and Science College(A), Tiruchirappalli |