





INTERNATIONAL CONFERENCE NKCon - 2024

THEME-DIGITAL TRANSFORMATION: UNLEASHING THE POWER OF INFORMATION



21 - 22 September, 2024





B.V.V.Sangha's Basaveshwar Engineering College, Bagalkote-587102, Karnataka, India



Organized by

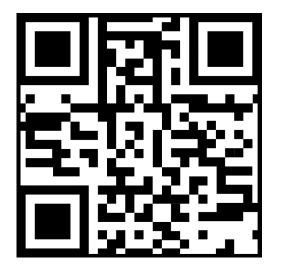
^{*i*} North Karnataka Sub-Section

Technically Co-sponsored by



IEEE Bangalore Section

Scan for Conference Venue





https://ieeenkcon2024.org/ https://www.becbgk.edu/

Dr. Ravi Hosmani Dr. Vijaylakshmi S. J. Conference Chairs Dr. Mahabaleshwar S. K. Dr. Abhishek Deshmuk Organising Chairs Bas

Dr. B. R. Hiremath Principal, Basaveshwar Engineering College, Bagalkote Dr. R. N. Herkal Director of Technical Institutions BVV Sangha Bagalkote

ABOUT NKCON-2024

NKCON 2024 is the flagship conference organized by the IEEE North Karnataka Subsection (NKSS), designed to promote networking, excellence, collaboration, and cooperation among technologists. Scheduled to take place at Basaveshwara Engineering College in Bagalkot from **21-22 September 2024**, the conference will feature a range of activities including contributed papers on cutting-edge research, expert talks on contemporary topics, and various professional events. NKCON 2024 offers a distinctive platform for participants to share groundbreaking research, present innovative ideas, and explore practical applications across the diverse domains covered by the IEEE. The conference stands as a testament to the dynamic and collaborative spirit of the IEEE community, fostering the exchange of knowledge and advancements in numerous technological and scientific fields.

ABOUT THE INSTITUTE

Basaveshwar Engineering College (BEC), Bagalkot, established in 1963, has evolved from a private institution engineering programs—Civil, three offering just Mechanical, and Electrical—into a prestigious college with 9 undergraduate and 8 postgraduate programs. Initially receiving government grant-in-aid in 1968, BEC has grown significantly, now encompassing 10 departments recognized as research and development centers by Visvesvaraya Technological University (VTU), Belagavi. The college achieved a notable rank in the 201-250 band nationally in the 2019-20 National Institutional Ranking Framework (NIRF) and boasts accreditations from the National Board of Accreditation (NBA). Its development can be segmented into three phases: Phase I focused on infrastructure consolidation, Phase II on expanding programs and faculty, and Phase III on modernization and excellence, marked by its participation in the Technical Education Quality Improvement Program (TEQIP), which included substantial grants for program enhancement and research. BEC has also received several accolades, including the AICTE IDEA Lab establishment, recognition as an Incubation Centre, and high rankings in industry-linked surveys. The college's core values emphasize high-quality teaching, research, and administration, continually striving to enhance its educational environment through national-level audits.

high-performance computing, cybersecurity, IoT, big data analytics, and autonomous systems. All submissions will undergo a peer-review process, evaluating originality, relevance, technical quality, and clarity. Accepted papers will be published in the IEEE conference proceedings and available on IEEE Xplore. For more information on registration, conference fees, and accommodation, please visit our website [ieeenkcon2024.org].

CONFERENCE TRACKS

Track 1: Communication and Signal Processing.
Track 2: Power Electronics and Control System.
Track 3: Robotics and Automation System.
Track 4: Artificial Intelligence and Machine Learning.
Track 5: Computing Devices and Circuits.
Track 6: Learning Computer and Software Engineering.
Track 7: Electric Vehicle and Grid Integration.
Track 8: Intelligent Mobility and Visual Inelligence.
Track 9: Intelligent Solutions in Healthcare applications

KEY HIGHLIGHTS OF NKCON-2024

• Best Paper Awards: For tracks with more than 30 papers, a

ABOUT IEEE NORTH KARNATAKA SUB-SECTION

IEEE North Karnataka, India Sub-Section (IEEE-NKSS) was established in July 2020 with the primary objective of networking the professionals through IEEE membership in the region and sharing technological developments among faculty and students. IEEE-NKSS has successfully organized its first International flagship conference IEEE NKCon-2022 during 20-21, November 2022 and IEEE NKCon⊠2023 in hybrid mode during 19-20, November 2023. The conference covered a diverse range of technical tracks, relevant to the domains of Electrical, Electronics and Information Technology and their applications. Best Paper Award will be given for each track, provided at least 15 papers in the track.

- **Publication in IEEE Xplore:** All accepted and presented papers will be submitted for potential inclusion in the IEEE Xplore Digital Library and associated databases, contingent upon meeting IEEE standards.
- **Pre-Conference Workshop:** Participate in a pre-conference workshop designed to delve into emerging technologies and key topics relevant to digital transformation.
- Accommodation: Complimentary accommodation will be provided for out-of-town participants on a first-come, first-served basis.

REGISTRATION FEE DETAILS

| Category | IEEE Members | Non-IEEE Members |
|--|-----------------|---------------------|
| Student/ Research Scholar | 5000 INR | 6000 INR |
| Academician/Industry Person | 6000 INR | 8000 INR |
| Non- Authors/Participants/Accomp anying Person: | 2000 INR | |
| IEEE members: Non Authors/Participants/Accomp anying Person: | 1000 INR | |

CALL FOR PAPERS

The IEEE NKCON 2024 will take place from 21-22 September 2024 at Basaveshwara Engineering College Bagalkot Karnataka. We invite researchers, practitioners, and industry experts to submit papers exploring cutting-edge advancements in computing technologies and their applications. This year's conference theme, "Digital transformation : Unleashing the power of Information" ,emphasizes advancements in various domains, including advanced computing architectures, quantum computing, artificial intelligence, edge and cloud computing,

IMPORTANT DATES

| Last date for Submission | 20th July, 2024 |
|----------------------------|----------------------------|
| Acceptance Notification | 31st July, 2024 |
| Dead line for Registration | 15th August, 2024 |
| Camera ready submission | 30th August, 2024 |
| Conference Dates | 21st-22nd September, 2024 |

Organizing Council

Chief Patron

 Dr. Veeranna Charantimath, Chairman, BVV Sangha, Bagalkote

Patrons

- Sri. Mahesh N. Athani, Secretary, BVV Sangha, Bagalkote
- Dr. R. N. Herkal, Director of Technical Institutions, BVV Sangha, Bagalkote

Advisory Committee

- Dr. S. H. Jangamshetti, Vice Chancellor, Haveri University, Karnataka, IEEE NKSS Chair, 2020,21
- Dr. Debabrata Das, Director, IIIT, Bangalore, Past chair, IEEE India Counsel
- Dr. Basavaraj Anami, Registrar, KLE Tech. University, Hubballi, IEEE NKSS Chair, 2022

Steering committee

- Dr. P. Deepa Shenoy, 2022 chair, IEEE Bangalore Section
- Dr. Chandrakanta Kumar, ISRO Bangalore, chair Elect 2024 IEEE Bangalore Section
- Dr. Chengappa M. R., HP Bangalore, Voice chair 2024, IEEE Bangalore Section
- Dr. Abhishek M. Appaji, Prof., Dean R&D, BMSCE Bangalore, Treasure IEEE Bangalore Section
- Ms.Ashwini Holla, Canara Engineering College Benjanapadavu. Chair, IEEE WiE Banglore section
- Ms. Divya MG , JD at CDAC Bangalore, Execom IEEE Banglore section
- Dr. Kiran K., UVCE, Bangalore, Past Execom IEEE Bangalore Section
- Mr. Puneet Kumar, Mishra U R Rao Satellite Centre, Bangalore. GoB, IEEE AESS
- Dr. Krupa Rasane, Head, Dept. of ECE, JCE Belagavi, 2023 Chair, IEEE NKSS
- Dr. Deepak Waikar, Trainopreneur-Pro, Researcher-Pro, Academic Adviser, National University, Singapore
- Dr. Aloknath De, 2023 Chair, IEEE Bangalore Section
- Mr. Bindhumadhava, CDAC, Bangalore, Past chair IEEE Bangalore Section
- Dr. Parameshachari B. D., Dean R&D, NMIT Bangalore Execom member IEEE Bangalore section
- Dr. D. S. Jangamshetti, Rtd. Principal, Basaveshwar Engineering College, Bagalkote
- Ms. Anandi Giridharan, IISc Banglore Execom Member IEEE Bangalore Section
- Dr. Ramakrishnan Raman, Fellow, Honeywell, IEEE Bangalore Section
- Mr. Shailesh Sakri, Sr. Director, Automotive,

- Dr. Vishwanath P., Prof and HoD ECE, SLNCE, Raichur, Execom IEEE NKSS
- Dr. S. P. Bangarshetti, Head, Dept. of Information Science & Engineering, BEC Bagalkote
- Dr. J. D. Mallapur, Head, Dept. of Electronics & Communication Engineering, BEC Bagalkote
- Dr. R. L. Naik, Head, Dept. of Electrical & Electronics Engineering, BEC Bagalkote
- Dr. K. Bhat, Head, Dept. of Electronic & Instrumentation Engineering, BEC Bagalkote
- Dr. C. L. Chayalakshmi, Head, Dept. of Electronics & Computer Engineering, BEC Bagalkote

General Chair

- Dr. B. R. Hiremath, Principal, Basaveshwar Engineering College, Bagalkote
- Dr. T. Srinivas, IISc, Bengaluru, 2024 Chair, IEEE Bangalore Section

Conference Chair

- Mr. Ravi Hosamani, 2024, Chair, IEEE NKSS
- Dr. Vijayalakshmi S. Jigajinni, 2024 Voice Chair,
- Harman International, past chair, SPS Bangalore chapter
- Dr. K. Chandrashekar, CoE, BEC Bagalkote
- Dr. Jayashri Rudagi, Professor, SGBIT, Belagavi, Execom Member IEEE NKSS
- Dr. P. N. Kulkarni, Dean (Academics), BEC Bagalkote
- Dr. A. D. Devangavi, Dean (Quality Assurance), BEC Bagalkote
- Dr. S. G. Kambalimath, Dean (Career Guidance & Placement), BEC Bagalkote
- Dr. Bharathi S. Meti, Dean (Student Welfare), BEC Bagalkote
- Dr. Basanti Ghanti, Sharnabasva University Kalaburagi, IEEE NKSS Member

IEEE NKSS, ECE Dept., BEC Bagalkote

Organizing Chair

- Dr. Mahabaleshwar S. K, Dean (R & D), BEC Bagalkote
- Mr. Abhishek Deshmukh , 2024, IEEE NKSS Chair Elect , Gogte Institute of Technology, Belagavi,

Organizing Committee Members

- Dr. Vilas Naik, CSE Dept., BEC Bagalkote
- Dr. Bharati M. Reshmi, AIML Dept., BEC Bagalkote
- Dr. B. K Sarojini, ECE Dept., BEC Bagalkote
- Dr. S. V. Saboji, CSE Dept., BEC Bagalkote
- Dr. L. B. Bhajantri, ISE Dept. BEC Bagalkote

Publication Chair

- Dr. Shridhar K. ECE Dept., BEC Bagalkote
- Dr. Krupa Rasane, 2023 Chair, IEEE NKSS JCE Belagavi,

Publication Committee Members

- Dr. Pratyasa Bhui, IIT, Dharwad, Execom Member IEEE NKSS
- Dr. Jagadeesha R. Bhat , IIIT, Dharwad, Execom Member IEEE NKSS
- Dr. Swetha Goudar, GIT, Belagavi, Execom Member IEEE NKSS
- Dr. Vinoda S., KLE Institute of Technology, Hubballi, Execom Member IEEE NKSS
- Dr. Arunkumar Patil, EEED, CUK, Kalaburagi, Execom Member IEEE NKSS
- Dr. S. R. Patil, ISE Dept. BEC Bagalkote
- Dr. M. G. Kambalimath, Computer Science and Engineering Department, BEC, Bagalkote

Finance Chair

- Sri. B. S. Haravi, Dept. of Civil Engg, BEC Bagalkote
- Dr. Virupaxi Dalal, Dean R & D., JCER Belagavi, Treasure, IEEE NKSS

Finance Committee members

- Dr. Santosh Kumbalavati, ECE Dept., BEC Bagalkote
- Dr. Kiran Bendigeri, ECE Dept., BEC Bagalkote
- Dr. Ajay Katageri, ECE Dept., BEC Bagalkote

Publicity Chair

- Dr. B. F. Ronad, 2024 Secretary, IEEE NKSS, EEE Dept., BEC Bagalkote
- Dr. Chengappa M. R., HP Bangalore, Voice chair 2024, IEEE Bangalore Section

Publicity committee Members

- Dr. S. Y. Goudappanavar, EEE Dept., BEC Bagalkote
- Dr. Sharanappa. P. H., ECE Dept., BEC Bagalkote
- Dr. A. S. Tigadi, ECE Dept., Dr. MSS Engineering College, Belagavi, Member IEEE NKSS

Technical Program Chair

- Dr. V. B. Pagi, Head, Dept. of Computer Science & Engineering, BEC Bagalkote
- Dr. Rudresh Magdum, 2024 Joint secretary IEEE NKSS, Gogte Institute of Technology, Belagavi .

Technical Program Members

- Dr. Kumar Swamy V., Execom Member IEEE NKSS
- Dr. S. M. Jigajinni, Dept. of Mechanical Engg., BEC Bagalkote
- Dr. K. N. Rajur, ECE Dept., BEC Bagalkote
- Dr. Mamata J. Satareddi, ECE Dept., BEC Bagalkote
- Dr. Rajani S. Pujar, ECE Dept., BEC Bagalkote
- Dr. K. B. Balavalad, ECE Dept., BEC Bagalkote
- Dr. Poornima M. Chanal, ECE Dept., BEC Bagalkote

- Mr. Mahantesh Chikkadesai, Dept of EEE, BEC Bagalkote, Execom Member IEEE NKSS
- Dr. Ashok V. Sutagundar, Dept of ECE, BEC Bagalkote
- Mr. Pratik B. Joshi, Dept of ECE, BEC Bagalkote, IEEE NKSS Student Rep.

Web Management Chair

- Dr. Puneeth N. Thotad, 2024 Web Master IEEE NKSS, KLE Institute of Technology, Hubballi,
- Dr. Vishwanath Kagawade, AI & ML Dept., BEC Bagalkote,

Web Management Committee members

- Dr. J. G. Ghantimath, Dept. of Physics, BEC Bagalkote
- Mr. Prashantkumar S. Chinamalli, Sharnbasava University, Kalaburagi, Member IEEE NKSS
- Dr. Manjula A. Sutagunder, EEE Dept., BEC Bagalkote
- Dr. A. H. Unnibhavi, ECE Dept., BEC Bagalkote
- Dr. Somu Parande, ECE Dept., BEC Bagalkote
- Dr. G. B. Chittapur, CSE Dept., BEC Bagalkote
- Mrs. Ratnaprabha Aragnaji, Dept. of Physics, BEC Bagalkote

For More Details Contact:

1. Dr. Mahabaleshwar S. K, Organising Chair, Dean R & D, BEC Bagalkote, mahabaleshsk@gmail.com

2. Dr. Ravi Hosmani, Conference Chair, IEEE NKSS Chair 2024,

ravishosamani@ieee.org

3. Dr. Vijaylakshmi S. Jigajinni, Conference Co-Chair, IEEE NKSS Voice chair, talk2vijusj@ieee.org