# Dr. D SAVITHA

Affiliation (Asst. Professor, Dept of Electronics and Instrumentation Engg, SIT)
Contact: 9916430457
Email: savithad@sit.ac.in
Vidwan ID: 90971
Scopus ID: 57762180800
OrcID: 0000-0003-3011-8328
Faculty ID: SIT0140

**PROFESSIONAL PROFILE**

Assistant Professor in the Department of Electronics and Instrumentation Engineering at Siddaganga Institute of Technology, Tumakuru, with professional experience at the institution since March 2005. Holds a Ph.D. (2024) in the area of thin-film sensors. Academic and research interests include thin-film materials and sensors, nanomaterials, embedded systems, and sensor-based applications.

## Education

| | Degree | Year | Institute | Specialization |
|---|---|---|---|---|
| 1 | B.E | 2002 | Siddaganga Institute of Technology, Tumakuru | Instrumentation Technology |
| 2 | M.Tech | 2011 | Sri Siddhartha Institute of Technology, Tumakuru | Digital Electronics |
| 3 | Ph.D | 2024 | Siddaganga Institute of Technology, Tumakuru | Thin Film Sensors |

## Professional Experience

| | Date (from-to) | Designation | Organization |
|---|---|---|---|
| 1 | 15-03-2005 to 31-12-2010 | Lecturer | Siddaganga Institute of Technology, Tumakuru |
| 2 | 1-1-2011 to till | Assistant Professor | Siddaganga Institute of Technology, Tumakuru |

## Positions held

- *Exhibition Coordinator*
- *ISO coordinator*
- *Test Coordinator*
- *Library Coordinator*

## Awards and Honors

Top 5% in the NPTEL course Transducers for Instrumentation

## Courses Taught

### Undergraduate Courses

- Data Converters
- Industrial Control Systems & Automation
- Process Control Systems
- Industrial Communication
- Smart Sensors
- Advanced Control Systems
- Computer Networks
- Optical Instrumentation
- Internet of things
- Introduction to Electronics
- Research Methodology

### Postgraduate Courses

- VLSI Design

## Research Areas

- Thin-film sensors and functional thin-film materials
- Nanomaterials and green synthesis
- Structural, optical and electrical characterization of metal-oxide materials
- Embedded systems and sensor interfacing
- IoT-based sensing and monitoring applications

## TECHNICAL EXPERTISE

| Area | Experience / Tools / Techniques |
|---|---|
| Materials and devices | ZnO and doped ZnO; zirconium oxide ($ZrO_2$); titanium dioxide ($TiO_2$); thin-film and nanoparticle-based sensor materials |
| Synthesis and deposition | Green synthesis of nanoparticles; thin-film deposition techniques such as sputtering and e-beam evaporation (include only techniques personally handled) |
| Characterization | XRD, FESEM, EDX, TEM, FTIR, photoluminescence (PL), as applicable to work undertaken |
| Electrical measurements | LCR/impedance analysis and dielectric-property measurements |
| Embedded and IoT platforms | Arduino, Raspberry Pi, ESP32, sensor interfacing, MQTT and ThingSpeak (where applicable) |
| Design and simulation | Cadence Virtuoso and digital design |

## Publications

### Journals

- Impact of temperature and frequency dependence of electrical properties of Al

doped ZnO nanoparticles

- Structural, optical and electrical properties of undoped and doped (Al, Al + Mn) ZnO nanoparticles synthesised by green combustion method using terminalia catappa seed extract

Conference Proceedings

- Design of Ripple Carry Adder Using Cadence Virtuoso 180Nm Technology.
- Studies on Structural and Electrical Characterization of Nitrogen Doped SiC Thin Films
- Impact of Al and Mn doping on structural and Electrical properties of the Green synthesized ZnO Nanoparticles
- M. N. Lohith Kumar, H. Latha and D. Savitha, "Studies on Structural and Electrical Characterization of Nitrogen Doped SiC Thin Films," 2024 International Conference on Smart Systems for applications in Electrical Sciences (ICSSES), Tumakuru, India, 2024, pp. 1-4, doi: 10.1109/ICSSES62373.2024.10561276.
- T. M. C and D. Savitha, "Design of Ripple Carry Adder Using Cadence Virtuoso 180Nm Technology," *2025 3rd International Conference on Smart Systems for applications in Electrical Sciences (ICSSES)*, Tumakuru, India, 2025, pp. 1-5, doi: 10.1109/ICSSES64899.2025.11009717.