

## CHAGARLAMUDI BABY RANI



**Designation** : Professor & HOD  
**E-Mail ID** : cbr@vrsiddhartha.ac.in  
**Contact at** : S&H-II/107, Department of Mathematics,  
 Velagapudi Ramakrishna Siddhartha School of Engineering,  
 Kanuru, Vijayawada, Andhra Pradesh 520007.

### Education

#### Ph. D (Fluid Dynamics)

2011, Acharya Nagarjuna University, Guntur.

#### M.Phil (Applied Mathematics)

1998, Andhra University Engineering Campus, Visakhapatnam

#### M.Sc (Applied Mathematics)

1991, Andhra University, Visakhapatnam.

#### B.Sc (MPC)

1988, Maris Stella College (Acharya Nagarajuna University), Vijayawada.

### Experience

| Period         | Designation   | Institution / Organization                            | Key Responsibilities  |
|----------------|---|---|---|
| 2024-Till Date | Associate Professor & HOD Mathematics & Incharge of I/IV B.Tech | Siddhartha University (SAHE)                          | Curriculum design, Ph.D. guidance, research publications, academic leadership, NBA/NAAC coordination, I/IV B.Tech (S&H-II) Block Incharge Key Responsibility, BOS Member, Subject Expert. |
| 2012-2024      | Associate Professor & HOD Mathematics & Incharge of I/IV B.Tech | Velagapudi Ramakrishna Siddhartha Engineering College |   |
| 2009-2012      | Sr. Lecturer & HOD Mathematics                                  | Velagapudi Ramakrishna Siddhartha Engineering College |   |
| 1998-2009      | Lecturer  | Velagapudi Ramakrishna Siddhartha Engineering College |   |
| 1991-1998      | Lecturer  | Gandhiji mahila Kalasala                              |   |

## Research Interests

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### Broad Area of Research :

- Fluid Dynamics

## Honors and Awards

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## Courses Taught

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| S.No | Course Name  | Level (UG/PG) |
|------|--|---------------|
| 1    | Linear Algebra, Series and Calculus                  | UG            |
| 2    | Differential Equations and Numerical Methods         | UG            |
| 3    | Probability and Statistics for Engineers             | UG            |
| 4    | Probability and Statistics                           | UG            |
| 5    | Complex Analysis Transform Techniques and Statistics | UG            |
| 6    | Discrete Mathematics                                 | UG            |
| 7    | Computer Applications in Numerical Analysis Lab      | UG            |
| 8    | Mathematics Foundation for Data Science              | UG            |
| 9    | Mathematics Foundation for Data Science Lab          | UG            |
| 10   | Optimization Techniques                              | PG            |
| 11   | Fluid Dynamics                                       | Pre Ph.D.(KU) |
| 12   | Numerical Methods                                    | Pre Ph.D.(KU) |

## Research Profile

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### Publications

The recent publications and research contributions can be viewed from the following URLs

|                       |   |
|-----------------------|---|
| <b>Google Scholar</b> | <a href="https://scholar.google.com/citations?hl=en&amp;user=4svMva4AAAAJ">https://scholar.google.com/citations?hl=en&amp;user=4svMva4AAAAJ</a> |
| <b>Scopus</b>         | <a href="https://www.scopus.com/authid/detail.uri?authorId=57201653452">https://www.scopus.com/authid/detail.uri?authorId=57201653452</a>       |
| <b>Orcid</b>          | 0000-0001-5658-7144   |

## Recognized Research Supervisor

| S.No. | Department  | University  |
|-------|-------------|---|
| 01.   | Mathematics | Siddhartha University (SAHE)                        |
| 02.   | Mathematics | Jawaharlal Nehru Technological University, Kakinada |
| 03.   | Mathematics | Krishna University                                  |

## Funded Research Projects

| S.No. | Type | Title | Status | Funding Agency | Amount (INR) | Duration |
|-------|------|-------|--------|----------------|--------------|----------|
| --    | --   | --    | --     | --             | --           | --       |

## Administrative Roles

| S.No. | Role                                      | Institution                        | Duration                | Responsibilities   |
|-------|---|------------------------------------|-------------------------|--|
| 1     | HOD<br>Mathematics                        | VRS School of Engineering          | March 2024 to till date | Responsible for academic and administrative leadership of the department, including curriculum planning, faculty coordination, quality teaching, examinations, and student guidance. |
|       |   | V R Siddhartha Engineering College | 2009-2024               |  |
| 2     | In-charge of I/IV B.Tech(S&H II)          | VRS School of Engineering          | March 2024 to till date | Responsible for academic and administrative activities of first-year B.Tech, including class schedules, attendance, assessments, discipline, and student support.                    |
|       |   | V R Siddhartha Engineering College | 2020-2024               |  |
| 3     | <b>Equal Opportunity Cell Chairperson</b> | VRS School of Engineering          |                         | Ensures fairness and inclusivity by addressing grievances, supporting disadvantaged groups, and promoting equal opportunities for all students and staff.                            |
| 4     | ICC Chairperson                           | V R Siddhartha Engineering College | 2012 to 2024            | the Internal Complaints Committee to ensure safety, address complaints, conduct inquiries, and promote awareness on gender sensitization   |

## Certifications/MOOC Courses Completed

| S.No. | Title  | Platform | Duration        | Year |
|-------|--|----------|-----------------|------|
| 1.    | Transform Calculus and its applications in Differential Equations      | NPTEL    | 12 Weeks        | 2019 |
| 2.    | Numerical Methods: Finite Difference Approach                          | NPTEL    | 4 Weeks         | 2018 |
| 3.    | Probability and Statistics: To p or not to p?                          | Coursera | <b>16 hours</b> | 2020 |
| 4.    | Introduction to Statistics & Data Analysis in Public Health            | Coursera | <b>15 Hours</b> | 2020 |
| 5.    | Linear Regression in R for Public Health                               | Coursera | <b>15 hours</b> | 2020 |
| 6.    | Introduction to Thermodynamics: Transferring Energy from Here to There | Coursera | <b>15 hours</b> | 2020 |
| 7.    | Electrodynamics: Electric and Magnetic Fields                          | Coursera | <b>12 Hours</b> | 2020 |
| 8.    | Fundamentals of Fluid-Solid Interactions                               | Coursera | <b>9 Hours</b>  | 2020 |
| 9.    | Logic for Economists   | Coursera | <b>7 Hours</b>  | 2020 |
| 10.   | Fundamentals of Fluid Power  | Coursera | <b>19 Hours</b> | 2020 |
| 11.   | Logistic Regression with NumPy and Python                              | Coursera | <b>1 Hour</b>   | 2020 |
| 12.   | Linear Regression with Python  | Coursera | <b>1 Hour</b>   | 2020 |
| 13.   | Linear Regression with NumPy and Python                                | Coursera | <b>1 Hour</b>   | 2020 |
| 14.   | Create Your First Python Program From UST                              | Coursera | <b>2 Hours</b>  | 2020 |
| 15.   | Build a Data Science Web App with Streamlit and Python                 | Coursera | <b>2 Hours</b>  | 2020 |
| 16.   | Matrix Algebra for Engineers   | Coursera | <b>19 Hours</b> | 2020 |
| 17.   | Matrix Methods   | Coursera | <b>6 Hours</b>  | 2020 |

|     |  |          |                 |      |
|-----|--|----------|-----------------|------|
| 18. | Differential Equations for Engineers   | Coursera | <b>26 Hours</b> | 2020 |
| 19. | Vector Calculus for Engineers  | Coursera | <b>29 Hours</b> | 2020 |
| 20. | Introduction to Calculus   | Coursera | <b>58 Hours</b> | 2020 |
| 21. | Learning How to Learn: Powerful mental tools to help you master tough subjects | Coursera | <b>15 Hours</b> | 2020 |
| 22. | AI For Everyone  | Coursera | <b>6 Hours</b>  | 2020 |

## Consultancy / Industry Projects

|                  |    |
|------------------|----|
| <b>Completed</b> | 00 |
| <b>On-going</b>  | 00 |
| <b>Applied</b>   | 03 |

## Patents

| S.No | Title   | Status  | Application No. | Year       |
|------|---|---------|-----------------|------------|
| 1.   | An Artificial intelligence and IOT based fabric defect detection and Method thereof                         | Granted | 202341022907    | 05/05/2023 |
| 2.   | Magneto hydrodynamic heat transfer using water –based nanofluids with soret and viscous dissipation effects | Granted | 202141033308A   | 06/08/2021 |
| 3.   | Under Water Pollution monitoring system to prevent fatalities of aqua echosystem                            | Granted | 202041044264    | 03/07/2020 |

## Ph.D

|                |    |
|----------------|----|
| <b>Awarded</b> | 01 |
| <b>Guiding</b> | 03 |

## Invited Talks

|                             |    |
|-----------------------------|----|
| <b>No. of Invited Talks</b> | 05 |
|-----------------------------|----|

## Professional Service / Reviewer

- Reviewer in Elsewhere

## Professional Development Activities - Participations

|  |         |
|--|---------|
| Faculty Development and Training Programmes<br>(at least 5 Days) | 20      |
| International / National Level Seminars                          | 10 / 05 |
| International / National Level Conferences                       | 06 / 10 |
| Workshops  | 20      |
| Instructor Led / Self-Paced Courses                              | --      |
| Webinars   | --      |

## Professional Bodies Membership Details

| S.No. | Membership No. | Society Name                               |
|-------|----------------|--|
| 1.    | LM 27304       | The Indian Society for Technical Education |

(Dr. Ch Baby Rani)

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