

Personal Profile



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Qualification: B Tech ECE, JNTU Hyderabad
Professional Experience: 25 years

Areas of Interest:

- Electronics & Instrumentation design and development support to R&D projects
- Build Proof of Concept setups and application demonstrations
- Design of Analog and Digital control circuits for automation
- Use of programmable Instruments for Simulation and testing
- Embedded design & development of applications using Microcontrollers
- National Instruments LabVIEW software and hardware
- HMI & Programmable Logic Controllers for industrial automation
- Interfacing, Integration and modification of subsystems
- Sensors and signal conditioning
- Data Acquisition Systems & building customized data loggers
- Commissioning and troubleshooting of complex analytical, process control equipment such as,
 - LASER control systems
 - CVD and PVD systems
 - Detonation Spray, Plasma Spray, Flame spray, Cold Spray etc.

CNC and ROBO systems
Servo control, Vacuum, Pneumatics and Chiller control systems

List of Journal Publications

[*]Published a paper entitled “Detection of drill through in Laser percussion drilling” in *Lasers in Engineering, Vol. 17, pp. 361-369.*

[*] Presented/published a paper entitled ‘Current status of MEMS in INDIA’ at Kuala Lumpur, Malaysia 6-7 September 2005 /in proceedings of 5th *International workshop on Microelectronics pp 23-37.*

[*] Presented / published a paper on “A Reliable Electronic Ignition System for a Detonation Chamber” in a conference conducted by ISOI (Instrument Society of India) during October 2007 at Tiruchengode, Tamil Nadu/ in *J. Instrument. Soc. India Vol. 38(4) December 2008 pp. 243-247.*

[*] Published a paper entitled, “Centralized monitoring and control of Air conditioning units” in *Journal of Scientific & Industrial Research, Vol.68, November 2009, pp.934-939.*

[*] Presented/published a paper entitled, “Integration of a High Power Laser with a CNC workstation” at the International Conference on Instrumentation ICI2009 during at Pune/ in *J. Instrument. Soc. India Vol. `40(4) December 2010 pp. 254-255.*

[*]Published a paper entitled “A virtual instrument for pulsed electro deposition: A novel technique for obtaining graded coatings” in *J. of Scientific & Industrial Research Vol. 70, December 2011, pp. 1026-1028*

[*]Presented/published a paper entitled, “Automation of Arc Discharge setup for production of Carbon Nanotubes” at 37th National Symposium on Instrumentation held at CSIO, Chandigarh on 31st October, 2012/in *J. Instrument. Soc. India Vol. 43, No. 1 March 2013 pp. 55-57.*

[*]Published a paper entitled, “A computer – based approach for developing functionally graded and layered coatings with detonation spray coating process” in *J. of Scientific & Industrial Research Vol.72, August 2013, pp.477-480*

[*]Presented/published a paper entitled “*A Virtual Instrument for Thermal Fatigue Testing of Die Casting Tool Steels*” at 38th National symposium on Instrumentation held at BVB college of Engineering & Technology, Hubli /in *J. Instrument. Soc. India Vol. `43(4) December 2013 pp. 261-262.*

[*]Presented/published a paper entitled “*Computer Control of a Thermal Cycling System*” in *J. Instrument. Soc. India Vol. `45(2) June 2015 pp. 138-139.*

[*]Published a paper entitled, “Mixing Torque Measurement-an Effective Tool for Identifying Critical Binder Volume Concentrations for Ceramic Processing” in *J. of Scientific & Industrial Research Vol.74, September 2015, pp.504-507.*

[*]Coauthor for a published paper entitled “Development of an Arduino based Charge Controller for a Solar” at 39th National symposium on Instrumentation held at Gurukul Kangri University, Haridwar, and 18th October, 2014 / in *J. Instrument. Soc. India Vol. 45(3), pp 180-181, September, 2015*

[*]Presented/published a paper “*Simulated LabVIEW setup for studying the combined behavior of Supercapacitor and Battery in Hybrid EV*” *J. Instrument. Soc. India Vol.50, pp 133-135, 2020*

[*]Coauthor for a published paper entitled “Development of portable 3D printer with PID controlled heating, fine stepping and self- replicating” *J. Instrument. Soc. India Vol.43, PP.38-43, 2021*

Patents:

- Patent Application No. 202241037966 has been filed on July 01, 2022. "AN AUTOMATED SPRAY COATING DEPOSITION SYSTEM"
S Nirmala, P Suresh Babu, D Sen, L Rama Krishna, D Srinivasa Rao

Conference proceedings:

- S Nirmala, ‘Current status of MEMS in INDIA’ in proceedings of 5th *International workshop on Microelectronics/pp 23-37 held at Kuala Lumpur, Malaysia 6-7 September 2005.*
- D Sen, S.Nirmala, D.Srinivasa Rao, Influence of Pulse Frequency on WC-Co and Al₂O₃ Coating Properties obtained by DSC Technique, Proc. ATSC 2014, p.121-122.

Affiliation to Professional societies:

- Institute of Electrical and Electronic Engineers (IEEE Senior Member)
- Instrument Society of India (ISOI)
- Sensor Research Society of India (SRSI)
- Indian Women Scientist Association (IWSA)

Awards & Honors:

- Senior Grade member IEEE

Training Students:

Providing hands on training to Fresh B.Tech Graduate Students under one year Graduate Trainee Program of ARCI, Summer Research Interns for a period of 45 days. Trained 40+ students so far.

