DEPARTMENT OF INFORMATION TECHNOLOGY

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA
SURATHKAL, MANGALORE 575025 INDIA

2019 - 2020

Profile of the Department

Established in the year 2000, the Department of Information Technology is the youngest among the 14 departments at NITK Surathkal. The department strives to be a centre for excellence, innovation and research with dedicated faculty, highly motivated students, state-of-the-art facilities and an innovative teaching-learning environment. The department was accredited by the National Board of Accreditation (NBA) for 3 years in 2008 and for 5 years w.e.f. July 1st, 2014. The department has consistently demonstrated its potential for excellent research through sponsored research projects, consultancy work, high-quality scholarly publications, text books, open source software and other professional contributions. Several research and consultancy projects are also underway as part of various MoUs with reputed industry and academic organizations. Our students have consistently achieved 100% placements and have demonstrated a high level of success in pursuing post graduate and doctoral studies at top universities of the world as per QS World University Rankings, like Massachusetts Institute of Technology, Carnegie Mellon University, Yale, Columbia, Purdue and in the 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
Biju R Mohan		*Professors (HAG Scale)*
Year of Establishment		Ananthanarayana V. S. (Deputy Director)
2000		G. Ram Mohana Reddy
Student Information		*Associate Professors*
Programme	*Number of Students*	Jaidhar C D
B.Tech	308	*Assistant Professors (Grade I)*
		Biju R. Mohan
M.Tech	50 (full-time)	Geetha V
M.Tech (By Research)	03 completed 02 ongoing	Sowmya Kamath S Nagamma Patil Anand Kumar M
PhD	21 completed 24 in progress. (18 full time; 6 part time)	*Assistant Professors (Grade II)* Dinesh Naik Kiran M Bhawana Rudra
		Adjunct Professors Prakash S. Raghavendra *(AMD Fellow)* Sidney David Rosario

Degrees and Programmes

- B.Tech (Information Technology)
- M.Tech (Information Technology) and M.Tech (by Research)
- PhD (Information Technology)

Current Research Areas

The Department of Information Technology is actively involved in advanced research at the UG, PG and doctorate (PhD) levels, in fundamental and cutting edge technologies. Current areas of research interest include - Affective Computing; Big Data/Cognitive Analytics; Bio-inspired Computing; Bioinformatics; Blockchains, Cloud Computing; Computer Networks; Computer Vision, Cryptography; Cyberphysical Systems, Database Systems; Data Mining; Distributed Computing; Green Computing and Green Datacenters; Healthcare Analytics; High Performance Computing; Human Centred 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 – 137

Refereed International Conferences – 412

Refereed National Conferences – 6

Books and book chapters - 45

Recent Events

- **National Workshop on High Performance Computing and Applications (HPCA 2019)** organised as part of NITK Diamond Jubilee Celebrations (Aug 12-17, 2019)
- TEQIP III Sponsored Five Days STTP on **Applications of Data Mining and Deep Learning Techniques in Multidisciplinary Area** (Jun 24-28, 2019)
- TEQIP III Sponsored Workshop on **Deep Learning for Big Data and Cyber Security Applications** (Jul 1-5, 2019)
- TEQIP III Sponsored **One Week Workshop on Predictive Analysis and its Applications (PAA 2019)** (as part of NITK-GEC Jhalawar Twinning activities, Jan 14-18 2019)
- One Day Workshop on **Internet of Things** (22 March 2019)
- **NITK-RDL - Makeathon** 2019 (16-17 March 2019)
- HP Enterprise Workshop on **"Experience the Power of HPC"** (9th March 2019)
- Two day Workshop/Seminar on **New Frontiers in Cloud and Fog Computing for Big Data and Internet-of-Things (IoT) Applications** (31 Dec 2018-1 Jan 2019)

SOME R&D PROJECTS

Research Project	Sponsoring Agency	Funding	Duration	Principal Investigators
A Framework for Deep Learning based Analytics for Intelligent Healthcare Applications	DST-SERB (Early Career Research Grant)	₹ 35 Lakhs	2017-20	Sowmya Kamath S
Effective Online Framework Solution for Protein Sequence Alignment and to Predict Protein Structure & its subcellular localization using Amino Acid Molecules	Vision Group on Science and Technology, DST, Govt. of Karnataka	₹ 5 Lakhs	2018-19	Nagamma Patil
Young Faculty Research Fellowship	Visweswaraya PhD Scheme for Electronics & IT	Rs. 5 lakhs	2018-19	Geetha V.
Smart HCC: Automated Health Care Centre Activities	Institute Research Grant, NITK	₹ 5 Lakhs	2017-18	G. Ram Mohana Reddy and T.P Ashok Babu

Other Projects	Agency	Budget	Duration	Faculty Member
NITK-MIS IRIS Project (Academic-centric Student Information System Development)	NITK	₹ 54 Lakhs	2016-ongoing	Ananthanarayana V.S. Biju R Mohan Sowmya Kamath S
CCMT 2016 (Centralised Counselling for M.Tech/ M.Arch/M.Plan Admissions)	MHRD	₹ 4.5 Crores	2015-16	Ananthanarayana V.S *(Technical Convener)*
DASA Admissions Portal	MHRD	₹ 20 Lakhs	2011-14	Ananthanarayana V.S Biju R Mohan G Ram Mohana Reddy

Industry-Institute Interactions

The Department has several industry linkages and MoUs at various stages/levels, some of which are-

- 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 (2008 for 1 year)
- EMC Bangalore (2008 for 2 years)
- HP Bangalore (2008)
- Pennsylvania State University (PSU) (2008 for 5 years)

DETAILED FACULTY INFORMATION

Professors (HAG Scale)

Ananthanarayana V S, *PhD (IISc Bangalore), Post-doc (Canada)*
Deputy Director
Email - anvs@nitk.ac.in; Phone: +91-824-2473550
Research: Databases, Data Mining, Distributed/Pervasive Computing, Service-oriented Computing

G. Ram Mohana Reddy, *PhD (University of Edinburgh, UK)*
Email - profgrmreddy@nitk.ac.in;   Phone: +91-824-2474056/2473551
Research: Affective Computing, Cloud/Cognitive Computing, Green Data Centers, Social Networks

Associate Professors

Jaidhar C.D, *PhD (NIT Trichy)*
Email - jaidharcd@nitk.edu..in;   Phone: +91-824-2473553
Research: Cryptography,Network/Information Security, Security Issues in Cloud Computing.

Assistant Professors (Grade I)

Biju R Mohan, *PhD (NITK Surathkal)*
Head of the Department
Email - biju@nitk.ac.in;   Phone: +91-824-2473558
Research: Software Aging, Virtualization, Software Engineering, Software Architecture

Geetha V, *PhD (NITK Surathkal)*
Email - geethav@nitk.ac.in;   Phone: +91-824-2473554
Research: Internet of Things, Wireless Sensor Networks, Computer Networks

Sowmya Kamath S, *PhD (NITK Surathkal)*
Email – sowmyakamath@nitk.edu.in;   Phone: +91-824-2473557
Research: Big Data Analytics, Natural Language Processing/Understanding, Machine Learning

Nagamma Patil, *PhD (IIT Roorkee)*
Email – nagammapatil@nitk.ac.in;   Phone: +91-824-2473559
Research: Data Mining, Data Mining Techniques to Bioinformatics, Soft Computing

Anand Kumar M, *PhD (Amrita Vishwa Vidyapeetham)*
Email – m_anandkumar@nitk.edu.in;   Phone: +91-824-2473561
Research: Natural Language Processing, Information Retrieval, Machine/Deep Learning

Assistant Professors (Grade II)

Bhawana Rudra, *Ph.D (IIIT Allahabad)*
Email - bhawanarudra@nitk.edu.in;   Phone: +91-824-2473560
Research: Future Internet and its Security, Information Security, Wireless Sensor Networks

Dinesh Naik, *M.Tech (VTU), [pursuing PhD]*
Email - din_nk@nitk.ac.in; Phone: +91-824-2473552
Research: Web Semantics, Cloud Computing, Computer Networks

Kiran M, *PhD (NITK Surathkal)*
Email - kiranmanjappa@nitk.edu.in;   Phone: +91-824-2473561
Research: Bio-inspired Computing, Blockchains, Soft Computing, WSN, MANETs.

Adjunct Professors

Prakash Raghavendra, *PhD (IISc Bengaluru) [AMD Fellow]*
Email – Prakash.Raghavendra@amd.com
Research: Compilers, Deep Learning, High Performance Computing

Sidney Rosario, *PhD (Univ. of Rennes, France), Post-doc (Univ of Texas, Austin)*
Email – sidney.rosario@gmail.com;   Phone: +91-824-2473561
Research: Algorithms and Complexity.

INFORMATION TECHNOLOGY

STUDENTS' INFORMATION

Placement Statistics (2018 - 2019)

Degree	Total Eligible	Total Placed	Highest Pay Package	Average Pay Package
B.Tech (IT)	97	97	39 Lakhs	14.15 Lakhs
M.Tech (IT)	19	19	18.75 Lakhs	11.9 Lakhs

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

Name of Student	Institute	Programme
Medhini Narasimhan	University of California Berkeley	Integrated MS-PhD
Shailee Jain	Univeristy of Texas-Austin	Integrated MS-PhD
Aditya Bhat	Purdue University	Integrated MS-PhD
Soundarya R	National University of Singapore	Integrated MS-PhD
Anirudha R C Shrimai Prabhumoye	Carnegie Mellon University (CMU), USA	Integrated MS-PhD
Rishab Ranga, Poorva Rane Pravalika Avarru	Carnegie Mellon University (CMU), USA	M.S in Computer Science
Karthik Senthil, Medhini Narasimhan, Pradnyesh Joshi	University of Illinois at Urbana-Champaign (UIUC)	M.S in Computer Science
Pruthvi H R, Vaibhav Arcot	University of Pennsylvania	M.S in Computer Science

Statistics on IT students pursuing higher studies (last 5 years)

Students pursuing higher education	Number of Students	
	In India	Abroad
Master's Degree in IT and related fields	12	85
Master's Degree in Management field	26	6
Integrated Master's & PhD in IT & related fields	3	13

Some IT Entrepreneurs

Student	Degree and Batch	Start-up Initiative
Shashank N.D & Abhinav Lal	B.Tech, Batch of 2009	Co-founders of Practo.com, World's second largest healthcare startup (as per Forbes India)
Nitin Bantwal Rao	B.Tech, Batch of 2008	Co-founder, SunGlass Inc (San Francisco) and DPlay.com (Stanford)
Neelesh Soni, Gaurav Raj	B.Tech, Batch of 2012	Co-founder/CEO of Piktor Imaging and Rhapsody Labs
Rohit Manglik	B.Tech, Batch of 2012	Founder, EduGorilla Platform
Smrithi Ranjan Parida	B.Tech, Batch of 2007	COO, NestAway
Shreyas Tonse	B.Tech, Batch of 2006	CEO, Zwayam Digital
Srinivasan Narayanan, Smrithi Ranjan Parida	B.Tech, Batch of 2005	Co-founders, CohortPlus

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 classrooms are situated in the same building as the department, on the 3rd, 5th and 6th floors.

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/PhD 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 classes, seminars and distinguished lectures.
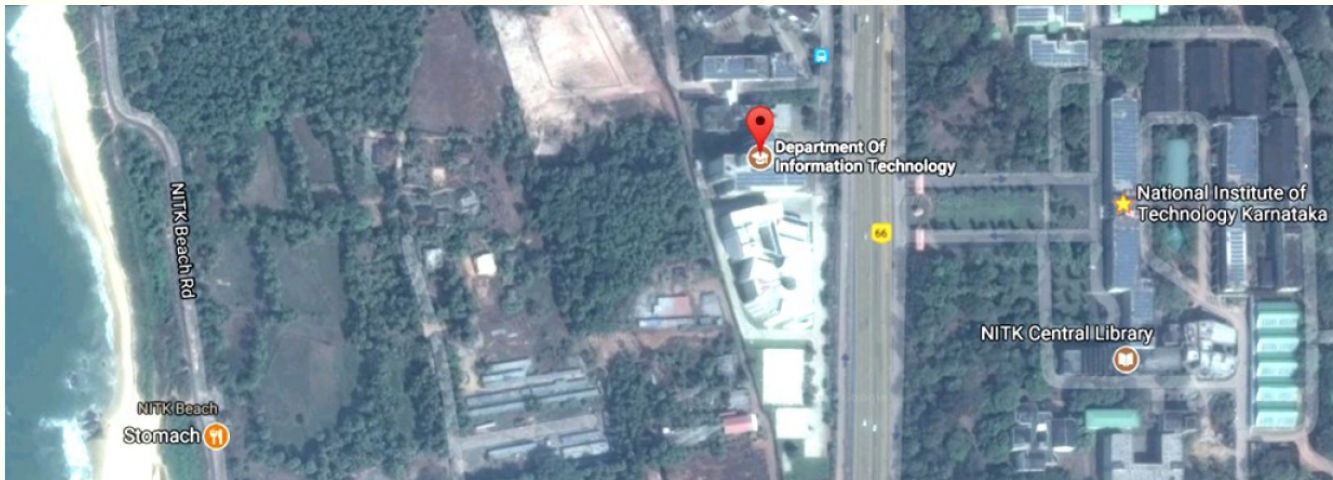
Conference Room

The Department Conference Room is equipped with LCD projector and teleconferencing facilities and is located on the 4th floor. It is used for conducting presentations, teleconferences, 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(by research) students and PhD scholars. The department has several labs for general programming language laboratory courses for UG and dedicated labs for fields like Virtualization, Data Processing, Internet Technology and System Software. 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 –

- 2 Rack Mount Servers with 2 NVIDIA TESLA P40 GPUs
- 2 Dell Power Edge R730 XD2U Rack Mount Server with 2 NVIDIA TESLA M40 GPUs
- 2 Xeon Rack Mounted DL160 Server running Ubuntu and 1 HP Proliant 16GB RPS Server
- 2 Power Edge 420 server and IBM POWER 7 Virtualization Server
- 1 Blade Server, 1 IBM Server and 1 rx2600 Itanium Server running Linux for Laboratory support
- 3 high-end Dell, 1 Lenovo and 11 HP Workstations
- 2 CUDA based server for High Performance computing
- 181 high-end Desktop systems with i7 processor (8GB RAM) and 15 systems with 4GB RAM
- 30 HP Desktop with i5 Processor, 7 IBM and 17 HP desktops with Pentium III processor
- Desktop Virtualization facility (20 NComputing Devices)
- 2D and 3D camcorders for High Performance Multimedia Lab and Applications
- Microsoft Kinect, 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
- MEMSIC Wireless Sensor Network Professional and Educational Kits
- Microprocessor and Interface Kits for hands on experiments.
- LAN Trainer Kits for Network and routing simulation experiments
- Rational Rose Suite 7 and IBM's Business Intelligence Suite

DEPARTMENT LOCATION

Contact Information

The Head,
Department of Information Technology,
IT Building, Western Campus,
National Institute of Technology Karnataka, Surathkal,
Srinivas Nagar P.O, Mangalore 575025, Karnataka, INDIA

Tel: +91-824-2473047 (office) / +91-824-2474056 (direct)
Fax: +91-824-2474082

Email: infotech@nitk.ac.in
           infotech@nitk.edu.in

Website: www.infotech.nitk.ac.in