



DEPARTMENT OF INFORMATION TECHNOLOGY
NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA
SURATHKAL, MANGALORE 575025 INDIA

2023 - 2024



Profile of the Department

Established in the year 2000, the Department of Information Technology is the youngest among the 14 departments at NITK Surathkal. Since then, it has grown to be a center for excellence, innovation and research with dedicated faculty & staff, highly motivated students, state-of-the-art facilities and an innovative teaching-learning environment. The department offers two undergraduate programmes (B.Tech.-IT and B.Tech.-AI); one post-graduate programme (M.Tech.-IT), M.Tech. in IT (by Research) and Ph.D. programmes are also offered by the department. The department was accredited by National Board of Accreditation (NBA) for 6 years (2022-2023 to 2027-28, upto 30-06-2028), for 6+1 years w.e.f. 01-07-2014 (further extended for 1 year up to 30-06-2022) and for 3 years in 2008. It has demonstrated its significant potential for excellent research through high-quality scholarly publications, research projects, patents and other initiatives. Several research & consultancy projects are currently underway as part of various grants/MoUs with reputed industry and academic organizations. Our students have consistently achieved excellent placements year after year and have demonstrated a high level of success at pursuing post-graduate and doctoral studies at leading universities world-wide (as per QS World University Rankings). Many NITK-IT graduates are currently at universities of repute like Massachusetts Institute of Technology, Carnegie Mellon University, Yale, Cornell, Columbia, Duke University, Purdue, Georgia Tech, and in IITs/IIMs.

Vision

- To achieve excellence in education, so as to enable students to establish themselves as world-class professionals & empower them with the proficiency & knowledge to excel in the dynamic field of IT.*

Mission

- To create and disseminate knowledge through research, teaching & learning, and to enhance society in meaningful & sustainable ways.*
- To serve our students by inculcating in them problem solving, leadership & teamwork skills, and the value of commitment to quality, ethical behavior & respect for others.*

Head of the Department		Faculty Members	
Geetha V.			
Year of Establishment 2000		<i>Professors (HAG Scale)</i> Ananthanarayana V. S. G. Ram Mohana Reddy	<i>Assistant Professors (Grade II)</i> Janani T.
Student Information			
<i>Programme</i>	<i>Number of Students</i>		<i>Adhoc Faculty</i>
B.Tech. (AI)	132	<i>Associate Professors</i> Jaidhar C. D. Sowmya Kamath S.	Anita S. R. Anupama H. C. Deepa C. Palla Parasuram Yadav Uma Maheswari V
B.Tech. (IT)	387	Nagamma Patil Biju R. Mohan Geetha V.	
M.Tech. (IT)	64 (full-time)	Anand Kumar M. Purushothama B. R.	
M.Tech. (By Research)	07 completed 03 ongoing	<i>Assistant Professors (Grade I)</i> Shrutilipi Bhattacharjee Bhawana Rudra Dinesh Naik Kiran M.	
Ph.D.	40 completed 34 in progress. (Full-time: 21; Part-time: 13)		

Degrees and Programmes

- B.Tech. (Artificial Intelligence)
- B.Tech. (Information Technology)
- M.Tech. (Information Technology) and M.Tech. (by Research)
- Ph.D. (Information Technology)

Current Research Areas

The Department of Information Technology is actively involved in advanced research at the UG, PG and doctorate (Ph.D.) levels, in fundamental and cutting edge technologies. Current areas of research interest include - Affective Computing; Big Data/Cognitive Analytics; Bio-inspired Computing; Bioinformatics; Blockchain, Cloud Computing; Computer Networks; Computer Vision, Cyber-physical Systems, Database Systems; Data Mining; Distributed Computing; Geoscience and Spatial Data Mining, Graph Analytics, Green Computing and Green Datacenters; Healthcare Analytics; High Performance Computing; Human Centered Computing; Internet of Things & Smart Sensing applications; Mobile and Vehicular Adhoc Networks; Machine Learning; Natural Language Processing & Understanding; Pervasive Computing; Requirements Engineering; Service-oriented Computing; Software Engineering and Architecture; Security Issues in Information, Networks and VoIP; Semantic Web Technologies; Social Network Analysis and Wireless Sensor Networks among others.

Research Publications and Books

Peer-reviewed International Journals – 213

Refereed International Conferences – 608

Refereed National Conferences – 6

Books and book chapters - 70

Recent Events

- 21st Annual Convocation Dept-level programme (Nov 4, 2023)
- National-level Hackathon "HackVerse 4.0 (2023)" (Apr 15-16, 2023)
- SERB sponsored 7-Day Workshop on "Advanced Topics in Network Security and Cryptography" (May 30 - June 5, 2022)
- AICTE sponsored 5-day Workshop on "Quantum Computing & Quantum Cryptography" (Jun 7 - 11, 2021)



RESEARCH, CONSULTANCY & DEVELOPMENT PROJECTS (RECENT)

<i>Research Project</i>	<i>Sponsoring Agency</i>	<i>Funding</i>	<i>Duration</i>	<i>Principal Investigators</i>
Quantum Cryptanalysis using Grovers Quantum Search Algorithm	DRDO	₹ 51 Lakhs	2023-25	Bhawana Rudra
Deep Explainable Framework for Semantically Similar Document Retrieval & Summarization of Legal text	SERB Core Research Grant	₹ 42 Lakhs	2023-26	Anand Kumar M.
AI-based modeling and assessment of Saltwater intrusion phenomenon in west- flowing rivers of Coastal Karnataka	DST SERB POWER Grant	₹ 30 Lakhs	2022-25	Shrutilipi Bhattacharjee & Sowmya Kamath S.
Microsoft AI for Earth Grant	Microsoft	USD 15,000	2022-23	Sowmya Kamath S. & Shrutilipi Bhattacharjee
Google Cloud COVID-19 Research Grant	Google Inc	USD 10,600	2020-21	Sowmya Kamath S.
Google Cloud COVID-19 Research Grant	Google Inc	USD 9,100	2020-21	Neelima B.
Young Faculty Research Fellowship	Visweswaraya PhD Scheme for Electronics & IT	₹ 14.98 Lakhs	2019-21	Geetha V.

<i>Consultancy/Other Projects</i>	<i>Agency</i>	<i>Budget</i>	<i>Faculty Member</i>
Unstructured Business Document analysis	MIS	₹ 28.57 Lakhs	Sowmya Kamath S.
Structured content extraction from preformatted documents & study materials	Edumeister USA	₹ 1.18 Lakhs	Anand Kumar M.
NITK-MIS IRIS Project (<i>Academic-centric Information System</i>)	NITK	₹ 54 Lakhs	Ananthanarayana V. S. Biju R. Mohan Sowmya Kamath S.
CCMT 2016 (<i>Centralised Counselling for M.Tech/M.Arch/ Admissions</i>)	MHRD	₹ 450 Lakhs	Ananthanarayana V. S. (Technical Convener)

Industry-Institute Interactions

The Department has several industry linkages and MoUs at various stages/level-

- Hewlett Packard Enterprise, Bangalore - NITK MoU (2019-2024)
- RDL Technologies, Mangalore - NITK-IT LoI (2018-2021)
- Huawei Technologies India Ltd., Bangalore - NITK MOU (2015-to date)
- AMD India, Bangalore - NITK MOU (2012-to date)
- Dell India R&D Centre, Bangalore (2012-to date)
- Accenture, Mumbai – NITK MOU (1 year)
- Pennsylvania State University (PSU) (5 years)

DETAILED FACULTY INFORMATION

Professors (HAG Scale)



Ananthanarayana V. S., Ph.D. (IISc Bangalore), Post-doc (Canada)

Email - anvs@nitk.edu.in | Phone: +91-824-2473550

Research: Data Mining, Web Services, Distributed Computing, Databases



G. Ram Mohana Reddy, Ph.D. (University of Edinburgh, UK)

Email - profgrmreddy@nitk.edu.in | Phone: +91-824-2473551

Research: Artificial Intelligence, Big Data Analytics, Cognitive Hearing/Speech Science, Cloud/Edge/Fog Computing, QoS-aware Green Data Centers, IoT applications

Associate Professors



Jaidhar C. D., Ph.D. (NIT Trichy)

Email - jaidharcd@nitk.edu.in | Phone: +91-824-2473553

Research: Cyber Security, Internet of Things (IoT), Precision Agriculture



Sowmya Kamath S., Ph.D. (NITK Surathkal)

Associate Dean (Alumni Network)

Email - sowmyakamath@nitk.edu.in | Phone: +91-824-2473557

Research: Healthcare Analytics, Natural Language Processing, Information Retrieval, Machine Learning, Visual Computing



Nagamma Patil, Ph.D. (IIT Roorkee)

Email - nagammapatil@nitk.edu.in | Phone: +91-824-2473559

Research: Data Mining, Soft Computing, Applying Data Mining Techniques to Biological Data



Biju R. Mohan, Ph.D. (NITK Surathkal)

Professor-in-charge (Institute website)

Email - biju@nitk.edu.in | Phone: +91-824-2473558

Research: Software Aging, Virtualization, Software Engineering, Software Architecture



Geetha V., Ph.D. (NITK Surathkal)

Head of the Department

Email - geethav@nitk.edu.in | Phone: +91-824-2473554

Research: Internet of Things, Wireless Sensor Networks, Computer Networks



Anand Kumar M., Ph.D. (Amrita Vishwa Vidyapeetham)

Email - m_anandkumar@nitk.edu.in | Phone: +91-824-2473561

Research: Natural Language Processing, Text Analytics, Information Retrieval, Machine Learning



Purushottama B R., Ph.D. (NIT Warangal)

Email - puru@nitk.edu.in | Phone: +91-824-2473145

Research: Information Security, Cryptography, Cloud Security, Security Analytics.

DETAILED FACULTY INFORMATION (contd.)

Assistant Professors (Grade I)



Shrutilipi Bhattacharjee, *Ph.D. (IIT Kharagpur), Post-doc (Technical University of Munich, Germany)*

Email - shrutilipi@nitk.edu.in | Phone: +91-824-2473142

Research: Geoscience and Spatial Data Mining, Complex Network Analysis



Bhawana Rudra, *Ph.D. (IIIT Allahabad)*
Professor-in-charge (Staff training programs)

Email - bhawanarudra@nitk.edu.in | Phone: +91-824-2473560

Research: Cryptography and Network Security, Cyber Security, IoT, Blockchain Security, Quantum Computing & Cryptography, Future Internet & its Security,



Dinesh Naik, *Ph.D. (NITK Surathkal)*

Email - din_nk@nitk.edu.in | Phone: +91-824-2473552

Research: Deep learning for Computer Vision and Natural Language Processing, Evolutionary Deep Intelligence, Scientific Imaging, Remote Sensing, Biomedical Imaging



Kiran M., *Ph.D. (NITK Surathkal)*

Email - kiranmanjappa@nitk.edu.in | Phone: +91-824-2473561

Research: Blockchain Technology, 5G and beyond, Wireless Sensor Networks, Mobile Adhoc Networks, Swarm Intelligence and Bio-inspired Computing,

Assistant Professors (Grade II)



Janani T., *Ph.D. (NIT Trichy)*

Email - jananit@nitk.edu.in | Phone: +91-824-2473142

Research: Cryptography, Image Encryption, Multimedia Analytics

STUDENTS' INFORMATION

B.Tech. (IT) Placement Statistics (last 5 years)

<i>Placement Year</i>	<i>Total Eligible</i>	<i>Total Placed</i>	<i>Highest Pay Package</i>	<i>Average Pay Package</i>
2022-23	113	112+1*	54.75 Lakhs	29.23 Lakhs
2021-22	91	91	45.03 Lakhs	23.03 Lakhs
2020-21	95	93+2*	45.03 Lakhs	17.28 Lakhs
2019-20	97	96+1	43 Lakhs	17.06 Lakhs
2018-19	93	92+1*	39 Lakhs	14.15 Lakhs

**Off-campus placement*

M.Tech. (IT) Placement Statistics (last 5 years)

<i>Placement Year</i>	<i>Total Eligible</i>	<i>Total Placed</i>	<i>Highest Pay Package</i>	<i>Average Pay Package</i>
2022-23				
2021-22	29	28+1*	45.03 Lakhs	17.38 Lakhs
2020-21	26	24+2*	28 Lakhs	12.25 Lakhs
2019-20	22	22	20 Lakhs	12 Lakhs
2018-19	18	19	18.75 Lakhs	11.90 Lakhs

**Off-campus placement*

Recent student admissions to top universities (as per QS World University Rankings)

<i>Name of Student</i>	<i>Institute</i>	<i>Programme</i>
Akshara Prabhakar	Princeton University, USA	Integrated MS-Ph.D.
Medhini Narasimhan	Univ. of California Berkeley, USA	Integrated MS-Ph.D.
Shailee Jain	University of Texas-Austin, USA	Integrated MS-Ph.D.
Aditya Bhat	Purdue University, USA	Integrated MS-Ph.D.
Spandana Balumuri	Univ. of Texas at Austin	MS in Computer Science
Akshay Udupa	Carnegie Mellon University	MS in Computer Science
Mohit Mitra.	GeorgiaTech, USA	MS in Computer Science
Nachiketh Naganure	Texas A & M University	MS in Computer Science
Tilak Shenoy	Univ. of Illinois Urbana- Champaign	MS in Computer Science

Some IT Entrepreneurs

<i>Student</i>	<i>Degree and Batch</i>	<i>Start-up Initiative</i>
Shashank N.D. & Abhinav Lal	B.Tech, Batch of 2009	Co-founders, Practo Healthcare
Shreyas Tonse	B.Tech, Batch of 2006	CEO, Zwayam Digital
Rohit Manglik	B.Tech, Batch of 2012	Founder, EduGorilla Platform
Vaibhav Arcot	B.Tech, Batch of 2018	Co-founder, TreeSwift Inc.
Neelesh Soni & Gaurav Raj	B.Tech, Batch of 2012	Co-founders of Piktora Imaging and Rhapsody Labs
Smrithi Ranjan Parida	B.Tech, Batch of 2007	COO, NestAway
Sanchit Garg	B.Tech, Batch of 2016	Co-founder & CTO, ChangePay MMS
Manash Sharma	B.Tech, Batch of 2021	Co-founder of OxyHeal Pvt. Ltd.
Utkarsh Ajay Patil	B.Tech, Batch of 2021	Co-founder of Cryptocase & Seventy7 Technologies Pvt. Ltd.

DEPARTMENTAL FACILITIES

Classrooms

The department has well furnished classrooms and seminar rooms to facilitate learning, discussions and debates. The specially designed classrooms are equipped with audio visual aids (sound system and LCD projectors) & Internet connectivity (Wi-Fi) to enhance the learning process. The labs are situated in the 3rd, 4th, 5th and 6th floors of the building, while the classrooms are located in the adjacent building, Lecture Hall Complex C (LHC-C).

Department Library

The department has its own library, situated on the 5th floor, offering reference books for all subjects and areas of Information Technology. It also includes a Library Information System developed in-house, providing search and discovery functionalities for the library's various resources like seminar reports, UG/PG/Ph.D. Theses and technical videos in a single search. It provides account/history management, automated issue and alert system etc.

Seminar Hall

The department's seminar hall is on the 5th floor and is equipped with ceiling-mounted LCD projector, and wireless audio system. It can comfortably seat more than 125 people and is used for conducting seminars and distinguished lectures.

Conference Room

The Department Conference Room is equipped with digital display system and teleconferencing facilities and is located on the 4th floor. It is used for conducting presentations, seminars, meetings, webinars etc.

Computing Facilities

The department's laboratory setup provides excellent facilities to cater to the varied needs of B.Tech., M.Tech./M.Tech.(Research) students and Ph.D. scholars. The department has several labs for general programming language laboratory courses for UG and dedicated labs for fields like Internet of Things, Data Analytics and High Performance Computing. PG students and research scholars work in dedicated labs equipped with high-end machines and facilities. Some state-of-the-art computing facilities available in the various labs include –

- 163 High-end HP and Dell Desktop systems, with i7 Processor and 16 GB RAM
- 209 High-end HP Desktop systems, with i7 Processor and 32 GB RAM
- 1 Lenovo Workstation with Xeon Processor and 8 GB RAM
- 3 Dell Desktop Systems with i7 processor and 8 GB RAM
- 2 HP Desktop Systems with i7 processor and 4 GB RAM
- 2 CUDA based servers for High Performance Computing – Dell Power Edge R730XD
- 1 Dell Power Edge R540 Server
- 1 Tyrone Camarero Server and 1 NVIDIA DGX Station for High Performance Computing
- 2D and 3D camcorders for High Performance Multimedia Lab and Applications
- Microsoft Kinect for Xbox 360 for Human Computer Interaction Applications
- MEMSIC Wireless Sensor Network Professional and Educational Kits.
- Microprocessor and Interfacing Kits for hand-on experiments.
- Sense 3D, Myo, Leapmotion, Arduino, Raspberry Pi3, Health/Environment Monitoring Sensors, VR based head Mounted Devices, Google Glass, Oculus Rift, Eye Tracker, Firebird Robotic Kit, Nintendo Wii etc for Human Computer Interaction Applications .
- LAN Trainer Kits for Network and routing simulation experiments
- Rational Rose Suite 7 and IBM's Business Intelligence Suite

DEPARTMENT LOCATION



Contact Information

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