



**3rd INTERNATIONAL CONFERENCE ON
VLSI, Signal Processing, Power
Electronics, IoT, Communication and
Embedded Systems
(VSPICE-2022)**

(Under the Aegis of ICETE 2022 Multi-Conference Platform)

December 22nd – 23rd 2022

Organised by

Department of Electronics & Communication Engineering



About NITTE (Deemed to be University)

Nitte (Deemed to be University) has its roots in a group of Institutions established by the Nitte Education Trust. The Trust was established in 1979 by one of India's respected statesmen, Late Justice K. S. Hegde, Supreme Court Judge and Speaker of Lok Sabha, with the mission of empowering rural youth through quality education and health care. The Trust has established 36 Institutions spread in 3 campuses at Nitte, Mangaluru and Bengaluru. It offers education in diverse areas of learning including Health professions education, Engineering, Management, Humanities, General Education, Vocational Training and School/Pre-University Education.

The University offers a total of 98 Programs in the disciplines of Engineering, Medicine, Allied Health Sciences, Dentistry, Pharmacy, Nursing, Physiotherapy, Speech and Audiology, Biological Sciences, Media & Communication, Commerce, Science, Management and Architecture. It has 10000+ students, over 875 faculty members and over 2475 support staff on roll. The University campuses are spread over 52 acres in Deralakatte-Palnear areas of Mangaluru and 110 acres in Nitte.

The University received A+ Grading in NAAC Accreditation in 2021. It has been consistently placed in the top 70-80 Rank band in NIRF. The University is also placed in the 401-450 Rank band in the QS Rankings for Asia region. It has received Diamond Rating in the QSI-Guage India Ratings. The constituent colleges of the University have good standing in their disciplines in the NIRF Rankings. In 2021, the Dental College was ranked 6th and the Medical College and Pharmacy Colleges were ranked 45th in NIRF. All the Undergraduate Programs of NMAMIT are Accredited by NBA. Further, the B. Pharm program of the University is accredited by NBA. The teaching hospital is accredited by both NABH and NABL.

About NMAMIT

Nitte Mahalinga Adyanthaya Memorial Institute of Technology (NMAMIT), an Off- Campus of Nitte (Deemed to be University) offers UG, PG and Doctoral Programs. It currently offers 10 UG programs in Engineering, 6 M.Tech Programs, MBA and MCA Programs. The Institute is ISO 9001-2015 Certified. The Institute is Ranked 138 in NIRF Ranking (Engineering Institutes)- 2021, Govt. of India. ATAL Incubation Center supported by NITI AAYOG, Govt. of India is situated in the campus.

About the Conference

Department of Electronics and Communication Engineering, N. M. A. M. Institute of Technology, Nitte, India is organizing Third International Conference on "VLSI, Signal Processing, Power Electronics, IoT, Communication and Embedded Systems (VSPICE-2022)" as a part of Multi-Conference on International Conference on Emerging Trends in Engineering (ICETE- 2022) on 22nd and 23rd December 2022.

The conference is dedicated to driving innovation in nearly every aspect of Electronics & Communication Engineering. The conference provides platform for researchers, professionals, executives and practicing engineers from various industries, research institutes and educational bodies to share and exchange their ideas on the theme of the conference. A series of keynote presentations, technical paper and poster presentations are planned to

discuss new issues, tackle complex problems and find advanced enabling solutions which are able to shape new trends and enable the development of mankind as a whole. A one day pre conference tutorial by Dr. Ashok Rao, Former Network Project Group Head, CEDT, IISc, Bengaluru covering the insight into the conference themes is organised on 21st December 2022.

Theme of the Conference

Advances in VLSI, Signal Processing, Power Electronics, IoT, Communication and Embedded Systems pave a pathway for the development of efficient and economic systems. For making the best use of resources, expertise in multiple specializations and interdisciplinary research is gaining prominence. Hence, the objective of the conference is to provide a platform for people who are working in Electronics, Communication and allied disciplines to share their expertise and contribute to technical innovations.

Thrust Areas

Topics of interest include following aspects of VLSI, Signal Processing, Power Electronics, IoT, Communication and Embedded Systems including, but not limited to:

VLSI

- VLSI CAD Algorithms for Design Automation
- Analog/Mixed-Signal System Design
- Testability & Design for Test
- Crypto VLSI Design
- Deep Submicron Design & Modeling Issues
- Digital Circuits & FPGA based Designs
- Digital System Design & Validation
- Emerging CMOS Technology
- Low Power & Power Aware Design
- Post-CMOS VLSI
- Reconfigurable Systems
- System Design & Security
- Testing
- Reliability
- Fault-Tolerance
- VLSI Applications in Communication
- 3-D Integration & Physical Design

Embedded Systems

- Adaptive Embedded Systems
- Automotive and Avionic Systems
- Distributed Embedded Computing
- Embedded Real-Time Operating Systems
- Embedded Robotics
- Instrumentation and Measurement
- Embedded Software Engineering
- Hardware/Software Co-Design
- High Performance Computing Systems
- Identification and Supervision Systems
- MEMS
- Microcontroller & FPGA Implementation
- Multi-Objective Optimization
- Networked Embedded Systems
- Real-Time Systems and Applications
- Security in Embedded Systems
- Software & Hardware Architectures for Embedded Systems
- Testing and Benchmarking

Power Electronics

- Converters, Rectifiers and inverters
- Power Electronic Systems
- High Power Density Power Converters
- Smart Grids
- Applications of Nonlinear Methods to Power Electronic Systems
- Power Electronics in Renewable



Signal Processing

- Adaptive Signal Processing
- Applications of Signal Processing
- Artificial Neural Network (ANN)
- Biomedical Signal & Image Processing
- Deep Learning
- Feature Extraction, Image & Video Processing
- Machine Learning
- Multi-Rate Signal Processing
- Non-Linear Signal Processing
- Non-Stationary Signal Processing
- Pattern Recognition & Classification
- Signal Models in Communication
- Signal Transforms
- Speech Processing

Internet of Things

- Big Data
- Cloud Computing in IoT
- Cloud Computing Architecture
- Cloud Storage
- Security and Privacy in IoT
- IoT Applications and Services
- Signal Processing in IoT



Communication

- Antenna Design
- Congestion & Admission Control
- Cognitive Radio
- Information-Theoretic Aspects of Wireless Communications
- Integrated Wireless/ Optical Networks
- Mesh, Sensor & Adhoc Networks
- Microwave & RF Communication
- MIMO Systems
- Mobile Edge Computing
- OFDM
- Multi-Carrier Modulation
- Waveform Design
- Optical Networking
- Routing in Wireless Networks
- Satellite Communication
- Scheduling & Radio Resource Management
- Software Defined Radio
- Wireless Body Area Networks & E-Health Services
- Wireless Network Security & Privacy Ultra-Reliable Communication

Invited Speakers

Eminent researchers, academicians and industrialists will be delivering keynote address on topics pertaining to the major themes of the conference. The list of keynote speakers and related details will be updated on the website.

Publication



All peer reviewed and selected papers of the conference will be submitted to Springer for possible publication in their prestigious "Lecture Notes in Electrical Engineering" series (<https://www.springer.com/series/7818>). Springer will conduct quality checks on these papers and only papers that pass these quality checks will be published.

Committees

Patron:

Sri N. Vinaya Hegde,

Chancellor, Nitte-Deemed to be University, President, Nitte Education Trust, Mangaluru

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Dr. Srinivas Rao B. R., Vice Principal & Controller of Examinations, NMAM Institute of Technology, Nitte

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Dr. Venkatesh Kamath, Deputy Controller of Examinations

Dr. Srinath Shetty, Resident Engineer

Dr. Rashmi Hegde B., Head, Dept. of Humanities

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Coordinators:

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Dr. Subramanya Bhat, Associate Professor, Department of Electronics and Communication Engineering, NMAM Institute of Technology, Nitte.

Track Chairs:

Communication

Dr. Krishnananda Shet, Associate Professor, Dept. of ECE

VLSI & Embedded Systems

Mr. Mahaveera K., Assistant Professor, Dept. of ECE

Power Electronics

Dr. Durga Prasad, Associate Professor, Dept. of ECE

Signal Processing

Dr. Vidya Kudva, Associate Professor, Dept. of ECE

Embedded Systems & IoT

Dr. Suresh Rao, Associate Professor, Dept. of ECE

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Chair

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Member

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Members

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Mr. Prajwal Hegde N., Assistant Professor, Dept. of ECE

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Mrs. Anusha R., Assistant Professor, Dept. of ECE

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Chair

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Member

Mr. Karthik, Assistant Professor, Dept. of ECE

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Chair

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Mrs. Ashwini K., Assistant Professor, Dept. of ECE

Mrs. Lavanya B. L., Assistant Professor, Dept. of ECE

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- Dr. C. P. Ravikumar, Technical Director, Technical Talent Development, Texas Instruments, India
- Sri. Puneeth Kumar Mishra, Head, Satellite Antenna Characterization, Test and Design Section, ISRO Satellite Center, Bengaluru, India. Chair, IEEE Bangalore Section
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- Dr. S. Y. Kulkarni, Professor and Additional Director, BNMIT, Bengaluru, India

Steering Committee:

- Sri. Vishal Hegde, Pro-Chancellor, Nitte-Deemed to be University
- Dr. N. R. Shetty, Chancellor, Central University of Karnataka, Gulbarga, Karnataka
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- Dr. Prasad Yarlagada, Queensland University of Technology, Australia
- Mr. Tomonari Kobayashi, President, Kobayashi Create Co. Ltd., Aichi-Ken, Japan.

Important Dates

Submission of Full-length Manuscript (opens from)	: 01 March 2022
Last date to submit Full-length Manuscript	: 01 August 2022
Notification of Acceptance	: 20 October 2022
Submission of Camera-ready Manuscript	: 20 November 2022
Last Date for Registration	: 20 November 2022
Conference Dates	: 22-23 December 2022

Paper Submission

The research paper submitted should be original work and should not have been submitted in another conference or journal.

Full length papers in IEEE format not exceeding 8 pages are to be submitted through the EasyChair conference management system.

<https://easychair.org/conferences/?conf=vspice2022>

Registration Fee

Indian Delegates		Foreign Delegates	
Pre Conference Tutorial	Conference	Pre Conference Tutorial	Conference
₹ 1000	₹ 6000	\$ 100	\$ 150

Mode of Payment

Payment of Registration fee can be made in the form of:

Demand Draft

Demand Draft in favour of **Nitte Education Trust** payable at Nitte. Demand Draft may be sent through post to NMAM Institute of Technology, Nitte-574110, Karkala, Karnataka, India.

NOTE: Please specify your "Paper ID" and "VSPICE-22 Conference" on the back of Demand Draft.

NEFT/RTGS

A/c Holder name: NITTE EDUCATION TRUST
Account No.: 01152200011460
IFSC code: CNRB0010115
MICR Code: 576015041
Account Type: Savings Bank
Bank Name: Canara Bank, Nitte-574110

Conference Location

Nitte is a village in Karkala taluk of Udupi district, India. Nitte is on the state highway from Padubidri to Kudremukh. It is 8 km away from Karkala, 36 km from Udupi and 54 km from Mangaluru. It is located on the foothills of the Western Ghats Mountains and receives an annual rainfall of around 4830 mm. The state highway SH-1 cuts across Nitte which connects to the National Highway NH-66 at Padubidri and NH-13 near Karkala.

There are ample number of tourism destinations near Nitte. To name a few

- Sri Krishna Math, Udupi
- Beach, Malpe
- Thousand Pillar Temple, Moodbidri
- Chaturmukha Basadi, Karkala
- Attur Church, Karkala
- Durgaparameshwari Temple, Katil
- Kudremukh forest ranges
- Light house, Kaup



Contact Details :

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Conference URL: www.vspice2022.in
Conference Email: vspice@nitte.edu.in

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Registration Form

Name :

Designation :

Department :

Institution :

Registration for :

Indian Pre Conference Tutorial Conference Both

Foreign Pre Conference Tutorial Conference Both

Payment Details :

DD Details : DD No:..... Date:.....

Bank:.....

NEFT Details : NEFT ID :..... Date:.....

Accommodation required : Yes / No

Mobile No :

Email ID :

Date :

Place :

Signature of the Participant

Signature & Seal of the Head of the
Institution / Organization



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