

# CURRICULUM VITAE

**Dr. Nagamalleswari Katragadda**

PhD

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Nagamalleswari\_k@srmmap.edu.in



## Profile

Seeking and maintaining a full-time position offers professional challenges, utilizing interpersonal skills, excellent time management, and problem-solving skills.

## ❖ Work experience

### ⊕ Lecturer (2017-2019) in Vignan Degree College, Palakaluru Road, Guntur, AP

- Used a variety of learning modalities and support materials to facilitate the learning process and accentuate presentations.
- Developed and implemented innovative teaching strategies to engage students in lectures and coursework.
- Used PowerPoint to give presentations to student classrooms.

➤ Courses Taught: Mechanics & Properties of Matter, optics, Basic Electronics, Renewable Energy.

### ⊕ Assistant Professor (2024 - Present) at DRK Institute of Science And Technology, Bowrampet, Hyderabad

- Courses Taught: Applied Physics

## ❖ Education & Qualifications

| S.No | Qualification | % of Marks | Year      | University/ College        |
|------|---------------|------------|-----------|----------------------------|
| 1.   | PhD           | 83         | 2019-2024 | SRM University, Guntur, AP |
| 2.   | MSc (Physics) | 84         | 2015-2017 | TJPS College, Guntur, AP   |
| 3.   | BSc (MPC)     | 86         | 2012-2015 | JKC College, Guntur, AP    |
| 4.   | Inter (MPC)   | 73         | 2010-2012 | JKC College, Guntur, AP    |
| 5.   | SSC           | 82         | 2009-2010 | AGH School, Guntur, AP     |

➤ **PhD Thesis Title:** Design of Pb-free Perovskite Oxides for Multiferroics and Flexible Hybrid Nanogenerators

## ❖ Publications

1. **KN Malleswari**, P. Tulasirao, and P. Mandal “*A measurement set-up for characterization of temperature dependence of impedance dielectric permittivity, and pyroelectric current under controlled environment*” **J. Electron. Mater.** **52**, **1625** (**2022**). **IF = 2.04** <https://doi.org/10.1007/s11664-022-09875-2>.
2. **KN Malleswari**, P. Mandal, P. Yanda, A. Sundaresan, S. D. Kaushik, W. Zhang, P. Shiv Halasyamani, A. M. Manjón-Sanz “*Room temperature Polar and Weak-ferromagnetic Oxide with Low Dielectric Loss*” **Mater. Sci. Eng. B**. **298**, **116869** (**2023**). **IF = 3.407** <https://doi.org/10.1016/j.mseb.2023.116869>
3. **KN Malleswari**, Soham Kumar, and P. Mandal “*Carbon Nanotube Assisted Improved Device Performance in a Piezoceramic–Polymer Flexible Hybrid Nanogenerator*.” **ACS Appl. Electron. Mater.** (**2023**). **IF = 4.49** <https://doi.org/10.1021/acsaelm.3c01341>
4. **KN Malleswari**, Soham Kumar, P. Tulasirao, and P. Mandal “*The Structural and Electrical Properties of  $BiFeO_3 - Bi_{0.5}K_{0.5}TiO_3 - BaTiO_3$  based Solid Solutions at the Morphotropic Phase Boundary*.” **Mater. Today Commun.** **45**, **113030** (**2025**). **IF = 4.5** <https://doi.org/10.1016/j.mtcomm.2025.113030>

## ❖ Other Publications

1. Shahnaz Kossar, R. Amiruddin, Asif Rasool, M.C. Santhosh Kumar, **KN Malleswari**, Pranab Mandal, and Nafis Ahmed, “*Study on ferroelectric polarization induced resistive switching characteristics of neodymium-doped bismuth ferrite thin films for random access memory applications*.” **Curr. Appl. Phys.**, **39**, **221** (**2022**). **IF = 2.85** <https://doi.org/10.1016/j.cap.2022.04.013>
2. P. Tulasirao, **KN Malleswari**, and Pranab Mandal “*Probing oxide ion conductivity in  $Na_{0.5}Bi_{0.5}TiO_3$ - $BiFeO_3$ - $BaTiO_3$ -based ferroelectric materials*.” **ACS Appl. Energy Mater.** **6**, **9**, **5009** (**2023**). **IF = 6.95** <https://doi.org/10.1021/acsae.3c00594>
3. Achal Brigade; **KN Malleswari**; Pranab Mandal; R V K Mangalam “*Improved pyroelectric effect in PVDF/ $BaTiO_3$  composite flexible films mediated by enhanced  $\beta$  – PVDF phase formation*.” **J. Polym. Res.** **288**, (**2023**). **IF = 3.06** <https://doi.org/10.1007/s10965-023-03669-8>
4. Achal Brigade; **KN Malleswari**; Pranab Mandal; R V K Mangalam “*Studies on PVDF/Ferrite composite films on flexible substrate for pyroelectric energy conversion*.” **New J. Chem.** **09**, **28**, (**2023**). **IF = 3.92** <https://doi.org/10.1039/D3NJ02649C>
5. Achal Brigade; **KN Malleswari**; Pranab Mandal; R V K Mangalam “*Flexible multiferroic PVDF/ $CoFe_2O_4$  composite films for pyroelectric energy conversion*.” **J. Mater. Sci.** **1** (**2023**). **IF = 4.5** <https://doi.org/10.1007/s10853-023-09149-0>

6. Thara Prasannan, **KN Malleswari** Achal Bhiogade, Pranab Mandal, Vengadesh Kumara Mangalam Ramakrishnan “*Revealing Pyroelectric Capabilities: Filler-Enhanced PVDF/PbTiO<sub>3</sub> Films for Improved Flexibility and Energy Conversion.*” **Polym. Adv. Technol. (2025).** IF = 3.69 <https://doi.org/10.1002/pat.70345>
  
7. P. Tulasirao, **KN Malleswari**, and Pranab Mandal “*Influence of Mg<sup>2+</sup> doping on the oxide ion conductivity of layered ferroelectric SrBi<sub>2</sub>Ta<sub>2</sub>O<sub>9</sub>*” **Ceram. Int. 50, 24 (2025).** IF = 5.6 <https://doi.org/10.1016/j.ceramint.2024.10.233>

## ❖ Under Communication

1. P. Prasad V, **KN Malleswari** Non-Invasive In-Vivo Detection of Random Blood Glucose using Photoacoustic Spectroscopy” has been sent back for the following reasons ([Under Review](#)).
2. P. Prasad V, **KN Malleswari** “Design of a Lead-Free Transducer for Non-Invasive Continuous Glucose Monitoring using Photoacoustic Spectroscopy.” ([Under preparation](#)).

## ❖ Patents

1. P. Mandal, P. Tulasirao, **KN Malleswari**, “A method and set-up for characterization of temperature dependence of impedance, relative dielectric permittivity, piezoelectric coefficients and pyrocurrent under controlled gas environment” Application no: **202141051103, 2021** (Published, granted).
  
2. P. Prasad V, **KN Malleswari** et. al. “Piezoelectric sensor and a method for its preparation” Application no: **202241034906, 2022** (Published, Examination pending)

## ❖ Prototype

- **KN Malleswari**, P. Tulasi Rao, and Pranab Mandal “A Low-cost set-up for temperature dependence measurement of impedance, relative dielectric permittivity, piezoelectric coefficients, and pyrocurrent under a controlled gas environment up to 1000 °C.” ([Built and operational](#)).

## ❖ Conferences

1. **KN Malleswari**, P. Mandal. “Room temperature multiferroics.” International Conference on Advances in Chemical and Materials Sciences (ACMS), Indian Institute of Chemical Engineers, Kolkata (Virtual), 14-16<sup>th</sup> 2022.
2. **KN Malleswari**, P. Mandal “Design of flexible hybrid nanogenerators” International Conference on Electronic & photonic Integration Circuits (EPIC-2022), SRM University AP, December 15- 17, 2022.
  
3. **KN Malleswari**, P. Mandal. “ A Polar and weak ferromagnetic oxide with low dielectric loss” National conference on Status and Opportunities in Functional Energy and Electronic Materials (SOFEEM), SRM University, AP, March 2-3<sup>rd</sup> 2024.

## ❖ Research Experience

1. Expertise in synthesizing Pb-free Piezoelectric ceramic Oxides using solid-state reaction (SSR) and Molten Salt Synthesis (MSS) techniques.
2. Specialize in making pellets for measuring Dielectric and Piezoelectric properties in Pb-free Piezoelectric ceramic oxide materials for sensor applications.
3. I specialize in the preparation of nanomaterials for flexible hybrid nanogenerators.
4. During my Ph.D. tenure, I had the opportunity to be the student in charge of operating the PANalytical Empyrean X-ray Diffractometer (XRD).
5. I specialize in making custom-made furnaces and measuring probes.

## ❖ Guest Lecturer – Introduction to Data Analytics

*TJPS college | January 2025*

- Delivered a 1-hour lecture on "Material science."

## ❖ Awards

- A silver award for presenting "Design Pb-free flexible hybrid nanogenerators" during Research Day. 2022, September.

## ❖ Technical Skills

- MS Office
- Origin
- WinPLOTR

## ❖ Skills

- Problem solving
- Effective Communication
- Self-motivation and teamwork

## ❖ Languages

- English ..... Fluent
- Telugu ..... Fluent
- Hindi ..... Basic

**Board of Secondary Education  
ANDHRA PRADESH**

KP 0966263



**DUPLICATE**

**SECONDARY SCHOOL CERTIFICATE**

CERTIFIED THAT KATRAGADDA NAGAMALLESWARI

D/o KATRAGADDA NARASIMHA RAO

bearing Roll No 1015101988

belongs to AUXILIUM (G) HIGH SCHOOL, GUNTUR

has appeared and PASSED SSC EXAMINATION held in MARCH 2010 in A2 GRADE

with TELUGU as medium of instruction.

| DATE OF BIRTH | DAY        | MONTH  | YEAR               |
|---------------|------------|--------|--------------------|
| 30-08-1995    | THREE ZERO | AUGUST | ONE NINE NINE FIVE |

**THE CANDIDATE SECURED THE FOLLOWING PERCENTAGE OF MARKS**

| SUBJECT                              | Marks Secured<br>(in figures) | Marks Secured<br>(in words) | Positional<br>Grade |
|--------------------------------------|-------------------------------|-----------------------------|---------------------|
| FIRST LANGUAGE : ( TELUGU SANSKRIT ) | 75                            | SEVEN FIVE                  | B1                  |
| THIRD LANGUAGE : ENGLISH             | 84                            | EIGHT FOUR                  | A1                  |
| MATHEMATICS :                        | 84                            | EIGHT FOUR                  | A2                  |
| GENERAL SCIENCE :                    | 95                            | NINE FIVE                   | A1                  |
| SOCIAL STUDIES :                     | 89                            | EIGHT NINE                  | A1                  |
| <b>TOTAL :</b>                       | <b>427</b>                    | <b>FOUR TWO SEVEN</b>       |                     |
| SECOND LANGUAGE : ( HINDI )          | 71                            | SEVEN ONE                   | A2                  |
| <b>GRAND TOTAL :</b>                 | <b>498</b>                    | <b>FOUR NINE EIGHT</b>      | A2                  |

Life Skills Education : GRADE SECURED : A1

Marks of Identification 1. A mole on the neck  
2. A mole on the right hand.

*Se Brigitte*  
Head Mistress 27/09/12

Head of CLFM 2008 HIGH SCHOOL  
with School Grant Stambheguru

Date of issue : 23-05-2010

*H. J. S. 19/7/12*  
Addl. Joint Secretary,  
to the Director for Government

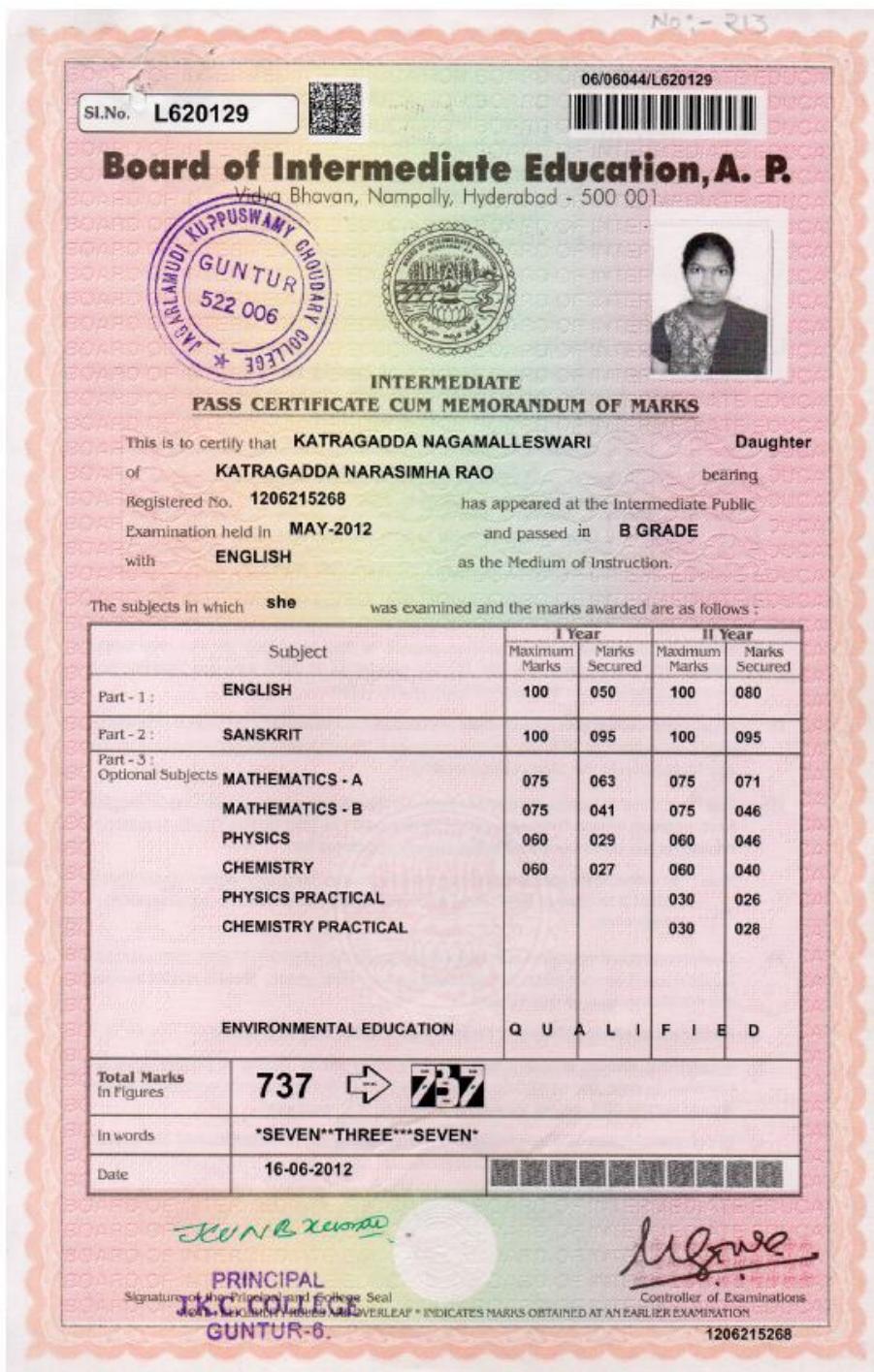
sd/-xxxx

SECRETARY

BOARD OF SECONDARY EDUCATION  
A P, HYDERABAD

1. Life Skills Education : The Grade shall be incorporated in the marks of the candidate before delivery of the certificates to the candidates.  
2. Any corrections in the certificate will not be entertained after one year from the date of issue.  
3. Any unauthorised correction in the certificate will result in cancellation of certificate.  
4. The Marks with asterisk indicate the old marks secured in previous achievement.

2010



leg no: 1220079



## **FACULTY OF PHYSICAL SCIENCES**

## ఫాక్టరీ అఫ్ ఫైబ్రిక్ట్ సెన్స్

*This is to certify that*  
துமிகரம்

Mr./Ms. *Gauthamgadda Nagarmalleswari*  
శ్రీ/మిస్సి నగరమల్లేశ్వరి

Son/Daughter of Karthikarao Narsimha Rao  
పుట్టాడు/పుట్టిన

*has been duly admitted to the Degree of **Bachelor of Science***

బ్రాచులర్ అప్ప స్వామీ, పట్టాపురావానికి ఆర్తపాందినందున

from T.K.G College (Autonomous) Guntur

of this University he/she having been declared to have passed the examination prescribed therefor as follows:

| Subjects<br>ଓଡ଼ିଆ ଓ ଅଂସାର  | Month & Year of Passing<br>ମୁହଁନ୍ଦ ପାଠ୍ୟ ବେଳେ ବେଳେ | Class Awarded<br>ଶାସନ ପ୍ରତିକାଳ |
|--|--|--------------------------------|
| part - I<br>(i) English<br>(ii) Odia<br>(iii) Geography<br>୧୯୯୮ ଜାନ୍ମି | April, 2014  | First                          |
| part - II Mathematics<br>Physics<br>Chemistry                          | April, 2015  | First                          |

*Given under the Seal of the University*

విశ్వవిద్యాలయ అధికార ముద్రత చూర్చిచేయబడినది.

Nagarjuna Nagar-522 510. A.P, India  
నాగర్జున నగరం-522 510, ఆంధ్రప్రదేశ్, భారతదేశము.

Date 11 5 MAR 2018  
50



Ch. A. J. Agarwala

Addl. Controller of Examinations

Regd. No. : Y16PH03016



PH/0993/A17

ACHARYA NAGARJUNA UNIVERSITY  
శాస్త్రవిజ్ఞాన విశ్వవిద్యాలయము



FACULTY OF PHYSICAL SCIENCES

శాస్త్ర అంధకార సైన్స్

This is to certify that

దృష్టికాల

Katragadda Nagarnalleswari

Mr./Ms.

శ్రీ/శ్రీమతి/శ్రీమతి

Son/Daughter of

శాస్త్రవిజ్ఞాన విశ్వవిద్యాలయము

Katragadda Narasimha Rao

has been duly admitted to the Degree of **Master of Science**

శాస్త్ర అంధకార విశ్వవిద్యాలయముకి ఆశ్రమించబడు

of this University he/she having been declared to have passed the examination prescribed therefor as follows :

ఈ బిశ్వవిద్యాలయం కుండి కెప నూచించ చిరంగా అభిరుచి/లఘు కథ్యాన న్యోండి కిందిలో ప్రత్యేక ప్రాంగణ ప్రాంగణంలో:

| Subjects<br>అభిరుచి పాఠము | Month & Year of Passing<br>ఎంబ్రెచ్ పొదు మా. వచ్చింది | Class Awarded<br>ప్రాంగణ ప్రాంగణ                               |
|---------------------------|---|--|
| Physics                   | April 2017  | First Class with<br>Distinction<br>( CGPA: 8.46,<br>Grade: A ) |

Given under the Seal of the University

శాస్త్రవిజ్ఞాన విశ్వవిద్యాలయ దాఖల ముద్రలో అంధికాలిసారి.

Nagarjuna Nagar-522 510, A.P. India  
శాస్త్రవిజ్ఞాన విశ్వవిద్యాలయ-522 510, అంధ్రప్రదీప, శాస్త్రవిజ్ఞాన.

Date  
30

13 AUG 2023



Registrar  
ప్రాంగణ



### PROVISIONAL CERTIFICATE

This is to certify that Ms. KATRAGADDA NAGAMALLESWARI  
D/o Mr. KATRAGADDA NARASIMHA RAO bearing Registration No. AP18235080002,  
Research Scholar in the Department of PHYSICS from SCHOOL OF ENGINEERING AND  
SCIENCES of SRM UNIVERSITY -AP, Andhra Pradesh, has successfully completed the Ph.D.  
Programme with the thesis entitled "Design of Pb-free Perovskite Oxides for Multiferroics  
and Flexible Hybrid Nanogenerators".

The student has completed the course work as per the programme requirements  
prescribed for the award of the degree. Her thesis Viva-Voce examination was held on  
02<sup>nd</sup> May 2025 and the thesis evaluation was done by a pool of examiners including external  
examiners from India and Abroad.

Date: 22.05.2025

This certificate bears no correction(s)



*Sheela Singh*

**CONTROLLER OF EXAMINATIONS**