



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

2016 - 2017



IT Building

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 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 quality scholarly publications - more than 90 peer-reviewed journal and 310 refereed conference publications. Several research and consultancy projects are also underway as part of various MoUs with reputed industry and academic organizations. Our students have consistently achieved near 100% placements and have demonstrated a high level of success at pursuing post graduate and doctoral studies at top universities of the world as per QS World University Rankings - Massachusetts Institute of Technology, Carnegie Mellon University, Yale, Columbia, Purdue and in the IITs and IIMs.

Vision

- To achieve excellence in education so as to enable students to establish themselves as world-class professionals and 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 G. Ram Mohana Reddy		Faculty <i>Professors</i> Ananthanarayana V. S. G. Ram Mohana Reddy
Year of Establishment 2000		
Student Information		
<i>Programme</i>	<i>Number of Students</i>	<i>Assistant Professors</i> Biju R. Mohan Dinesh Naik Geetha V. Jaidhar C. D. Nagamma Patil Sowmya Kamath S.
B.Tech	303	
M.Tech	37 (full-time)	
M.Tech (By Research)	03 completed	
Ph.D	12 completed 21 in progress. (18 full time+3 part time)	

Degrees and Programmes

- B.Tech (Information Technology)
- M.Tech (Information Technology)
- M.Tech (in Information Technology by Research)
- Ph.D (Information Technology)

Current Research Areas

The Department of IT is actively involved in advanced research in cutting edge technologies at the UG, PG and doctorate level (PhD). Current research areas include - Affective Computing, Big Data/Cognitive Analytics, Bio-inspired Computing, Bioinformatics, Cloud Computing, Computer Networks, Cryptography, Data Mining, Distributed Computing, Green Computing, Healthcare Informatics, High Performance Computing, Human Centered Computing, Internet of Things & Smart Sensing applications, Mobile and Vehicular Ad-hoc Networks, Machine Learning, Natural Language Processing and Understanding, Requirements Engineering, Service-oriented Computing, Software Engineering, Software Architecture, Security Issues in Information, Networks and VoIP, Semantic Web Technologies, SocialNetwork Analysis, Soft Computing, Software Engineering, and Wireless Sensor Networks among others.

Research Publications

International Peer-reviewed Journals – 90

International Refereed Conferences – 310

Recent Technical Events

- B.Tech (IT) and M.Tech (IT) Major Project Exhibition **IT-ProFest 2016** on 4th April 2016
- Workshop on **Containers Technology** by resource persons from Dell R&D, Bangalore, on 18th March 2016.
- Workshop on **Intel HPC Code Modernization (Parallelization)** on 7th November 2015
- Alumni Interaction with **Mr. Srivatsa S Bhat, B.Tech (IT) graduate of 2011**, currently pursuing his Ph.D at Massachusetts Institute of Technology (MIT), Boston, USA on 22nd January 2016
- Expert Lecture on **Technical Writing** by resource persons from Dell R & D on 11th January 2016.
- TEQIP-II Sponsored 3-day Research Workshop on **Human Centered Computing: Tools and Applications**, during 25 – 27th June 2015.
- TEQIP-II Sponsored 3-day Research Workshop on **Research Issues In Green Cloud Computing**, during 18 – 20th June 2015.



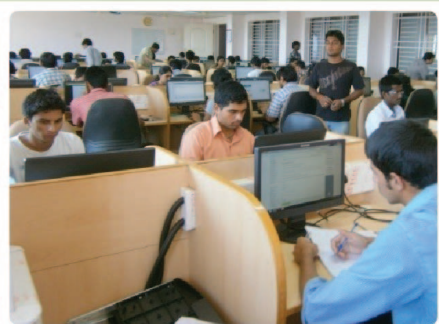
Some Research and Consultancy Projects

<i>Name of Project</i>	<i>Sponsoring Agency</i>	<i>Funding</i>	<i>Duration</i>	<i>Principal Investigators</i>
Load Balancer for Resource Management & Cost Optimization for Guaranteed Task Completion without SLA Violation and Spot Instances in a Cloud Platform	IBM India	Rs.4.8 Lakhs	2016-17	G. Ram Mohana Reddy and Shridhar Domanal
Quality of Service Aware Routing in MANETs	MHRD, Rajeev Gandhi National Research Fellowship	Rs.8 Lakhs	2011-14	G. Ram Mohana Reddy and Kiran Manjappa
Content Based Video Copy Detection & Prevention of In-Theatre Piracy	DST, Women Scientist Research Fellowship	Rs. 30 Lakhs	2011-14	G. Ram Mohana Reddy and R. Roopalakshmi
Automated DASA Admission Process	DASA Admissions Portal	Rs 20 Lakhs	2011-14	Biju R Mohan
Development of Web Based Course Material on Distributed Computing Systems	MHRD NPTEL	Rs.3.5 Lakhs	2012-13	Ananthanarayana V.S.
Security Issues in WSNs	Startup Grant, NITK	Rs. 5 Lakhs	2010-13	Geetha V.
Bug Data Classification using Machine Learning	Cisco, Bangalore	Rs.3.6 Lakhs	2012-13	G. Ram Mohana Reddy and Sowmya Kamath S

Industry-Institute Interactions

The Department has several industry linkages and MoUs at various stages/levels which are being successfully pursued for activities like consultancy/R & D in areas of mutual interests and student projects.

- Huawei Technologies India Ltd., Bangalore - NITK MOU (2015)
- AMD India, Bangalore - NITK MOU (2012)
- Dell India R&D Centre, Bangalore (2012)
- 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



Ananthanarayana V S, *Ph.D (IISc Bangalore), Post Doctoral Fellow (Canada)*
Professor

Room no 407, 4th Floor, IT Building,
Email - anvs@nitk.ac.in; Phone: +91-824-247 3550

Research Interests: Databases, Big Data Analytics, Data Mining, Distributed Computing, Semantic Web, Web Services



Biju R Mohan, *M.Tech (Pondicherry University), currently pursuing Ph.D*
Assistant Professor

Room no 411, 4th Floor, IT Building
Email - biju@nitk.ac.in; Phone: +91-824-247 3558

Research Interests: Software Aging, Virtualization, Software Engineering, Software Architecture, Software Patterns, Requirements Engineering.



Dinesh Naik, *M.Tech (VTU), currently pursuing Ph.D*
Assistant Professor

Room no 409, 4th Floor, IT Building
Email - din_nk@nitk.ac.in; Phone: +91-824-247 3552

Research Interests: Computer Networks, Web Semantics, Cloud Computing.



G. Ram Mohana Reddy, *Ph.D (University of Edinburgh, UK)*
Professor and Head

Room no 408, 4th Floor, IT Building,
Email - profgrmreddy@nitk.ac.in; Phone: +91-824-247 4056/247 3551

Research Interests: Affective Computing, Bio-inspired Cloud Computing, Cognitive Computing, Energy Efficient Green Data Centers, Social Multimedia/Social Network Analysis.



Geetha V, *Ph.D (NITK Surathkal)*
Assistant Professor

Room no 410, 4th Floor, IT Building
Email - geethav@nitk.ac.in; Phone: +91-824-247 3554

Research Interests: Wireless Sensor Networks, Computer Networks



Jaidhar C.D, *Ph.D (NIT Trichy)*
Assistant Professor

Room no 505, 5th Floor, IT Building
Email - jaidharcd@nitk.edu.in; Phone: +91-824-247 3553

Research Interests: Cryptography and Network Security, Computer Networks and Information Security, Security Issues in Voice over IP and Cloud Computing.



Nagamma Patil, *Ph.D (IIT Roorkee)*
Assistant Professor

Room no 507, 5th Floor, IT Building
Email - nagammapatil@nitk.ac.in; Phone: +91-824-247 3559

Research Interests: Data Mining, Soft Computing, Data Mining Techniques to Bioinformatics



Sowmya Kamath S, *Ph.D (NITK Surathkal)*
Assistant Professor

Room no 506, 5th Floor, IT Building
Email - sowmyakamath@nitk.ac.in; Phone: +91-824-247 3557

Research Interests: Service-oriented Computing, Natural Language Processing and Understanding, Semantic Web Technologies, Machine Learning, Big Data Analytics

Students' Information

Placement Statistics (2015 - 2016)

<i>Degree</i>	<i>Total Eligible</i>	<i>Total Placed</i>	<i>Highest Pay package</i>	<i>Average Pay package</i>
B.Tech (IT)	87	84	25 Lakhs	9.85 Lakhs
M.Tech (IT)	21	20	21 Lakhs	11.55 Lakhs

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

<i>Student</i>	<i>Institute</i>	<i>Programme</i>
Srivatsa S Bhat	Massachusetts Institute of Technology (MIT), USA	Integrated MS-Ph.D
Anusha Bagalkotkar Bharath Kumar M J Dhivya Piraviperumal Divya Venugopalan Shrimai Prabhumoye	Carnegie Melon University (CMU), USA	M.S in Computer Science
Pranav Bagur	Yale, USA	M.S in Computer Science
Bhavana R Vikas Mohandoss	Columbia University	M.S in Computer Science
Gaurav Trivedi	University of Pittsburgh, USA	Integrated MS-Ph.D
Gaurav Singh Thakur	Purdue, USA	M.S in Computer Science

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

<i>Students pursuing higher education</i>	<i>Number of Students</i>	
	<i>In India</i>	<i>Abroad</i>
Master's Degree in IT and related fields	8	51
Master's Degree in Management field	14	3
Integrated Master's & PhD in IT & related fields	2	4

Recent news on IT Entrepreneurs

<i>Student</i>	<i>Degree and Batch</i>	<i>Start-up Initiative</i>
Rishab Doshi, Rohit John, Siddharth P	B.Tech, Batch of 2016	Campus Connect
Neelesh Soni	B.Tech, Batch of 2012	Co-founder and CEO, Pictor Imaging and Rhapsody Labs
Rohit Manglik	B.Tech, Batch of 2012	Founder, Career Breeder, Bangalore
Shashank N.D and Abhinav Lal	B.Tech, Batch of 2009	Co-founders of Practo.com
Parkal Suhas Kamath	B.Tech, Batch of 2007	COO, UnWrapIndia.com and Eye & Buy Retail
Vikram Nayak	B.Tech, Batch of 2007	CEO, Maximiner Analytics, Bangalore
Srinivasan Narayanan	B.Tech, Batch of 2005	Director & Co-founder, LMNOP Solutions

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

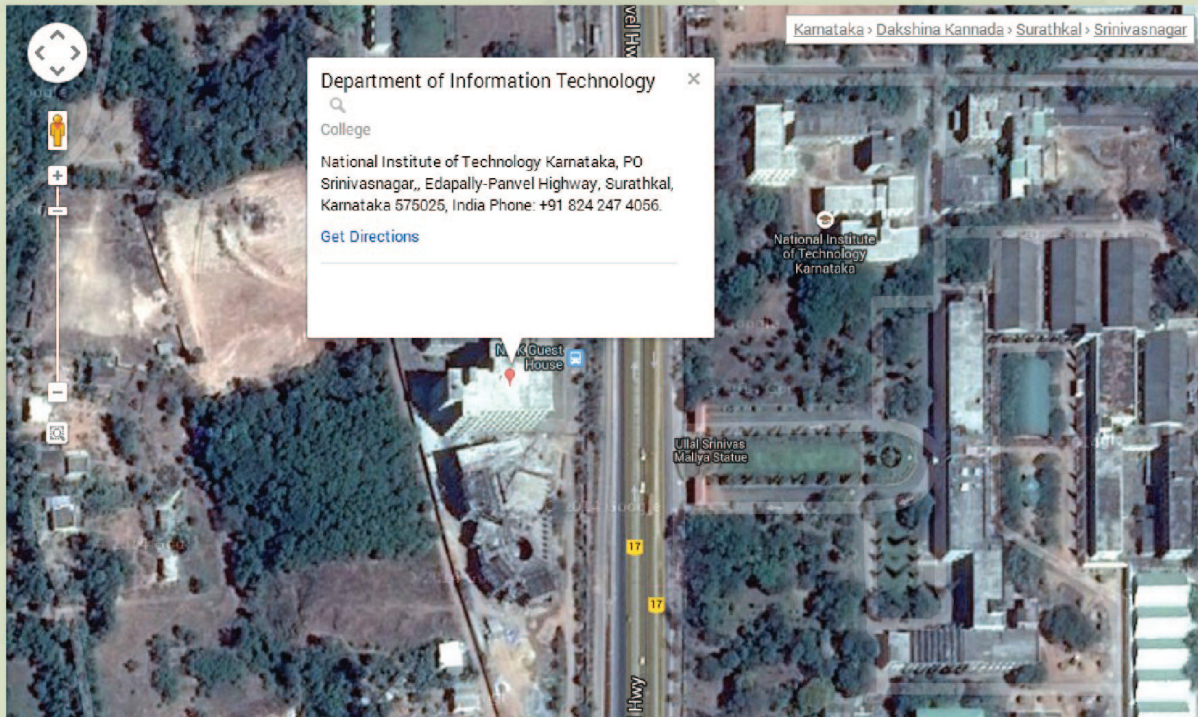
The Department Conference Room is equipped with LCD projector and teleconferencing facilities and is located on the 4th floor. It is used for conducting presentations, teleconferences, webinars etc.

Computing Facilities

The department's laboratory setup provides excellent facilities to cater to the varied needs of B.Tech(IT), M.Tech(IT) and M.Tech(by research) students & Ph.D scholars. The department has several labs for general programming language laboratory courses for U.G 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 –

- 181 High end Desktop systems with i7 processor and 8GB RAM
- 15 High end Desktop systems with i7 processor and 4GB RAM
- 30 Pentium IV Computers with Internet facility and 26 Workstations
- 30 HP Desktop systems with i5 Processor, 15 IBM and 35 HP desktops with Pentium III processor
- 1 Blade Server, 2 IBM Servers and 1 rx2600 Itanium Server running Linux for Laboratory support
- 2 Power Edge 420 server and IBM POWER 7 Virtualization Server
- Desktop Virtualization facility (20 NComputing Devices)
- 3 Xeon Rack Mounted DL160 Server running ubuntu and 1 HP Proliant 16GB RPS Server
- 2 CUDA based server 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 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, West side Campus,
National Institute of Technology Karnataka, Surathkal,
Srinivas Nagar P.O, Mangalore 575025, Karnataka, INDIA

Tel: +91-824-2474056

Fax: +91-824-2474082

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

Website: www.infotech.nitk.ac.in

Web Semantics
Cloud Computing
MATHEMATICS
WEB TECHNOLOGIES
ALGORITHMS
INFORMATION TECHNOLOGY
PROGRAMMING
Databases
Distributed Computing
Parallel Computing
Computer Networks
Data Mining
HCI
NLP
Operating Systems
Computer Networks
Software Engineering
DATA STRUCTURES
Information Security
Digital Systems
Computer Organization
Wireless Sensor Networks
Mobile Computing
Big Data Analytics