Dr. Latha H K E

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Education

	Degree	Year	Institute	Specialization
1	PhD	2014	Siddaganga Institute of Technology, Tumkur	Electrical and Electronics Engineering Sciences
2	M.E	2000	University of Visvesvaraya College of Engineering, Bangalore.	Power Electronics
3	B.E	1995	Siddaganga Institute of Technology, Tumkur	Instrumentation Technology
4	Diploma in Engg.,	1991	Siddaganga Polytechnique	Electronics and Communication Engg

Professional Experience

	Date (from-to)	Designation	Organization
1	12.02. 2024 - till date	Professor & Head	Siddaganga Institute of Technology, Tumkur
2	24.02.2023 - 11.02. 2024	Professor	Siddaganga Institute of Technology, Tumkur
3	19.08.2014 -23.02.2023	Associate Professor	Siddaganga Institute of Technology, Tumkur
4	20.07.2010 - 18.08.2014	Assistant Professor	Siddaganga Institute of Technology, Tumkur
5	2.11.2000 - 19.7. 2010	Lecturer	Siddaganga Institute of Technology, Tumkur

(Please fill in reverse order. Current designation should be at the top)

Positions held

(Please give details of any administrative posts, co Ordinator roles/ responsibilities held)

- Head of the Department, Electronics & Instrumentation Engineering (EIE), SIT
- PG Coordinator, VLSi Design and embedded Systems from 2016 to 2023
- NBA Coordinator, EIE, SIT
- Department BoS Coordinator (PG), EIE, from 2016 to 2023
- Department BoE Coordinator (PG), EIE, from 2016 to 2023
- Department Research committee coordinator, EIE
- Department Lab Coordinator, EIE, SIT
- Department Library Coordinator, EIE, SIT

Affiliations of Professional organizations

- **Member:** Board of Examination for Electronics and Instrumentation Engineering, UG program, MSRIT, Bangalore.
- **Doctorial committee member**, BMS College of Engineering, Bangalore.
- Member of the Board of Studies for UG program in Electronics and Instrumentation Engineering, MCA Hassan.

Awards and Honors

- **Programme Evaluator**, **NBA-New Delhi** for Instrumentation, Electronics and communication Engineering since 2018-19
- **Organising Chair**, IEEE International conference on smart systems for applications in electrical Sciences (ICSSES-2024) organised by Siddaganga Institute of Technology, Tumakuru on 3rd and 4th May 2024.
- **Convener,** IEEE International conference on smart systems for applications in electrical Sciences (ICSSES-2023) organised by Siddaganga Institute of Technology, Tumakuru on 7th and 8th July 2023.
- **Convener**, International conference on Recent Developments in Mechanical Engg (ICRDME) organised by Siddaganga Institute of Technology, Tumakuru on 24th and 25th June 2022
- **Technical Session Chair** on "Instrumentation" on 24th and 25th June 2022 at the International conference on Recent Developments in Mechanical Engg (ICRDME), Siddaganga Institute of Technology, Tumakuru.
- "**Best Project of the Year award for the student project** entitled "Water Pollution Monitoring Boat using IoT" in the 45th series of 2021-22, during the Seminar and exhibition held at VTU, Belagavi on 12th and 13th August 2022 supported by DST, Govt. of Karnataka and Department of Science and Technology, Gov. of India (sponsored by KSCST).

- **Best E-Poster award** for the paper entitled synthesis and characterization of Zinc doped Molybdenum (Zn-MoO3) and impact of different doping concentration on structural, electrical and electrochemical properties in the International E conference on drug discovery and material science, organised by IQAC and department of Chemistry of JSS college of Arts, Commerce and Science, Mysore on 15th and 16th September 2021.
- **Technical Session Chair** on "Materials" on 22nd Dec 2016 at the International Conference on Large Area Flexible Microelectronics (ILAFM) 2016, RV college of Engineering, Bengaluru.
- **Organizing committee member**: Educators Day (2008, 2009 and 2010) conducted by National Instruments, Bangalore
- **Resource person** in the workshop on Virtual Instrumentation (29/1/2007-3/2/2007) conducted for VTU Faculty, Department of Electronics and Instrumentation Engg., SIT, Tumkur
- **Gold Medal for Best B.E Project Award –** for the project "Remote temperature controller using Virtual Instrumentation" for final year UG project during 2005-06 by the TCS, Bangalore

Courses Taught

Undergraduate Courses

- Thin film instrumentation
- Industrial safety and communication
- Advanced control system
- Analog and digital communication
- Analytical Instrumentation
- Power Electronics
- Signal Conditioning circuits
- Virtual Instrumentation
- Process control
- Data Converters
- Analog Electronics circuits
- Computers in process control
- Control system and components

Postgraduate Courses

- VLSI Processing Technology
- Analog IC Design

- Design of Analog and Mixed mode VLSI Circuits

Research Guidance

Sl. no	Name of the Scholar	Title of Thesis	Year of completion
1	Mala S	Synthesis and Characterization of Indium Tin Oxide Thin Film for Pressure Sensor	2022
2	Savitha D	Green Synthesis and Characterization of ZnO Thin Film for Vibration Measurement	2024

Research Areas

- Development of thin film sensors
- Materials for sensor applications

Sponsored Projects

Ongoing Projects:

1. Title:
   Funding Agency:
   Amount:
   Duration:
   Role:

Completed Projects:

1. Title: **Design & Development of ITO based thin film strain gauge pressure sensor**
   Funding Agency: VGST, Govt. of Karnataka
   Amount: 30 Lakhs
   Duration:3 years
   Role: Principal Investigator
2. Title: **Design & development of thin film Platinum RTD sensor for the online** detection and measurement of engine inlet temperature on a gas turbine engine
   Funding Agency: GTRE, Bangalore
   Amount: 8.76 lakhs
   Duration: 1 year
   Role: Co-Investigator
3. Title: **Development of thin film sensors**
   Funding Agency: VGST, Govt. of Karnataka
   Amount: 30 Lakhs
   Duration: 3 years
   Role: Co-Investigator

Publications

Journals

- H. S. Lalithamba · G. K. Prashanth · **H. K. E. Latha** · Rashmi · Aisha Siddekha · G. Nagendra, Cerium oxide nanoparticles: sustainable synthesis and diverse applications in electrical properties, catalysis and biomedicine, Chemical Papers, Volume 79, pp 193–209, (2025)
- Savitha, D., **Latha, H.K.E**., Lalithamba, H.S., Jeppu, Y.V., Impact of temperature and frequency dependence of electrical properties of Al doped ZnO nanoparticles, ***Materials Research Innovations*****,** 2024, 28(6), pp. 459–470
- Mala, S., **Latha, H.K.E**., Udayakumar, A. Design and Fabrication of Indium Tin Oxide Based Thin Film Piezoresistive Pressure Sensor, ***Experimental Techniques****, 2024*
- Lalithamba, H.S., **Latha, H.K.E.**, Narendra, N., Mala, S. Green Synthesis, Structural, Electrical and Catalytic Properties of Nano-MgO, ***Journal of Electronic Materials***, 2024, 53(1), pp. 30–40
- Mala, S., **Latha, H.K.E.**, Udayakumar, A. Influence of post-deposition annealing temperature on structural and electrical properties of TiW contact thin films, ***Journal of the Korean Physical Society***, 2023, 83(3), pp. 194–199
- **H.K.E Latha, Mala S and A. Udayakumar,** Investigation on Strain Sensitivity and Temperature Behaviour of Nitrogen Doped 3C-SiC Thin Films, Journal of Mines, Metals and Fuels, 70(8A): 266-272; 2022.
- H. S. Lalithamba, M. Raghavendra, R. Bharatha, **H. K. E. Latha**, Nano CaO: Synthesis, characterization, and application as an efficient catalyst for the preparation of tetrazole analogues of protected amino N Bharath, **Scientia Iranica C**(2022) 29(6), 3132-3141
- Raghavendra Mahadevaiah, Lalithamba Haraluru, Shankraiah, and **Latha Haraluru Kamalamma Eshwaraiah** (2022) “Combustion Synthesis of Nano Fe2O3 and its Utilization as a Catalyst for the Synthesis of *N*α-Protected Acyl Thioureas and Study of Anti-bacterial Activities”, ***Acta Chim. Slov****.* 2022, *69,* 116–124

- D. Savitha , **H.K.E. Latha**, H.S. Lalithamba, S. Mala, Yogananda Vasudev Jeppu (2022) ”Structural, optical and electrical properties of undoped and doped (Al, Al + Mn) ZnO nanoparticles synthesised by green combustion method using terminalia catappa seed extract”, **Journal of Materials Today: Proceedings**. Vol 60, part 2, 2022, pp988-997.
- S Mala, **H.K.E Latha**, Lalithamba H.S and A. Udayakumar (2021) *”A study on the impact of tin concentration on microstructural, dielectric and conductivity properties of ITO nanoparticles”,* **Journal of Materials Today: Proceedings**. Vol 60, part 2, 2022, pp839-848
- S Mala, **H.K.E Latha,** Lalithamba H.S and A. Udayakumar (2021) “The effect of Tin concentration on microstructural and electrical properties of ITO nanoparticles synthesized using Green synthesis” **Iranian Journal of Materials Science and Engineering**. *Vol. 18, Number 4, December 2021* pp 1-12
- S Mala, **H.K.E Latha,** Lalithamba H.S and A. Udayakumar (2021) Green synthesis of ITO nanoparticles using Carica papaya seed extract: Impact of Annealing Temperature on Microstructure and Electrical Properties of ITO Thin films for Sensor Applications, **Materials Technology: Advanced Performance Materials**. 2022, Vol. 37, No. 10, 1432–1438
- K V Yatish, H S Lalithamba, R Suresh and **H K E Latha** (2020) Ochrocarpus longifolius assisted green synthesis of CaTiO3 nanoparticle for biodiesel production and its kinetic study, Journal of Renewable Energy, 147, pp 310-321.

- **H.K.E Latha** and H S Lalithamba (2018) Synthesis and Characterization of Titanium Dioxide Thin Film for Sensor Applications, Journal of Materials research express, Volume No.5, Issue 3.
- **H.K.E Latha**, A. Udayakumar, V.Siddeswara Prasad (2015), “Microstructure and electrical properties of nitrogen doped 3C-SiC thin films deposited using methyltrichlorosilane”, Journal of Materials science in semiconductor processing, Vol.29, PP 117- 123.
- **H.K.E Latha**, A. Udayakumar, V.Siddeswara Prasad, (2014) “Effect of nitrogen doping on elastic modulus and hardness of 3C-SiC thin films deposited using methyltrichlorosilane”, Journal of Materials research express, Volume No.1, PP 1-12, Jan-2014.

- **H.K.E Latha**, A. Udayakumar, V.Siddeswara Prasad, (2014) " Effect of nitrogen doping on the electrical properties of 3C-SiC thin films for high temperature sensors applications", Journal of Acta metallurgica sinica (English Letters), Vol.27, No. 1, pp. 168-174. Jan-2014.
- **H.K.E Latha**, A. Udayakumar, V.Siddeswara Prasad, (2013) Growth and effect of deposition pressure on microstructure and electrical properties of 3C-SiC thin films deposited using MTS single precursor, International Journal of thin films science and technology, Vol.2, No.3, pp. 163-170, Sept.2013.
- **Latha H K E** and R J Stephen, (2010) "Development and Characterization of Nichrome strain gauge sensor for load applications", International Journal of Advanced Research in Engineering and Technology (IJARET), Vol. 1, No.1, pp 58-66, May-June 2010.
- Kumar Shubham, and **Latha H.KE** (2016) Gesture controlled wheelchair with object detection , Journal of Instrumentation Society of India (ISOI), Vol. 46, No.4, pp 156-158, December 2016**.**
- **Latha H K E**, A Udayakumar, V Siddeswara Prasad **(2016)** Effect of annealing temperature on microstructure and electrical properties of TiW thin films**,** Journal of Instrumentation Society of India (ISOI), Vol. 46, No.3, pp 104-106, September 2016.
- **H.K.E Latha**, A. Udayakumar, V.Siddeswara Prasad (2013) "Growth and characterization of undoped and nitrogen doped 3C-SiC thin films for sensor applications", Journal of Instrumentation Society of India (ISOI), Vol. 43, No.4, pp 247-249, Dec-2013.
- **Latha H K E** and R J Stephen (2010) "Finite Modeling and Development of thin film strain gauge for Load measurement", Journal of Instrumentation Society of India (ISOI), Vol. 40, No.2, pp 153-155, June2010.

Conference Proceedings

- Anushree S and **Latha H K E**, Design and Implementation of Asynchronous Counter Using Reversible Logic Gates, , *International Conference on Smart Systems for Applications in Electrical Sciences, ICSSES 2025*, 2025
- Lohith Kumar M.N. **Latha, H. K E**., Studies on Structural and Electrical Characterization of Nitrogen Doped SiC Thin Films, *International Conference on Smart Systems for Applications in Electrical Sciences, ICSSES 2024*, 2024
- Shubha, T., **Latha, H.K.E.**, Karuppiah, Y. Perfectly Keyless Commercial Vehicle

2023 Global Conference on Information Technologies and Communications, GCITC 2023, 2023

- Lakshmi, K., **Latha, H.K.E**., Venkateswarlu, Design and Development of Remote Monitoring Solar Powered Agricultural Motor Pump Using Modbus and MQTT IOT, *IEEE 1st International Conference on Ambient Intelligence, Knowledge Informatics and Industrial Electronics, AIKIIE 2023*, 2023
- Savitha, D., **Latha, H.K.E**., Lalithamba, H.S., Jeppu, Y.V. Impact of Al and Mn doping on structural and Electrical properties of the Green synthesized ZnO Nanoparticles, *International Conference on Smart Systems for Applications in Electrical Sciences, ICSSES 2023*, 2023
- R. Harini, **Latha. H.K.E** and Manjunatha C (2022)"Impact of Green Synthesized Copper Doped Nanostructured Molybdenum Oxide Flakes on Micro Structural, Electrical, and Electrochemical Properties" The Electrochemical Society,
  ECS Transactions, Volume 107, Number 1
- R. Harini, **Latha. H.K.E** (2021). Impact of novel fuel extract variation on structural, electrical and electrochemical properties of nanostructured molybdenum oxide flakes, Journal of Materials Today: Proceedings, Volume 49, Part 3, 2022, Pages 568-575
- P. Premakumari, **H.K.E. Latha**, G. Nagaraju (2021) Green synthesis of dimanganese trioxide nanoparticles using tamarind seed powder: Effect of tamarind seed powder concentration on the structural, electrical and electrochemical properties of dimanganese trioxide nanoparticles Journal of Materials Today: Proceedings, Volume 49, Part 3, 2022, Pages 554-558
- R. Harini, **Latha. H.K.E** (2021) Impact of Copper incapacitating nanostructured MoO3 flakes as anode electrode for Li-ion batteries, "1" international conference on Advances in Materials Science (ICAMS-2021), 22nd -24th September 2021.
- Kavya M and **Latha H K E** (2021), Automation of Health Care Modality's storage System Monitoring Process, 6th IEEE International Conference on Recent Trends on Electronics, Information, Communication& Technology (RTEICT-2021), 27" & 28th August 2021,
- Ashwini K B, **H.K.E Latha** and Lalithamba H.S (2021), Structural and electrical characterization of ITO nanoparticles Synthesized by hydrothermal using

polyethylene glycol 400, 4th online international conference on Science and Engineering of Materials, July 19-22, 2021

- D.Savitha, **H.K.E Latha,** Lalithamba H.S and Yogananda Vasudev Jeppu (2021). Green Synthesis of ZnO nanoparticles using terminalia catappa seeds extract, 4th online international conference on Science and Engineering of Materials, July 19-22, 2021
- S Mala, **H.K.E Latha,** Lalithamba H.S, and A. Udayakumar (2021). A study on the impact of tin concentration on microstructural and electrical properties of ITO nanoparticles synthesized by green combustion method, 4th online international conference on Science and Engineering of Materials, July 19-22, 2021
- Ramya S, H M Kalpana and **Latha H K E** (2020) People Resource Management System (PRS), International Conference on Frontiers in Engineering Science and Technology (ICFEST- 2020) December 18th and 19th 2020, Yenepoya Institute of Technology, Moodbdri
- S. Mala, K. B. Ashwini, **H. K. E. Latha**, and A. Udayakumar (2019), Effect of deposition temperature on microstructure properties of SiC thin films deposited using RF magnetron sputtering, AIP Conference Proceedings, 020023, 1-6
- Sahana V**, Latha H K E,** Raju Bhandari **(2018),** Design of secure SMART card reader and Wi-Fi interface for point-of-sale terminal, 3rd IEEE International conference on Recent Treands in Electronics, Information and communication Technology (RTEICT) May 18th and 19th 2018
- Nagamani S R, **Latha H K E**(2018), Design and implementation of remote smart parking assistance in automated vehicles, National conference on Recent trends in electrical sciences, 3rd March 2018, SIT, Tumkur, pp 53-58.
- Chethan Kumara, Rashmika Unnikrishnan, Sai Krishna Peri, **Latha H K E,** H S Lalithamba **(2018),** Synthesis and structural characterization of Zinc Oxide nano materials. National conference on Recent trends in electrical sciences, March 2018, SIT, Tumkur, pp 113-116.
- Shantala, **Latha H K E**, SV Mohanasundaram, Gokul Krishnan and Niyathi Shenoy **(2017),** An approach to extract text from water meter images using OpenCV-Python, International Conference on signal, Image Processing

communication and Automation ICSIPCA**,** July 6th and 7th 2017, JSS Academy of Technical Education, Bangalore, pp.1068-1072.

- **Latha H K E**, A Udayakumar, V Siddeswara Prasad **(2015)** Effect of annealing temperature on microstructure and electrical properties of TiW thin films, National Symposium on Instrumentation (NSI-40), October 30th and 31st 2015, Kumaraguru College of Technology, Coimbattore, pp 93-94

- Kumar Shubham, Ashutosh Kumar Tiwari, Abhishek Kesari, Ragini, **Latha H.KE** (2015) Gesture controlled wheelchair with object detection, National Symposium on Instrumentation (NSI-40), October 30th and 31st 2015, Kumaraguru College of Technology, Coimbattore, pp 73-74.

- Divyashree S V, Haryhitha K H, **Latha H K E.** Measurement of Vibration signals using Virtual Instrumentation Technology, National Symposium on Instrumentation (NSI-40), October 30th and 31st 2015, Kumaraguru College of Technology, Coimbattore, pp 150-151.

- **Latha H K E**, A Udayakumar, V Siddeswara Prasad **(2013)** "Growth and characterization of undoped and nitrogen doped 3C-SiC thin films deposited using methyltrichlorosilane for sensor applications", National Symposium on Instrumentation (NSI-38), October 24-26, 2013, B.V.B.College of Engineering & Technology, Hubli, pp.104.

- **Latha H K E,** A Udayakumar, V Siddeswara Prasad, **(2013)** "Structural and electrical properties of undoped and nitrogen doped 3C-SiC thin films deposited using methyltrichlorosilane", International Conference on communication, VLSi and Signal processing (ICCVSP-2013), 20th -22nd Feb'2013, SIT, Tumkur, pp. 304-308.

- **Latha H K E** and R J Stephen, **(2010)** "Finite Modeling and Development of thin film strain gauge for Load measurement", International Conference on Instrumentation (ICI-2010), 21st -23rd Jan'2010, Cummins College of Engineering for women, Pune.

- R J Stephen, **Latha H K E** and H M Kalpana **(2010)** "Development of thin film strain gauge for Load measurement", International Conference on Aerospace, Electronic Communication and Instrumentation (AECI-2010), 6th -7th Jan'2010, V R Siddartha Engineering College, Kanur, Vijayawada.

- R J Stephen, **Latha H K E** and H M Kalpana **(2009)** "Development of thin film strain gauge for force measurement", International Conference on Advanced Manufacturing and Automation (INCAMA-09), 26th-28th March 2009, Kalasalingam University, Kalasalingam.

Book Chapters

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Books

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Editorial

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Reviewer of Journals

- Material Science and Technology, a Journal by Elsevier.
- Material Science in semiconductor processing, a Journal by Elsevier.
- Applied Surface Science, a Journal by Elsevier
- IEEE sensors

(Please give details in IEEE format)

Editor/ Reviewer of Journal

- Material Science and Technology, a Journal by Elsevier.
- Material Science in semiconductor processing, a Journal by Elsevier.
- Applied Surface Science, a Journal by Elsevier
- IEEE sensors

Patents

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Invited Lectures, talks and workshops

- Delivered a lecture on **"Pressure Sensors: Design and Fabrication"** at the **IEEE Sensors Council** and **IEEE Women in Sensors** event, organized by **BMSCE IEEE PES** and the **Sensors Council** on **November 16, 2024**.