

# *Annual Report*

*2018-2019*



*Indian Institute of Information Technology  
Senapati, Manipur*

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## ***Indian Institute of Information Technology Senapati, Manipur***

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The Indian Institute of Information Technology Senapati, Manipur is the fourteenth member of the twenty new IIT family set up under Public Private Partnership (PPP) mode by the Ministry of Human Resource Development, Government of India, across the country as part of the Twelfth Plan. The establishment of IIT Senapati, Manipur under PPP mode at Mayangkhang Ningthoupham Village, Kangkopki Sub-Division of erstwhile Senapati District with its temporary campus at Mantripukhri, Imphal was approved by the State Cabinet.

# Annual Report

## A Quick Look

Academic Departments **03**

Students' Enrollment Matrix for 2018-2019 AY										
Course →	UG (B.Tech.)				Ph.D.					
Gender →	Male		Female		Male			Female		
Category ↓	(CSE)	(ECE)	(CSE)	(ECE)	HBS	CSE	ECE	HBS	CSE	ECE
General	13	9	1	1	0	1	0	0	1	0
SC	5	4	0	0	0	0	1	0	1	1
ST	1	0	2	0	0	0	0	0	0	0
OBC	10	9	0	0	0	0	0	0	0	0

Total students' Matrix as on 31st March 2019										
Course →	UG (B.Tech.)				Ph.D.					
Gender →	Male		Female		Male			Female		
Category ↓	(CSE)	(ECE)	(CSE)	(ECE)	HBS	CSE	ECE	HBS	CSE	ECE
General	36	28	3	2	0	1	0	0	1	0
SC	18	12	1	2	0	0	1	1	1	1
ST	2	3	2	0	0	0	0	0	0	0
OBC	36	35	2	1	0	0	0	0	0	0
Sub-Total	92	78	8	5	0	1	1	1	2	1
Total	183				6					

Grants Received During FY: 2017-2018			
Source	Recurring (Rs.)	Non-Recurring (Rs.)	Total (Rs.)
MHRD, Govt. of India	0.00	0.00	0.00
Government of Manipur	0.00	0.00	0.00
Manipur State IT SEZ Development Company (MIPDCO) (private partner)	0.00	0.00	0.00
Total	0.00	0.00	0.00

# Annual Report

## Objectives

IIIT Senapati, Manipur has been set up as an institute of international standard for offering UG (B.Tech.), PG (M.Tech.) and Ph.D. degree with a unique model of partnership of the Govt. of India in joint partnership with State Government of Manipur and industry partners.

- To provide best-in-class human resources to the growing electronics, manufacturing & design and IT software and services industry in India as well as technology development in the area of national importance such as e-Governance in the medium terms.
- The IIIT Senapati, Manipur also aims to foster research and development in advanced engineering and applied sciences in M.Tech. and Ph.D. levels.
- To have a strong industry interface to harness the multi-dimensional facets of IT, electronics and design in various domains.
- To increase the student capacity to meet the growing demands for industry leaders from domestic and international markets.
- To achieve international character by having provision for intake of a certain percentage of foreign students right from graduation level, especially from the South East Asian and SAARC countries.
- To provide mechanism for exchange of faculty with similar institutions of international repute.
- To improve the quality of life of people in general and socio economic environment of North East India region in particular as outreach activity.

## Mission Statement

The IIIT Senapati, Manipur undertakes the mission to provide technical education by offering state-of-the-art undergraduate, postgraduate and doctoral programmes with international standards of excellence and with emphasis on research to undertake collaborative projects which offer opportunities for long-term interaction with academia and Information Technology (IT) industry as well as technology development in the area of national importance.

## Vision

To contribute to India and the World through excellence in Information Technology in general; to create leaders and entrepreneurs through transformative and Innovative Education in the context of socio-economic relevance to the North Eastern Region of India in particular; to serve as a valuable resource for industry and society; and remain a source of pride for all Indians.

Manipur, being projected as a Gateway to South East Asia under the Look East Policy of the Government of India, IIIT Senapati, Manipur will be looking for opportunities to spread IT education and to contribute to Human Resource development in its neighboring countries.

IIIT Senapati, Manipur has a vision of establishing itself as an Institution of excellence in Cyber Security, Cyber Crime and Forensic so that human resource from IIIT Senapati, Manipur will be prepared to face this growing global threat. It also envisages itself for achieving excellence in application of robotics facilitating human life to overcome congenital as well as acquired disabilities.

# Message from the Interim Director

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Welcome to Indian Institute of Information Technology Manipur. I am Amarendra Kumar Das, Interim Director of the institute on behalf of IIT Guwahati, which is the Mentoring Institute of IIIT Senapati, Manipur. I am a Professor in the Department of Design, IIT Guwahati and served the institute for last 20 years and another 10 years in another technical institution, and my specialization is in the world of Design. I am one of the founder faculty members of the Department of Design and headed the department. I have multifarious research interest and have strong presence and contribution

to practice based research that directly benefit the society.

As an Interim Director it is my mandate to set up the institute and start its operation and plan its future course so that the institute establishes itself to meet its aims and objectives. I had taken this responsibility in Mid 2014 and have achieved the initial target and four batches of students were admitted.

I also take this opportunity to congratulate all students for making a very conscious and informed choice to opt for IIIT Senapati, Manipur. I must also congratulate and thank your parent for having reposed their faith in IIIT Senapati, Manipur to build a successful career for you. I have my own conviction and thus can assure all aspiring students (and their parents) that you have joined an institution which will establish itself as a leading institution in its chosen area not only in India but in the Global arena. We have excellent students to faculty ratio that enable us to give personalized attention to each student.

At present, IIIT Senapati, Manipur is in a transit campus in a prime location of Imphal. It has everything that a IIIT should ideally have of its own to make academic and social life of students very productive and memorable. Students have an identity and have an address that is ours. IIIT Senapati, Manipur permanent campus will come up at Mayangkhang in erstwhile Senapati district for which 150 acres of land has been acquired. Construction will start very shortly.

For an institution, it is not the physical resources that matters but it is the human resource which is most important. IIIT Senapati, Manipur has best human resources in terms of faculty and staff that is actually its own human resource rather than shared with its mentor institutions which is the case in most IIITs in PPP. Members of IIIT Senapati, Manipur faculty and staff are not only best in their academic area, but are most helpful and supportive of students' activities and provide guidance to student to be a person with overall development. Thus students will get best input in their academic and personal endeavor.

When it comes to its mission, the IIIT Senapati, Manipur undertakes to provide technical education by offering state-of-the-art undergraduate, postgraduate and doctoral programmes with international standards of excellence and with emphasis on research to undertake collaborative projects which offer opportunities for long-term interaction with academia and Information Technology (IT) industry as well as technology development in the area of national importance. PhD program has been started in December 2017.

IIIT Senapati, Manipur has a vision of establishing itself as an Institution of excellence in Cyber Security, Cyber Crime and Forensic so that human resource from IIIT Senapati, Manipur will be prepared to face this growing global threat. It also envisages itself for achieving excellence in application of robotics facilitating human life to overcome congenital as well as acquired disabilities.

To achieve some of the above objectives it has already signed a MoU with a premier Russian Institute, Ugra Research Institute of Information Technology, Khanti Mansiysk; it is the institute implementing Vikaspaedia in Manipuri language; conducting courses in teaching Burmese language, cyber security etc. and implementing TEQIP phase 3.

So dear students, you have a future and you have a chance to mould your own future. Being with us meant you are part of Make in India.

# The Governing Body: 2018-2019

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The names, addresses and occupations and designations of the Members of the Governing Body of IIIT Senapati, Manipur are:

- |        |  |                       |
|--------|--|-----------------------|
| (i)    | Shri R. Subrahmanyam<br><i>Secretary, Department of Higher Education, Ministry of Human Resource Development, Government of India.</i>       | - Chairperson         |
| (ii)   | Dr. J. Suresh Babu<br><i>Chief Secretary, Government of Manipur.</i>   | - Member              |
| (iii)  | Shri Sukhbir Singh Sandhu<br><i>Additional Secretary (Technical Education), Ministry of Human Resource Development, Government of India.</i> | - Member              |
| (iv)   | Shri Prashant Agarwal<br><i>Director (IITs' / IIIT's), Ministry of Human Resource Development, Government of India.</i>                      | - Member              |
| (v)    | Ms. Darshana M Darbhal<br><i>Financial Advisor, Ministry of Human Resource Development, Government of India.</i>                             | - Member              |
| (vi)   | Prof. Goutam Sutradhar<br><i>Director, National Institute of Technology Manipur, India.</i>  | - Member              |
| (vii)  | Shri Sumant Singh<br><i>Principal Secretary/ Commissioner (IT), Department of Information Technology, Government of Manipur.</i>             | - Member              |
| (viii) | Shri Shashi Prakash Goyal<br><i>Joint Secretary (TEL), Ministry of Human Resource Development, Government of <b>Manipur</b>.</i>             | - Member              |
| (ix)   | <i>Vice Chancellor, Manipur University, India.</i>   | - Member              |
| (x)    | Shri Nambam Deben<br><i>Director, MIPDCO, India.</i>   | - Member              |
| (xi)   | Prof. Amarendra Kumar Das<br><i>Interim Director, IIIT Senapati, Manipur</i>   | - Member<br>Secretary |
| (xii)  | Shri Uttam Chandra Das<br><i>Interim Registrar, IIIT Senapati, Manipur</i>   | - Secretary           |

## Building and Works Committee

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The 3<sup>rd</sup> Meeting of the Governing Body of the Indian Institute of Information Technology Senapati, Manipur had approved the Building and Works Committee (B&WC) for the Institute. The structure of B&WC for Indian Institute of Information Technology Senapati, Manipur is as under:

Director, IIIT Senapati, Manipur	- Chairperson
Commissioner cum Secretary, DIT, Government of Manipur	- Member
Commissioner cum Secretary, Finance, Government of Manipur	- Member
Chief Engineer, PWD, Buildings, Government of Manipur or his nominee	- Member
Dean/ Senior Faculty member, IIIT Senapati, Manipur (to be nominated by Director)	- Member
Executive Engineer, CPWD, Manipur	- Member
Deputy Commissioner, Senapati District, Manipur	- Special Invitee
Registrar, IIIT Senapati, Manipur	- Member Secretary

## Finance Committee

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The 3<sup>rd</sup> Meeting of the Governing Body of the Indian Institute of Information Technology Senapati, Manipur had constituted the Finance Committee for the Institute. The structure of Finance Committee for Indian Institute of Information Technology Manipur was formed as:

(i) The Chairman, BoG/ BG – ex-officio	- Chairperson
(ii) Two persons nominated by the Central Government	- Member
(iii) Two persons nominated by the State Government	- Member
(iv) Director, IIIT Senapati, Manipur	- Member
(v) Registrar, IIIT Senapati, Manipur	- Secretary

## Administrative staff members



**Shri Uttam Ch. Das**

Registrar IIT Guwahati and Interim Registrar, IIIT Senapati, Manipur



**Sunil Mir**

Junior Superintendent

*Date of Joining* : 15<sup>th</sup> May, 2015

*Date of Release* 16<sup>th</sup> June, 2018

*Section* : Finance &  
Accounts/ Stores  
& Purchase



**Sita Rani Debbarma**

Junior Accountant

*Date of Joining* : 20<sup>th</sup> September,  
2017

*Section* : Finance &  
Accounts



**Chingangbam Collin Singh**

Junior Superintendent

*Date of Joining* : 1<sup>st</sup> August, 2015

*Section* : Administration



**Ngangom Sandhyarani**

Junior Assistant

*Date of Joining* : 19<sup>th</sup> March, 2018

*Section* : Library,  
Establishment  
& Maintenance



**Mutum Roger Singh**

Senior Assistant

*Date of Joining as Office Asst.* : 1<sup>st</sup> May, 2015

*Date of Joining as Sr. Asst.* : 6<sup>th</sup> June, 2018

*Section*: Finance &  
Accounts/ Stores  
& Purchase



**S. Chingkhomba Singh**

Junior Attendant

*Date of Joining* : 1<sup>st</sup> September,  
2016



**Salam Monorama Devi**

Senior Assistant

*Date of Joining as Office Asst.* : 1<sup>st</sup> July, 2015

*Date of Joining as Sr. Asst.* : 6<sup>th</sup> June, 2018

*Section*: Academic  
Affairs



**Geeta Prasad Dhungel**

Junior Attendant

*Date of Joining* : 12<sup>th</sup> July, 2017



# Department of Computer Science and Engineering

## *Vision of the Department*

- *To excel as a center of excellence in the field of Cyber Security and Forensics.*
- *To carry out interdisciplinary research work in the fields of genetics, linguistics, medicine and other areas of science and engineering.*



Established in 2015, the department of Computer Science and Engineering (CSE) is currently offering Ph.D. and Bachelor of Technology in Computer Science and Engineering. This department comprises of five young and dynamic faculty members, two technical staff members, and 68 students in the reported year. The main goal of the faculty members of this department is to impart theoretical and practical know-how to computer science students to fit into industry, research and help pursuing higher studies. There is also a strong emphasis on core and interdisciplinary research.

The department is closely working with Department of Information Technology, Govt. of Manipur. Collaborative research in the interdisciplinary area is also envisaged with institutes of repute from India and abroad. The faculty members of the department have close collaboration with University of Colorado, Springs, USA, University of Houston, USA, NUS Singapore, IIT KGP, and IIT Guwahati, India etc.

Currently, the department is equipped with state-of-the-art computer network with internet and Wi-Fi facility in the campus. The laboratory has a total of 76 systems at present which caters the laboratory needs of students from other department as well. Conducting various skills set development programs for faculties as well as other training programs are regular activities despite being a new department. The future direction includes the proposal to start M.Tech. in Computer Science and Engineering.

## Academic Programmes

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The Department offers Ph.D. and B.Tech. degrees in Computer Science and Engineering.

# Department of Computer Science and Engineering

## Faculty members

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**Kabita Thaoroijam, Ph.D.**

Assistant Professor

*Date of Joining:* 13<sup>th</sup> July, 2015

*Areas of Interest:* Data Mining and Natural Language Processing



**Thoudam Doren Singh, Ph.D.**

Assistant Professor

*Date of Joining:* 2<sup>nd</sup> May, 2016

*Date of Release:* 29<sup>th</sup> June, 2018

*Areas of Interest:* Machine Translation, Machine Learning, Natural Language Processing



**Navanath Saharia, Ph.D.**

Assistant Professor

*Date of Joining:* 30<sup>th</sup> May, 2016

*Areas of Interest:* Social networks content analysis, Natural language processing



**Nongmeikapam Kishorjit Singh, Ph.D.**

Assistant Professor

*Date of Joining:* 10<sup>th</sup> August, 2016

*Areas of Interest:* Natural Language Processing, Image Processing, Soft Computing and Programming



**Prerna Mohit, Ph.D.**

Assistant Professor

*Date of Joining:* 1<sup>st</sup> August, 2018

*Areas of Interest:* Information security, Cryptography, User authentication

## Technical staff members

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**Himangshu Sarma**

Technical Officer- I

*Date of Joining:* 14<sup>th</sup> July, 2017



**Rajkumar N. Singh**

Junior Technician

*Date of Joining:* 23<sup>rd</sup> January, 2017

## *Vision of the Department*

*To create academic excellence by imparting quality teaching, carrying out research and technology development in frontier areas of Electronics and Communication Engineering, and thus to provide best-in-class human resources to the growing electronics, manufacturing & design industries in India as well as technology development in the area of national importance in particular. It also envisages itself for achieving excellence in application of robotics facilitating human life to overcome congenital as well as acquired disabilities.*

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Established in July, 2015, the department of Electronics and Communication Engineering (ECE) is currently offering Ph.D. and Bachelor of Technology in Electronics and Communication Engineering. This new department comprises five young and dynamic faculty members, two technical staff members, and 83 students at present.

The faculty members of the department have close collaboration with IIT Guwahati, RRCAT Indore, Tezpur (Central) University, India etc. Currently, the department is well equipped with state-of-the-art curriculum related laboratories.

The present areas of research and academic activities in the department include:

- Communication Systems
- Microelectronics and VLSI
- RF and Microwave Engineering
- Robotics and Embedded Systems
- Signal Processing

Collaboration in between the research groups of the department and with other department is also a practice.

The future direction includes the proposal to start M.Tech. in Electronics and Communication Engineering.

## Academic Programmes

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The Department offers Ph.D. and B.Tech. degrees in Electronics & Communication Engineering.

## Faculty members

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**Subasit Borah, Ph.D.**

Assistant Professor

*Date of Joining:* 1<sup>st</sup> July, 2015

*Areas of Interest:* Printed antennas/passive devices, Computational electromagnetics, EBG/PBG engineered planar antennas, High power Microwaves



**Murli Manohar, Ph.D.**

Assistant Professor

*Date of Joining:* 1<sup>st</sup> July, 2015

*Areas of Interest:* Antenna and RF Engineering (SWB & UWB Antenna)



**Nagesh Ch, Ph.D.**

Assistant Professor

*Date of Joining:* 20<sup>th</sup> July, 2015

*Areas of Interest:* VLSI, MEMS & SAW devices for biomedical applications



**Gaurav Saxena, Ph.D.**

Assistant Professor

*Date of Joining:* 9<sup>th</sup> January, 2017

*Areas of Interest:* MEMS, Chemical and Bio-sensors, Semiconductor Devices



**Ramesh Chandra Mishra, Ph.D.**

Assistant Professor

*Date of Joining:* 25<sup>th</sup> August, 2017

*Areas of Interest:* Wireless Communications, MIMO Systems, Signal Processing for Communications

Technical staff members

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**Kanchana Katta**

Technical Officer Grade- I

*Date of Joining:* 10<sup>th</sup> August, 2015



**Ranita Khumukcham**

Technician

*Date of Joining:* 1<sup>st</sup> August, 2015

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*State of the art Electronics  
Laboratories to train the  
UG students.*

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## Department of Humanities and Basic Sciences

Established in July, 2015, the department of Humanities and Basic Sciences (HBS) is currently providing best in class core as well as optional courses for the degree of Bachelor of Technology in Electronics and Communication Engineering (ECE) and Computer Science and Engineering (CSE).

The department of HBS offers the basic as well as advanced course on Mathematics and Physics for B.Tech. programmes both in ECE and CSE disciplines. The department presently carrying out research and development works in Applied Mathematics viz., Fluid Dynamics; and experimental condensed matter Physics viz. Spintronic materials.

The department of HBS also offers Humanities and Social Sciences courses for the B.Tech. Programmes. Humanities and Social Sciences is an integral part of the institute's course structure. It provides general knowledge, intellectual skills beyond occupational or professional skills and the relationships of individual within the society. The general intention of the department is to nurture the thinking process of the students. The department also strives to provide enquiry based education to students. The department has presently one Ph.D. student enrolled.



**Leihaorambam Sarbajit Singh, Ph.D.**

Assistant Professor, Humanities and Social Sciences

*Date of Joining:* 1<sup>st</sup> July, 2015

*Areas of Interest:* Language Documentation, Lexicography, Language Teaching, Human Language Technology



**Bhargab Deka, Ph.D.**

Assistant Professor, Physics

*Date of Joining:* 1<sup>st</sup> May, 2016

*Areas of Interest:* Heusler based half-metallic alloys, Spintronics



**Kishor Kumar Das, Ph.D.**

Assistant Professor, Mathematics

*Date of Joining:* 1<sup>st</sup> July, 2015

*Areas of Interest:* Fluid Dynamics, Magneto hydrodynamics, Heat and Mass Transfer



**Sanjib Choudhury, Ph.D.**

Assistant Professor, Mathematics

*Date of Joining:* 18<sup>th</sup> August, 2017

*Areas of Interest:* Sampling Techniques, Mathematical and Statistical Modelling

# Central Academic Facilities

## Library

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The Central Library of IIIT Senapati, Manipur makes continuous effort to fulfil the information requirement of its students, faculty and staff through systematic collection of books, journals in print and digital media and development of user friendly services and facilities.

### Collection Development and Management

The Central Library has procured collection of print and digital resources which includes books in particular in the field of Science and Technology, Engineering, Humanities & Social Sciences during the reported period.

Collection	Added during 2015-2016	Added during 2016-2017	Added during 2017-2018	Added during 2018-2019
Books	1335	1643	2837	19
Cost (in Rupees)	12,96,075.00	20,69,942.00	23,94,737.00	31,518.00

Collections procured during the reported period have been duly processed and shelved.

### Service and Facilities:

Central Library prospers to provide user friendly facilities and services to its esteem users.

- (i) For the benefit of its user community, the library remains open from 08:00 hrs to 18:00 hrs and 360 days around the year.
- (ii) To address the physically challenged students, central library has provided an easy to access room with low height book shelves and reading facility.
- (iii) Keeping in view the increasing importance and number of textbooks, central library has devoted an entire hall for shelving textbooks with optimum reading facility
- (iv) Another section includes a reserve book section.

Central library has also initiated the process of developing an Institutional repository for archiving the scholarly works of the students and faculty.

## Computer Centre

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The Computer Centre of IIIT Senapati, Manipur has been initiated in the reported year in association with computer laboratory of the Computer Science and Engineering department. Being equipped with 76 numbers of desktop computers the Computer Centre makes continuous effort to satisfy the information need of its students, faculty and staff through systematic collection development, user friendly services and facilities. The Centre provides the e-mail service and in-campus WiFi internet connectivity to its students, faculty and staff members.

### Research and Development

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Faculty members of IIT Senapati, Manipur are engaged in various collaborative research activities. The list of few highlighted research publications and research project in the reported year is as follows:

- [1] Kishorjit, N., Wahengbam Kanan Kumar, Oinam Nickson Meetei and Themrichon Tuithung, "Handwritten Manipuri Meetei-Mayek Classification using Convolutional Neural Network", Transactions on Asian and Low-Resource Language Information Processing (TALLIP) (SCI E), Association for Computing Machinery (ACM) Digital Library publication, Volume 18 Issue 4, May 2019.
- [2] Kishorjit, N., Wahengbam Kanan Kumar, Oinam Nickson Meetei and Themrichon Tuithung, "Increasing the Effectiveness of Handwritten Manipuri Meetei-Mayek Character Recognition Using Multiple HOG feature descriptors", Sadhana (SCI E), Indian Academy of Sciences, Springer Publication, Vol no. Sādhanā (2019) 44: 104, DOI: 10.1007/s12046-019-1086-0.
- [3] Kishorjit, N., Kanan Kumar W., Ranita Khumukcham and Dinamani Singh A., "An Unsupervised Cluster-wise Color Segmentation of Medical and Camera images using Genetically Improved Fuzzy-Markovian Decision Relational model", Journal of Intelligent and Fuzzy Systems, ISSN 1064-1246 (SCI), DOI: 10.3233/JIFS-17968, IOS Press, vol. no. , pp. 1-14, 2018.
- [4] Gaurav Kumar Raghav, Kishorjit, N., Anurag Dixit, Sachin Bose, and Dhananjay Singh, "Evaluating Classifiers for Emotion Signal on DEAP Dataset", In the Proc. of International Conference on Machine Learning and Data Science (MLDS) 2018, Mahindra E-cole Centrale, Hyderabad - Telangana, India (IEEE), pp.36-42, Dec 2018.
- [5] G. Saxena, "Modeling of Square Microhotplate and its Validation with Experimental Results", 2018 IEEE International Symposium on Smart Electronic Systems (iSES 2018).
- [6] G Saxena, "Performance Evaluation of Square Microhotplate with Alternative Membrane Materials", 2018 IEEE International Symposium on Smart Electronic Systems (iSES 2018).
- [7] Sanjib Choudhury, B K Singh, "A General Class of Estimators for Finite Population Mean Using Auxiliary Variable in Double Sampling", International Journal of Agricultural and Statistical Sciences, Vol. 14, Supplement 1, pp. 351-360, 2018.
- [8] Subasit Borah and N. S. Bhattacharyya, "Broad Band Resonator with Mirror Symmetric Radial Stubs on Partially Magnetized Magneto-dielectric Substrate," National Symposium on Vacuum Electronics Devices and Applications (VEDA-2018) is scheduled to be held during November 22th-24th, 2018, Indian Institute of Technology Guwahati (IITG), India.
- [9] L. Sarbajit Singh, "Preparation of Script Books for Manipuri in Bengali Script & Meetei Script", Workshop on Preparation of RLC Study Materials- Script Books of Assamese, Boro, Manipuri and Nepali, Organized by NERLC, Guwahati, CIIL Mysore (Ministry of HRD, Govt. of India): 14-18 May 2018.
- [10] L. Sarbajit Singh, "Cognitive Approaches in Learning Manipuri Folktales" Annual Conference of Cognitive Science ACCS 2018, Organized by Department of HSS, IIT Guwahati, India: 10-12 October 2018.



### Research and Development

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- [11] Himangshu Sarma, Navanath Saharia, “A speech-based driver assisting module for intelligent transport system”, International Conference on Contemporary Computing and Informatics, Delhi, India, IEEE, 2018.
- [12] Rahul Ranjan, Himangshu Sarma, Navanath Saharia, “Finding out the needy one from Tweets: An analysis using kerelafloods”, International Conference on Contemporary Computing and Informatics, Delhi, India, IEEE, 2018.
- [13] Smriti Kumari, Navanath Saharia, “Empirical study on two-class image classification”, International Conference on Advances in Computing, Communications and Informatics, Bangalore, India, IEEE, 2018.



### Ongoing R&D Projects

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- [1] Title: Awareness creation and research on e-Governance and applications  
Duration: November 2017 –  
Amount: INR 12 hundred thousand.  
PI: Dr. Navanath Saharia; Co-PI: Prof. Amarendra Kumar Das  
Funding Agency: Manipur State Information Technology Society
- [2] Title: National initiative for creating distributed network of attack data capturing sensors for generating India specific Cyber threat intelligence.  
Duration: 2018-  
PI: Dr. Navanath Saharia  
Co-PI: Prof. Amarendra Kumar Das  
Collaborator: CDAC-Mohali
- [3] Title: A Prototype of Auto-navigating E-Cart using Multispectral Imaging.  
Duration: 3 years from April 2019 –  
Amount: INR 40 lakhs.  
PI: Dr. N. Kishorjit Singh; Co-PI: Dr. Kabita Thaoroijam  
Funding Agency/ Collaborator: Ministry of Electronic and Information Technology (MEITY), Govt. of India

## Progress during 2018-2019

### Details of MoU signed by IIIT Senapati, Manipur

Sl No	Name of the Organization	Date of Sign	Purpose of MOU
1.	GATE FORUM – A division of Thinkcell Learning Solutions Pvt. Ltd.	12/11/2018	To provide GATE 2019 Examination training/coaching
2.	Reliance Jio Infocomm Limited	14/12/2018	To provide campus WiFi facility
3.	T.I.M.E. Pvt. Ltd.	01/03/2019	To provide Employability Skill training

### Details of Training /Workshop /Conference held

Sl No	Workshop/ Programme	Period	Convener
1.	Workshop on Art of Living (YES +)	25-30 March 2019	Dr. Kishor Kumar Das
2.	Workshop on IoT and Smart City	07-08 March 2019	Dr. Navanath Saharia
3.	Workshop on IoT and Drones	16-17 Feb. 2019	Dr. Navanath Saharia
4.	Workshop on Machine Learning and its Applications	21-25 Jan. 2019	Dr. N. Kishorjit Singh
5.	Workshop on Innovations and Start-Ups	07 Oct. 2018	Dr. Bhargab Deka
6.	Workshop on Bigdata & Hadoop	05 - 06 Oct. 2018	Dr. Navanath Saharia
7.	Workshop on Employability Skills	04 Oct. 2018	Dr. Navanath Saharia
8.	Workshop on Python Programming	07 - 09 Sept. 2018	Dr. Navanath Saharia
9.	Workshop on Linux Device Driver	27 - 28 July 2018	Dr. Navanath Saharia
10.	Awareness Programme on Cyber Threat & Prevention	07 - 08 May 2018	Dr. Navanath Saharia
11.	Workshop on OBE Outcomes and AICTE Mandates	07 - 08 April 2018	Dr. Subasit Borah

## Start-up Cell

Establishment of Start-up Cell: To identify the innovation and entrepreneurship potential of students and transform them into start-up entrepreneurs, Start-up cell IIIT Senapati, Manipur was established on 13.12.2017. Space Allocation: A space of around 1000 Sq. feet has been allocated for the start-up cell.



### Start-up Cell Members

Chairman	Dr. Kabita Thaoroijam
Start-up Cell Coordinator	Dr. Bhargab Deka
Faculty Representatives	Dr. Subasit Borah (ECE)  Dr. Thoudam Doren Singh (CSE)
Student Coordinators	Mr. Saurabh Kumar  Mr. Omswroop Thakur

### Start-Up Club

Dr Bhargab Deka	Faculty Supervisor
Anupriya Sinha	Student Coordinator
Mousam Kumar Baruah	Student Coordinator
Aman Ranjan Verma	Student Coordinator
Mohit Asudani	Member
Subhankar Ranjan Paul	Member
Avaneesh Ranadive	Member
Devashish K. Choudhary	Member
Kshitiz Kumar	Member
Kurra Sai Prasad	Member
Sachin Bose	Member
Sachin Kr Sinha	Member
Abhishek Thakur	Member
Praveen Pathak	Member

### Start-up Cell

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#### **Idea Club**

Dr Subasit Borah	Faculty Supervisor
Divyanshu Thakur	Student Coordinator
Saurabh Kumar	Student Coordinator
Smriti Kumari	Student Coordinator
Utkarsh Anand	Member
Kshitiz Kumar	Member
Kurra Sai Prasad	Member
Megha Ghosh	Member
Monu Kumar	Member
Sachin Bose	Member
Sweta Kumari	Member

#### **Innovation Club**

Dr N. Kishorjit Singh	Faculty Supervisor
Sumit Kumar	Student Coordinator
Kari Satwik Singh	Student Coordinator
Rahul Ranjan	Student Coordinator
Mohit Asudani	Member
Harsh Vardhan	Member
Subhankar Ranjan Paul	Member
Aniket Anand	Member
Avaneesh Ranadive	Member
Devashish K. Choudhary	Member
Sachin Kr Sinha	Member
Abhishek Thakur	Member

### Start-up Cell Activities

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1. Organisation of a Coding competition was on 18<sup>th</sup> August, 2018.
2. Workshop is organized titled “Workshop on Innovations and Start-up” on 7<sup>th</sup> October 2018.  
Resource Persons:
  - (i) Prof. Sashindra K. Kakoty, Indian Institute of Technology Guwahati.
  - (ii) Dr. Ng. Joykumar Singh, Central Agricultural University, Imphal, Manipur.

### Start-up Cell Activities

4. Start-up Idea Competition among all the students is organised. The following teams are the winners of “Start-up Idea competition” held on 7<sup>th</sup> October 2018 at IIIT Senapati, Manipur.

Title of the Idea	Participants
<b>HOSDOC</b>	Akshay Shivam, Jayant Singh, Divyanshu Thakur
<b>EASYLAB</b>	Sumit Kumar, Mudda Sai Aditya, Abhisek Thakur

5. Student participation at Start-up India Manipur Yatra held on 13<sup>th</sup> January, 2019:

Name	Position
Gaurav Kumar Raghav, Anurag Dixit, Abhijeet Vatsha, Sachin Bose	4 <sup>th</sup>
Mudda Sai Aditya, Sumit Kumar, Abhishek Thakur	6 <sup>th</sup>
Harsh Vardhan	7 <sup>th</sup>
Akshay Shivam, Jayant Singh, Divyanshu	11 <sup>th</sup>



### Students' achievements in various Inter-institutional events

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The students of IIIT Senapati, Manipur participated in various inter-institutional competitions and came up with successful performances. The highlighted winning events are as follows:

*Event:* 3<sup>rd</sup> Inter IIIT Sports meet 2019 at IIIT Allahabad.

*Overall result:* IIIT Senapati, Manipur secured the 1<sup>st</sup> position winning 4 Gold, 3 Silver and 1 Bronze medal. Rajesh Kumar won the award for best athlete.

*Detail medal tally:*

#### Gold Medal Winners:

1. Rajesh kumar (3 Km Track event)
2. Rajesh kumar (800 m Track event)
3. Rajesh Kumar, Abhishek Thakur, Nammi Rajesh, Sachin Kuri (4\*400 m Track event)
4. Angelina Khai Thian Muang Lamhno (High Jump)

#### Silver Medal Winners:

1. Rajesh kumar (1500 m Track event)
2. Angelina Khai Thian Muang Lamhno (110 m Hurdle Race)
3. Angelina Khai Thian Muang Lamhno (Long Jump)

#### Bronze Medal Winners:

1. Akshay Shivam, Sachin Kuri, B Naveen Kumar, Shashwat Shrivastav (4\*100m Track event)