



University of Calcutta

Department of Computer Science and Engineering

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History

Year of Establishment : 1980

History of the department : Established in the year 1980, the Department of Computer Science and Engineering, situated at Rajabazar Science College Campus, meant for post graduate studies is one of the largest and well established departments of Calcutta University. Very soon after its establishment, the department began to provide the intellectual foundations of Indian Technologies. Since then, over time, the department has played a vital role in the development technological resources by establishing the ability of Indian researchers to carry out advanced scientific and technological research in various fields. Their contribution is immense. The Department of Computer Science and Engineering has played a very significant role in science and technology education and research in our country. It has vivid reputation in the fields of different Computer applications, Information Sciences and Technology Studies. The prizes and valuable contribution of its students and faculties in all sphere of life have always enhanced the brilliance of the department.

Special award/ recognition from UGC or related statutory body :

The Department enjoyed two phases of the DRS and one of DSA under the UGC-SAP scheme; currently the 2nd phase of DSA is on.

The FIST programme of DST was implemented during 2005-2010.

The Department received support from the COSIST programme of UGC during 1991-1996.

Academic Faculty Members :

Name	Designation	Area of Specialization	Email / Phone Number
BANANI SAHA [Profile] (Compsc/Banani-Saha.pdf)	Associate Professor	Data Mining, Image Processing, Quantum Computing	bsaha_29@yahoo.com 9433130715
SANJIT KUMAR SETUA [Profile] (Compsc/SanjitSetua.pdf)	Associate Professor	Network Security, Genetic Algorithm	sksetua@gmail.com 9433146397

RAJAT KUMAR PAL [Profile] (Compsc/Rajat-Kumar-Pal.pdf)	Professor	VLSI Design, Graph Theory	pal.rajatk@gmail.com 9432265409
SANKHAYAN CHOUDHURY [Profile] (Compsc/Sankhayan.pdf)	Professor	Software Engineering, DBMS, Networking	sankhayan@gmail.com 9433040414
NABENDU CHAKI [Profile] (Compsc/Nabendu-Chaki.pdf)	Professor	Software Engineering, Distributed Systems	nabendu@ieee.org 9433068073
RAJIB KUMAR DAS [Profile] (Compsc/Rajib-Kumar-Das.pdf)	Associate Professor & HOD	Distributed Computing, Sensor Network	rajib.das.k@gmail.com 9903334193
PRITHA BANERJEE [Profile] (Compsc/Prith-Banerjee.pdf)	Assistant Professor	VLSI Physical Design	banerjee.pritha74@gmail.com 9433876759
SUNIRMAL KHATUA [Profile] (Compsc/Sunirmal-Khatua.pdf)	Assistant Professor	Distributed Computing	skhatuacomp@caluniv.ac.in 9874872149

Visiting faculty members :

Name	Institutions attached with	Period of appointment
Saktipada Nanda	Professor, Institute of Engineering & Management, Kolkata	2015-16
Susanta Kumar Pal	Professor and Head, Applied Electronics Section, Scientific Officer, Grade H+, VECC, Dept. of Atomic Energy, Kolkata	2016-17
Sujatra Bhattacharyya	Assistant Professor, Dept. of Economics, Maharaja Sris Chandra College, Kolkata	2015-16
Devaprasanna Sinha	Formerly, (1) Director (and President), CAD/CAM Consultants Pvt. Ltd, (2) DGM (IT), IT&CS Centre, The Peerless General Finance & Investment Co. Ltd., (3) Manager, MCS Division and Computer-in-Charge, Price Waterhouse, Kolkata, Currently, Regional Vice President (Eastern Region), Computer Society of India, Kolkata.	2016-17
Ankan Bhattacharya	Professor. Computer Vision & Pattern Recognition Unit, ISI, Kolkata	2016-17
Anupam Ghosh	Assist. Professor, Netaji Subhas Engineering College, Garia	2016-17
Bikramaditya Mondal	Assistant Professor, B. P. Poddar Institute of Management and Technology.	2015-16
Bidyut Biman Sarkar	Professor, Techno India College	2015-16
Subhro Ghosal	Assistant Professor, Acharya Prafulla Chandra College	2015-16
UJJWAL Kumar BASU	Ex-Professor and Registrar, University of Calcutta	2015-16
Sarbani Palit	Professor, Computer Vision & Pattern Recognition Unit, ISI, Kolkata	2015-16

Courses :

Program	Level of study	Eligibility	Intake capacity
B.Tech. in Computer Science & Engineering		<p>B.Sc. Hons. in Physics with Mathematics as Genl. Subject / B.Sc. Hons. in Computer Science / B.Sc. Hons. in Mathematics (C.U. current year) with Physics / Statistics / Computer Science as one of the Genl. Subjects / B.Sc. Hons. in Statistics (C.U. current year) with Physics / Mathematics / Computer Science as one of the General subjects. C.U. & Non-C.U.</p> <p>Comp. Sc. Hons. candidates have to appear in Entrance Test. All the candidates should have at least 55% marks in Graduation level (Hons.).</p>	40+2
M.Tech. in Computer Science & Engineering	Post-Graduate	<p>B.Tech / B.E. in Computer Science / Computer Science & Engineering / Computer Science & Technology.</p> <ol style="list-style-type: none"> 1. MCA (with B.Sc. Hons. in Physics / Mathematics / Statistics / Computer Science / Electronics Science) from CU only. 2. M.Sc. in Computer & Information Science (with B.Sc. Hons. in Computer Science from University of Calcutta). 3. B.Tech. in I.T. (CU only). 4. Equivalent degree of B.Tech. in Computer Science & Engineering of Calcutta University. <p>Non-C.U. candidates must have at least 60% or its equivalent grade in last qualifying examination and at least 60% or its equivalent grade in 10+2 level. Percentage of sum of best 4(four) subjects at H.S. (10+2) level will be considered as percentage of marks at H. S. (10+2) level. All Non-CU candidate must have GATE qualifying valid Score. All Non-CU Degrees must be approved by the UGC/AICTE and equivalent to the C.U. degree in the respective subjects. Except CU current year B. Tech. in CSE, and IT and the CU MCA candidates, all have to go through Entrance Test followed by Interview. GATE qualified valid score is not mandatory for CU students.</p>	41
M.Sc. in Computer & Information Science	Post-Graduate	At least 55% marks in B.Sc. Hons. in Computer Science or its equiv. All the candidates, both C.U. and Non-C.U. (Both Category A & Category B) have to appear in the Entrance Test.	30+2
Ph.D. (Tech) in Computer Science & Engineering	Doctorate	M.E. / M.Tech. / B.Tech. / B.E. in Computer Science & Engineering, MCA candidates with B. Tech. / B.E. may also apply.	8 scholars per faculty member
Ph.D. (Science) in Computer Science	Doctorate	M.Sc. in Computer & Information Science or equivalent or MCA.	8 scholars per faculty member

Research

Research Scholars:

Name	Name of Supervisor	Date of Registration	Topic
Prokash Barman	Banani Saha		Cryptography
Supriyo Banerjee	Banani Saha		Quantum Computing
Oindrla Sanyal	Devadutta Sinha	6-Aug-12	Biometry
Soumen Roy	Devadutta Sinha	17-Sep-12	Cryptography
Soumen Saha	Devadutta Sinha	17-Sep-12	Networking
Somdatta Chakraborty	Devadutta Sinha	17-Jun-13	Image Processing

Anal Acharya	Devadutta Sinha	17-Jun-13	E-learning
Biswajit Biswas	Kashi Nath Dey	30-Sep-11	Image Fusion
Sujay Saha	Kashi Nath Dey	30-Sep-11	Bioinformatics
Pratik Roy	Kashi Nath Dey	6-Aug-12	Software Reliability
Debabrata Datta	Kashi Nath Dey	17-Jun-13	Materialized View
Sukalyan Som	Kashi Nath Dey		Digital Signal Processing
Dipankar Deb	Nabendu Chaki		Service Science
Soumya Sen	Nabendu Chaki	23-Dec-10	Software Engineering
Sukhendu Kanrar	Nabendu Chaki		Distributed Systems
Novarun Deb	Nabendu Chaki	20-Aug-14	Software Engineering
Manali Chakraborty	Nabendu Chaki	10-Sep-15	Smart Grid
Ayan Dey	Nabendu Chaki		Signal Processing
Supriya Chakraborty	Nabendu Chaki		Software Engineering
Aradhita Mukherjee	Nabendu Chaki		Distributed Systems
Soma Datta	Nabendu Chaki		Image Processing
Maumita Chakraborty	Rajat Kumar Pal	28-Jun-10	Generation of all spanning trees of a cloud
Swagata Saha Sau	Rajat Kumar Pal	28-Jun-10	Wire length minimization in channel routing
Chiranjit Changdar	Rajat Kumar Pal	6-Aug-12	TSP & KP problem
Srirupa Dasgupta	Rajat Kumar Pal	6-Aug-12	Bioinformatics
Sudip Mandal	Rajat Kumar Pal	6-Aug-12	Bioinformatics
Tarak Nath Mandal	Rajat Kumar Pal	17-Jun-13	Cross-talk minimization in channel routing
Abhinandan Khan	Rajat Kumar Pal		Computational Biology and Bioinformatics.
Arpan Chakraborty	Rajat Kumar Pal		Digital micro-fluidic Bio-Chip
Ranjan Mehera	Rajat Kumar Pal		On Guard zone computing & applications
Ritamshirsa Choudhuri	Rajib Kumar Das	6-Aug-12	Sensor Network
Arijit Bhattacharya	Rajib Kumar Das	17-Jun-13	VLSI
Biplab Kanti Sen	Rajib Kumar Das	17-Jun-13	Sensor Cloud
Debjit Sen Sarma	Samar Sen Sarma	17-Jun-13	Graph based algorithms for security integrity & storage of information.
Somaditya Roy	Samir Kumar Bandyopadhyay	28-Jun-10	Video-Steganography

Biswajita Datta	Samir Kumar Bandyopadhyay	28-Jun-10	LSB based Steganography
Sayantani Ghosh	Samir Kumar Bandyopadhyay	30-Sep-11	Face Authentication
Sunita Roy	Samir Kumar Bandyopadhyay	30-Sep-11	Facial Expression Recognition
Souma Pal	Samir Kumar Bandyopadhyay	6-Aug-12	DCT based information hiding
Barnali Gupta Banik	Samir Kumar Bandyopadhyay	17-Jun-13	Text Steganography
Sudipta Roy	Samir Kumar Bandyopadhyay	24-Dec-14	Brain Tumor Detection
Ranjita Chowdhury	Samir Kumar Bandyopadhyay		EEG Analysis
Nabanita Basu	Samir Kumar Bandyopadhyay		Crime Scene Reconstruction using Bloodstain Patterns
Swalpa Kumar Roy	Samir Kumar Bandyopadhyay		Fractal Geometry
Tuhin Utsav Paul	Samir Kumar Bandyopadhyay	13-Aug-14	Brain Tumour Detection from MRI
Anirban Mitra	Sanjit Kumar Setua	6-Aug-12	Image Processing
Nilanjana Bhattacharya	Sanjit Kumar Setua	6-Aug-12	Bengali Handwriting
Swarnali Hazra	Sanjit Kumar Setua	6-Aug-12	Network Security
Sabari Pramanik	Sanjit Kumar Setua	6-Aug-12	Soft Computing & MSA
Shatabdi Saha	Sanjit Kumar Setua	6-Aug-12	Enterprise Security
Somasmit Roy	Sanjit Kumar Setua	6-Aug-12	Image Processing
Masuma Sultana	Sanjit Kumar Setua		Large Graph Analysis
Moumita Chatterjee	Sanjit Kumar Setua		Distributed Computing
Rakesh Kumar Mishra	Sankhayan Choudhury	27-Jun-10	Wireless Sensor Network
Abhijit Sanyal	Sankhayan Choudhury	28-Jun-10	Date modelling
Moitreyee Pal	Sankhayan Choudhury	28-Jun-10	Modelling & Simulation
Anirban Bhar	Sankhayan Choudhury	6-Aug-12	Software Engineering
Adrija Bhattacharya	Sankhayan Choudhury	17-Jun-13	Cloud Computing
Moumita Ghosh	Sankhayan Choudhury		Software Engineering
Pratik Dutta	Sankhayan Choudhury		Software Engineering
Sudip Mondal	Sunirmal Khatua		Bioinformatics
Somasree Bhadra	Sunirmal Khatua		IOT
Sudipta Paul	Pritha Banerjee	24-Dec-14	Design automation for DFM
Debdutta Barman Roy	Rituparna Chaki	28-Jun-10	Ad-Hoc Network
Ayan Kumar Das	Rituparna Chaki	30-Sep-11	Sensor Network
Tapalina Bhattacharjee	Rituparna Chaki	6-Aug-12	Network

Ammilan Ghosh	Rituparna Chaki	17-Jun-13	Distributed Systems
Soumya Brata Saha	Rituparna Chaki	17-Jun-13	Network
Sudhindu Bikash Mandal	Amlan Chakraborty, AKCSIT	28-Jun-10	
Dhiman Karmakar	C A Murty, ISI	28-Jun-10	
Udit Kumar Chakraborty	Samir Roy, NITTTR	28-Jun-10	
Sudeb Das	Malay Kundu, ISI	28-Jun-10	
Bhasker Dey	Malay Kundu, ISI	6-Aug-12	
Jaydeb Mondal	Malay Kundu, ISI	17-Jun-13	
Soumyadip Dhar	Malay Kundu, ISI	24-Dec-14	
Anupam Purkait	Sriyankar Acharya, WBUT		
Kartik Sau	Amitabha Chanda	28-Jun-10	
Suman Das	Ranjan Ghosh, RPE	28-Jun-10	
Aparup Khatua	Kuntal Ghosh, ISI	30-Sep-11	
Avatharam Ganivada	Subhra Sankar Ray, ISI	30-Jun-11	
Bibhash Roy	Sugata Sanyal, TIFR	30-Sep-11	
Suman Banik	Sugata Sanyal, TIFR	30-Sep-11	
Durbadal Chattaraj	Debasis Giri, HIT	30-Jun-11	
Nilanjana Ghosh Roy	Avisekh Adhikary		
Sudip Chatterjee	Subhamoy Mitra, ISI		
Antara Sengupta	Pabitra Pal Choudhury, ISI	6-Aug-12	
Camellia Ray	Pabitra Pal Choudhury, ISI	24-Dec-14	
Jayasree Saha	Monalisa Banerjee, TI		
Nilanjana Bhattacharya	Umapada Pal, ISI	6-Aug-12	
Sujai Das	Gautam Roy, NIRJAFT	6-Aug-12	
Saurav Mallick	Sanghamitra Bandyopadhyay	6-Aug-12	
Chandrani Ray Chowdhury	Sanghamitra Bandyopadhyay	24-Dec-14	
Debraj Ghosh	Rajat Kumar De, ISI	24-Dec-14	
Saptaditya Maiti	Debaprasad Mondal, ISI	24-Dec-14	
Subir Mondal	Debaprasad Mondal, ISI	24-Dec-14	
Shaswati Roy	Pradipta Maji, ISI	24-Dec-14	
Purnendu Banerjee	B. B. Chaudhuri, ISI	24-Dec-14	
Debayan Ganguly	Kumar Shankar Roy, ISI	24-Dec-14	
Romi Banerjee	Sankar Kumar Pal, ISI	24-Dec-14	
Jayanta Kumar Pal	Sankar Kumar Pal	24-Dec-14	
Dibakar Saha	Nabanita Das, ISI	24-Dec-14	

Jayanta Kumar Das	Pabitra Pal Choudhury, ISI	24-Dec-14	
Debdatta Roy	Paramartha Dutta, VU	24-Dec-14	
Mousumi Sardar	Sushmita Mitra, ISI	24-Dec-14	
Babul Prasad Tewari	Sasthicharan Ghosh, ISI		
Arjun Das	Utpal Garai, ISI		
Kamalesh Karmakar	Sunirmal Khatua/ Rajib Kumar Das		Cloud computing

Projects :

Project title	Funding agency	Principal investigator	Duration	Budget
A Framework for Healthcare Services using Mobile and Sensor-Cloud Technologies	ITRA, Media Lab Asia, DIT	N. Chaki, S. Choudhury	2013-2016	114 lacs
Lithography aware physical design for below 20nm process technology	DST-NSC Indo Taiwan Project	Pritha Banerjee	2013-2016	30.85 lacs
Biomedical Image Analysis	DEITY	Samir K. Banerjee	2014-2015 (Extn.)	25.49 lacs
GPU Cluster based Computing, SAP-DRS II	UGC	S. K. Setua	2014-2019	88 lacs

Collaborations :

Title of the program	Principal collaborator of the department	Name and address of the collaborating institution	Principal collaborator of the collaborating institution	Duration of the program
A Framework for Healthcare Services using Mobile and Sensor-Cloud Technologies	N. Chaki, S. Choudhury	Jadavpur University, NIT Durgapur	N. Mukherjee, A. Sarkar, S. Sarkar	2013-2016
Lithography aware physical design for below 20nm process technology	Pritha Banerjee	ISI Kolkata, National Taiwan University, Taipei, Taiwan	Prof. Susmita Sur-Kolay, Prof. Yao-Wen Chang,	2013-2016

International Academic Collaborations

Collaboration on Image Processing and Biometrics with Prof. Khalid Saeed, **AGH University of Science & Technology, Cracow, Poland**

Collaboration on Software Engineering and Abstract Interpretation with Prof. Agostino Cortesi, **Ca Foscari University, Venice, Italy**

Collaboration on Service Sciences with Prof. Aditya Ghosh, **Wollongong University, Australia**

Collaboration on Software Engineering with Prof. Valdis Berzins, **U. S. Naval Post-Graduate School, Monterey, USA**

National Academic Collaborations

Collaboration on Remote Healthcare technology with **Jadavpur University, IISET (former BESU)** and 4 more Universities/Institutes

Collaboration on Cloud Security with Sugata Sanyal of **TIFR, Mumbai, India**

Collaboration on Software Engineering and Distributed Systems with Samiran Chattopadhyay, **Jadavpur University**.

Collaboration on VLSI Physical level design with **Indian Statistical Institute**

Collaborations with Industry

Collaboration with **Tata Consultancy Services (TCS)** for Remote Healthcare project

MoU with **Tata Consultancy Services (TCS)** for funding of Ph.D. scholars

MoU with **Business Brio** on Data Analytics and Big Data research

Collaboration with **NASSCOM** for ISO standard building activities for Software Engineering (ISO JTC1/SC7) and Cloud Computing (ISO JTC1/SC38) in association with BIS, Government of India

Collaboration with **IXIA Technologies** regarding Internship of PG students.

Thrust area in teaching and research of the academic department :

Very Large Scale Integration (VLSI)

Distributed Computing

Algorithms

Information Security

Mobile & Ad-hoc Networks

Major activities :

ACSS 2016 – The 3rd International Doctoral Symposium on Applied Computation and Security Systems (ACSS) held during August 12–14, 2016 in Kolkata, [<http://acss.cucse.org/>] (<http://acss.cucse.org/>).

CISIM 2011 – The 10th International Conference on Computer Information Systems and Industrial Management Applications. (December 14–16, 2011) [<http://www.cisim.cucse.org/>] (<http://www.cisim.cucse.org/>).

ICDCN 2010– 11th International Conference on Distributed Computing & Networking, held on January 03–06, 2010. Organized by the University of Calcutta, Department of Computer Science & Engineering in collaboration with the Techno India Group, Saltlake. [<http://www.cucse.org/ICDCN2010.htm>] (<http://www.cucse.org/ICDCN2010.htm>).

Links :

Departmental Website : <http://cucse.org/> (<http://cucse.org/>).

Additional information :

Relating to internship, online-job-training, faculty exchange and development program, consultancy, extension program, syllabus, previous years' question papers, etc.

Internship – Collaboration with IXIA Technologies regarding Internship of PG students.

Syllabus : [Click here]

Contact

Campus : Technology Campus

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[MoU \(./MOU/mou.html\)](#).

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