

IEEE Kharagpur Section
Annual General Meeting Report for the Year 2020
(01 Jan. 2020-31 Dec. 2020)

IEEE Kharagpur Section
Annual Report for the Year 2020
Presented at the Annual General Meeting on 11-03-2021

PART A - SECTION SUMMARY

A1. Executive Committee

- Section Executive Committee Member List :
 - Dr. Debarati Sen (Chair, IC representative)
 - Dr. Sudip Misra (Vice Chair)
 - Dr. Debdoot Sheet (Secretary)
 - Dr. Mrinal Kanti Mandal (Assistant Secretary, Industry Relations Chair)
 - Dr. Sanjay Kumar Chaturvedi (Treasurer)
 - Dr. Dipankar Debnath (SAC Chair)
 - Dr. Kapil Debnath (SAC Chair)
 - Dr. Manjunatha Mahadevappa (SIGHT Chair, Humanitarian Technologies)
 - Dr. Ashish Hota (Technical Activities)
 - Dr. Amit Datta (Industry Relations Chair)
 - Dr. N. K Kishore (Historian)
 - Dr. Amitalok Budkuley (Young Professionals Affinity Group Chair)
 - Dr. Manjira Sinha (WiE Affinity Group Chair)
 - Dr. Sudipta Mukhopadhyay (Signal Processing Society Chair)
 - Dr. Sudip Nag (Engineering in Medicine and Biology Society Chair)
 - Dr. Alok Kanti Deb (Control Systems Society Chair)
 - Ms. Devarpita Sinha (IIT Kharagpur Student Branch Chair)
 - Dr. Shailendra Kumar Varshney (Immediate Past Chair, Advisor to Executive Committee)
 - Dr. Chittaranjan Mandal (Membership Development, Advisor to Executive Committee)
 - Dr. Shailendra Kumar Varshney (Advisor to Executive Committee)

A2. Constituent Bodies

- Section constituent bodies:
 - Kharagpur Section (R00155)
 - Control Systems Society Chapter (CH10150)
 - Engineering in Medicine and Biology Society Chapter (CH10723)
 - Signal Processing Society Chapter (CH10742)
 - Women in Engineering Affinity Group (WE00155)
 - Young Professional Affinity Group (YP00155)
 - IIT Kharagpur Student Branch (STB20461)
 - IEEE SPS Student Branch Chapter (SBC20461A)
 - Antenna and Propagation and Microwave Theory and Techniques (AP-MTTS) Student Branch Chapter (SBC20461B)
 - IEEE EMB Student Chapter (SBC20461C)
 - IEEE Computer Society Student Branch Chapter (SBC20461D)

A3.Membership statistics:

Fellow: **01**
 Senior Member: **46**
 Life Senior Member: **02**
 Members:**123**
 Associate Member: **01**
 Graduate Student Member: **139**
 Student Member: **20**
 Affiliate: **01**
 Total: **333**

A4. Financial Report:Statement of Section Accounts for January - December 2020

Fixed Deposit value as on 01/01/2020: INR 229,034.00

FD1 = INR 77,381.00

FD2 = INR 38,268.00

FD3 = INR 113,385.00

FD4 = 0.00

Fixed Deposit value as on 31/12/2020: INR 741,669.00

FD1 = INR 80,861.00

FD2 = INR 39,990.00

FD3 = INR 120,818.00

FD4 = INR 500,000.00

Fixed Deposit Interest Income during 2020: INR 12,635.00

Cash in hand on 01/01/2020: INR 158.00

Cash in hand on 31/12/2020: INR 158.00

Reduction in cash in hand: INR 0.00

Statement of Section Savings Account in SBI, Kharagpur

Date	Purpose	Debit (Rs.)	Credit (Rs.)	Balance (Rs.)
Income				
01/01/2020	Opening Balance			8,25,433.01
20/02/2020	Student Branch Unutilized Fund		8,820.00	8,34,253.01
25/03/2020	SBI Saving Account Interest		6,170.00	8,40,423.01
07/05/2020	"UPP School" to fund a variety of activities (INR153000/-). + APS - Annual Support AP- MTTS SBC IITKGP (INR49725/-)		202,725.00	10,43,148.01
10/06/2020	Computer Society - IEEE SBC Activities and Events; IEEE Computer Society Student Branch Chapter		11,340.00	10,54,488.01
25/06/2020	SBI Saving Account Interest		5,841.00	10,60,329.01
13/07/2020	Kharagpur Section 2020 Operating Funds		3,77,805.00	14,38,134.01
22/07/2020	Kharagpur Section 2020 Operating Funds		7,331.00	14,45,465.01
13/08/2020	Kharagpur Section 2020 Student Branch Operating Funds		59,455.00	15,04,920.01
25/09/2020	SBI Saving Account Interest		7,654.00	15,12,574.01
13/11/2020	SPS Certified Chapter Membership Grown Reward		14,650.00	15,27,224.01
08/12/2020	MTT-S Chapter Funding-IEEE AP- MTTS SBC IIT Kharagpur (INR36625/-) + (INR18313/-)		54,938.00	15,82,162.01

10/12/2020	Closure of Student Branch Account		3, 85, 531.00	19, 67, 693.01
17/12/2020	Ticket Cancellation Refund		10, 564.00	19, 78, 257.01
25/12/2020	SBI Saving Account Interest		5, 545.00	19, 83, 802.01
Expenses				
	Total Section Expenditure during 2020	3,39, 241.58		16, 44, 560.43
	New FD	5, 00, 000.00		11, 44, 560.43
31/12/2019	Reduction in cash in hand		0.00	11, 44, 560.43
31/12/2019	Closing Balance as per bank statement			11, 44, 560.43

- **Major section Activities**

- Organized 11 Technical Talks, 2 Workshops and a Virtual Tour
- Organized 7 administrative meetings (Executive committee and all affiliated OUs)
- IEEE Kharagpur Section has offered technical co-sponsorship to three international and national conferences, ICIS-2020, NCC-2020, ICCCNT-2020
- IEEE Computer Society SBC got approval from IEEE on 26 Jan. 2020
- Initiated formation of IEEE Instrumentation and Measurement Society (IMMS) Chapter
- Registration under societies act initiated
- Newly developed Section website
- Featured in IEEE R10 Today (IEEE Region 10 Newsletter), April 2020 issue : Small Section of the Month, pp 31-32

- **Major Student and Affinity Group Activities**

- Organized 66 Technical Talks and 15 Workshops on classical and emerging technologies.
- Organized 5 Psychological / Life skill talks focussing mainly on Covid-19 situations
- Initiated a flagship series called “KYP Talks”, organized 8 technical talks under that banner
- Organized one boot camp for membership development
- Celebrated IEEE Day : Conducted an event titled “Know your IEEE”

PART B - ORGANIZATIONAL ACTIVITIES

B1. Membership Development Activities

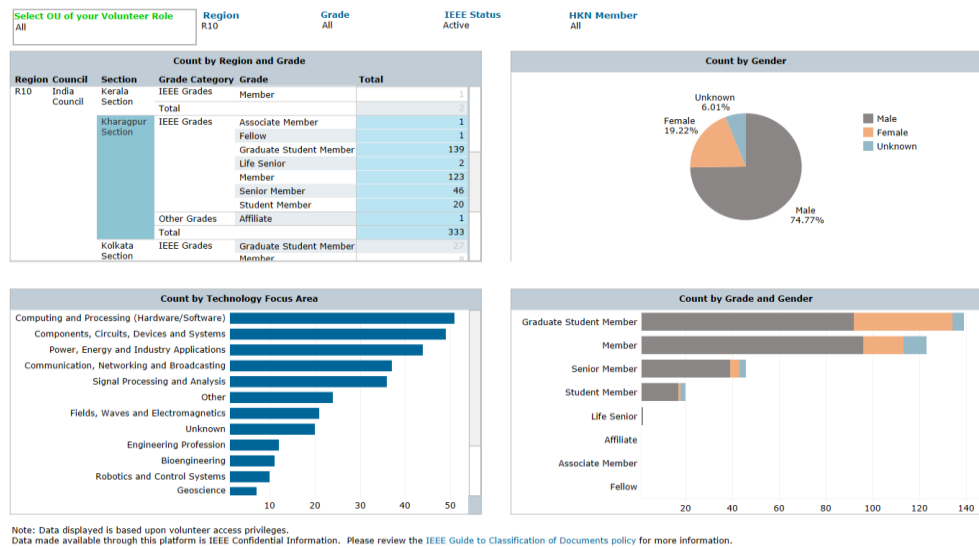
- Total number of active members in the past 3 years:
 - 2018: 386
 - 2019: 396
 - 2020: 390
 - Current: 333 (See below)

IEEE OU Analytics

Members and Affiliates - Dashboard

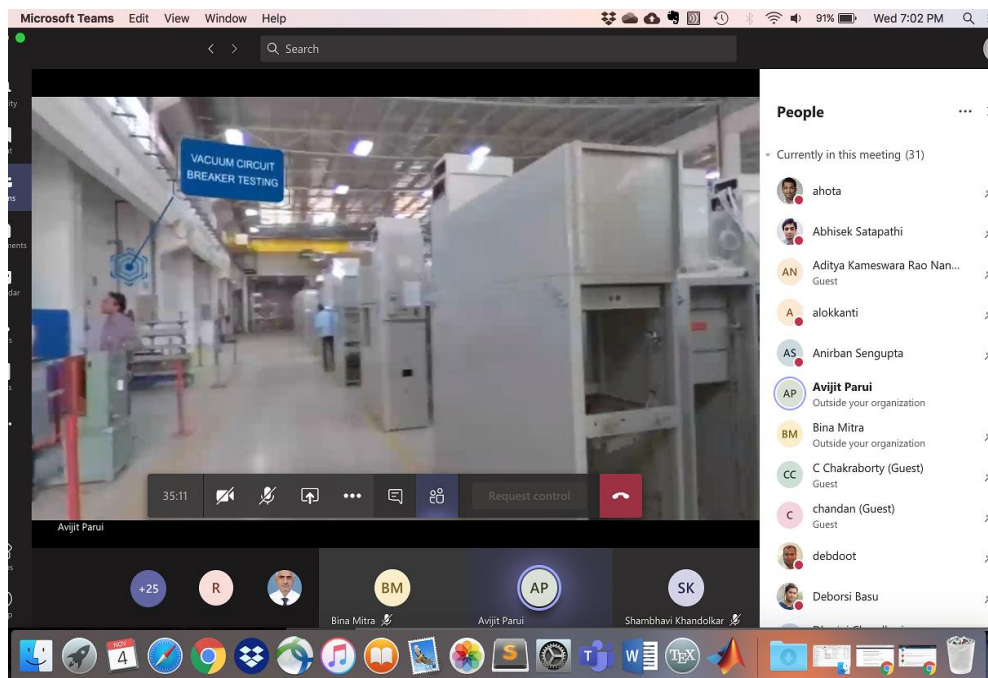
This dashboard provides interactive views for members, society affiliates, and participants by region, geographic council, section and subsection.

- Refine data through filters or click within a visualization to view results and details.
- Hover over a visualization to display a tooltip with statistical facts.
- Important: Choose an OU from "Select OU of your Volunteer Role" filter to view customized results for your OU position.



- One Virtual Tour was organized for membership retention:

Virtual Tour was conducted on November 4, 2020 to L&T Electrical and Automation Factory. The virtual tour consisted of demonstration of different products and solutions.



B2. Chapter Activities

1. Total number of Chapters in the Section: **7**

2. Number of active Chapters: **7**

3. Summary of Chapter activities

CH10742 (Signal Processing SP01): **6** technical talks

CH10723 (Engineering in Medicine and Biology EMB18): **6** technical talks

CH10150 (Control CS23): **6** technical talks

STB20461 (IIT KGP, SB): **7** technical talks + **2** workshop

SBC20461A (IIT KGP SPS, SB): **7** technical talks

SBC20461B (AP-MTTS, SB): **9** technical talks + **3** workshops

SBC20461C (IIT KGP EMBS, SB): **8** technical talks

SBC20461D (IIT KGP CS, SB): **6** technical talks + **2** workshops + **1** Pre-USTEM event

WE00155 (WIE Affinity Group): **3** technical talks + **5** life skill talks

YP00155 (YP Affinity Group): **8** technical talks + **3** workshops

B3. Professional and Continuing Education Activities

- Organized **11** Technical Talks, **2** Workshops and a Virtual Tour from Section
- Organized **66** Technical Talks, **5** Life-skill Talks and **15** Workshops for the various Chapters

Detailed Activity Report

B4. Professional and Continuing Education Activities

Kharagpur Section (Geo Code - R00155), Chair: Prof. Debarati Sen

Sl.	Date	Speaker	Topic	Attendance	
				IEEE	Non IEEE
1	03-Jan-2020	Koushik Roy, Purdue University, USA	Re-Engineering Computing with Neuro-Inspired Learning: Algorithms, Circuits, Devices	15	27
2	26-Feb-2020		Annual General Meeting 2019 : Kharagpur Section	140	40
3	09-Apr-2020	Munir Mohammed, Sr. Program Manager, IEEE India	IEEE Standards Overview	15	0
4	20-Apr-2020	Srikanth Chandrasekaran, Sr. Director – Standards & Tech., IEEE India	IEEE Standards Impact on Future Connectivity (5G)Technologies	15	0
5	02-June-2020		Executive Committee Meeting - June :	26	0
6	24-June-2020	Prof. Gerhard Kramer, Fellow IEEE, Technical University of Munich (TUM)	Quantized Precoding Algorithms for OFDM MIMO Channels	6	9

7	29-June-2020	Prof. Henk Wymeersch, Chalmers Univ. of Tech., Sweden	Localization in 5G and Beyond 5G: enablers, methodologies, and challenges	6	12
8	29-June-2020	Prof. Yogachandran Rahulamathavan	From Bitcoin to Fish Tracking: The Use of Blockchain in Various Applications	17	6
9	07-July-2020		Executive Committee Meeting - July	19	0
10	10-July-2020	Dr. Barun Saha, ABB	Industrial Intent Based Networks	13	10
11	16-July-2020	Dr. Pushpendu Kar	Personalized Visual Comfort and Energy Efficiency in Office Buildings	13	6
12	24-July-2020	Dr. Burak Kantarci, University of Ottawa	Trustworthiness and truthfulness issues in big crowd-sensed data	13	6
13	05-Aug-2020		Executive Committee Meeting - August	16	0
14	02-Sept-2020		Executive Committee Meeting - September	16	0
15	28-Sept-2020	Mr. Kartik Goyal	Advanced Concepts for antenna & array simulations using CST Studio Suite 2020.07	54	21
16	03-Oct-2020		Executive Committee Meeting - October	20	0
17	04-Nov-2020	Virtual Tour of L&T Electrical and Automation	Virtual Tour of L&T Electrical and Automation	11	14
18	14-Nov-2020	Dr. Goutam Chattopadhyay, Fellow, IEEE, NASA - JPL	Design and Innovation: Sensors, Antennas, and Systems	14	11
18	28-Nov-2020	Prof. Emanuele Viterbo, Fellow, IEEE, Monash Univ., Australia	From Message-passing to Low Complexity Iterative Rake Detection for OTFS Modulation	12	16
19	16-Dec-2020	Prof. Lajos Hanzo, Fellow, IEEE, Univ. of Southampton, UK	When Quantum Signal Processing and Communications Meet	20	12
20	27-Dec-2020		Meet and Join the Lattice of IEEE Kharagpur Section	20	3

Control System Society (Geo Code – CH10150), Chair: Prof. Alok Kanti Deb

Sl.	Date	Speaker	Topic	Attendance	
				IEEE	Non IEEE
1.	17-July-2020	Dr. Aritra Mitra, University of Pennsylvania	New Approaches to Distributed State Estimation, Inference and Learning with Extensions to Byzantine-Resilience	7	8

2.	24-Sept-2020	Prof. Dario Paccagnan, Imperial College London	Efficient Mechanisms for Socio- Technical Systems: Traffic Routing, Congestion Games, and Tolls	5	10
3.	30-Sept-2020	Dr. Atreyee Kundu, IISc Bangalore	Scheduling Networked Control Systems: a Switched Systems approach	4	8
4.	09-Oct-2020	Prof. P. V. Reddy, IIT Madras	Stability and negotiation of long-term agreements in cooperative difference games with non-transferable utility	6	16
5	13-Oct-2020	Dr. Mayank Baranwal, TCS Innovation	When Stability Theory Meets Network Optimization: New Results on Designing Fixed-Time Convergent Algorithms	7	10
6	31-Oct-2020		Administrative meeting		
7	02-Dec- 2020	Prof Akhil Ranjan Garg, J.N.V. University, Rajasthan	Convolutional Neural Network: Some insights on its working, its use in transfer learning, and its applications in medical image analysis	10	28

Signal Processing Society (Geo Code – CH10742), Chair: Prof. Sudipta Mukhopadhyay

Sl.	Date	Speaker	Topic	Attendance	
				IEEE	Non IEEE
1	24-Feb-2020	Dr. Ankur Kulkarni, IIT Bombay	Shannon meets Von Neumann	7	4
2	11-Jun-2020	Prof. Rangaraj M. Rangayyan, Dept. of ECE, Univ. of Calgary	Computer-aided Diagnosis: Engineering Improved Health Care	9	11
3	17-Jul-2020	Dr. S Naser	Music Familiarity and Liking: Effect on induced emotion decoding	3	14
4	3-Sep-2020	Dr. Anil Kr. Vuppala	AI and ML in Speech Processing	5	18
5	31-Oct-2020	Prof. Susanta Kumar Sarangi	Data-driven Filterbank for Speaker Verification	2	13
6	11-Dec-2020	Dr. Shefali Waldekar	A Study on Audio Features for Acoustic Scene Classification	4	4
7	22-Dec-2020		Review meeting of SPS Kgp Section		

EMBS Society (Geo Code – CH10723), Chair: Prof. Sudip Nag

	Date	Speaker	Title of the Lecture	IEEE Members	Guest
1.	13-Aug-2020	Prof. John Ho, NUS, Singapore	Wireless technologies for bioelectronic therapies and diagnostics	9	30
2.	18-Aug-2020	Prof. Aniruddh Sarkar, Georgia Tech., USA	Microscale tools for biomarker discovery and electronic point-of- care diagnostics for infectious diseases	5	19

3.	19-Aug-2020	Prof. Mrigank Sharad, IIT Kharagpur	VLSI for Edge Computing in Biomedical Devices	7	47
4.	22-Aug-2020	Prof. Shreyas Sen, Purdue Univ., USA	Secure and Efficient Internet of Body	7	89
5	29-Aug-2020	Prof. Kaushik Roy, Purdue Univ., USA	Re-engineering computing with Neuro-inspired Learning: Algorithms, Archit., and Devices	6	45
6	03-Oct-2020		IEEE Day Online Quiz Competition "Test Your Mettle"- Prelim. round	10	23
7	05-Oct-2020		IEEE Day Online Quiz Competition "Test Your Mettle"- Final round	21	10
8	03-Dec-2020	Prof. Tiago H. Falk, Univ. of Quebec, Canada	Domain-enriched machine learning and applications in biomedical engineering	10	38

Women in Engineering Affinity Group (Geo Code – WE00155), Chair: Prof. Manjira Sinha

Sl.	Date	Speaker	Topic	Attendance	
				IEEE	Non IEEE
1	30-Jan-2020		Administrative meeting	6	0
2	26-Feb-2020	Bornini Lahiri and Dripta Piplai (IIT-Kgp)	Preservation of Language Diversity and the Role of Technology	10	21
3.	27-Feb-2020		Administrative meeting	4	0
4.	31-Mar-2020		Administrative meeting	6	0
5	2-Apr-2020		Officer Training on VTools	6	0
6	4-Apr-2020	Mrs. Juliet Karmakar Mondal	Campus Mental health during Covid 19 Lockdown	12	4
7	17-Apr-2020	Dr. Ravi Kumar Sharma	Covid-19 measures and mental wellness	60	24
8	29-Apr-2020		Administrative meeting	5	0
9	21-May-2020	Gnana Lakshmi T C, Sr. Leadership Fellow at Women Who Code & Engg. Head, TrustIn	Building a social enterprise product: Technology Used and My Journey	10	3
10	30-May-2020	Mrs. Juliet Karmakar Mondal	Mental Health during Covid-19: Workable and Doable ways to deal with the issue	2	5
11	6-Jul-2020		Administrative meeting	5	0
12	1-Aug-2020	Tulasi Menon, Microsoft	Democratizing AI with Microsoft Cognitive Services	10	35
13	25-Aug-2020		Administrative meeting	4	0
14	03-Oct-2020		IEEE Day Online Quiz Competition "Test Your Mettle"- Prelim. round	10	23

15	5-Oct-2020		IEEE Day Online Quiz Competition "Test Your Mettle"- Final round	21	10
16	17-Oct-2020	Dr. Shantha Mohan, CMU	Indian Women Engineers - A historical perspective and future prospects	12	21
17	13-Nov-2020		Administrative meeting	4	0
18	01-Dec-2020	Mahima Sood	Data Ethics beyond Privacy	7	18

Young Professionals Affinity Group (Geo Code – YP00155), Chair: Prof. Amitalok J. Budkuley

Sl.	Date	Speaker	Topic	Attendance	
				IEEE	Non IEEE
1	6-Apr-2020		Executive Committee meeting	5	0
2	14-Apr-2020		Executive Committee meeting	5	0
3.	21-Apr-2020		Executive Committee meeting	5	0
4.	9-Jun-2020	Dr. Souvick Chatterjee, and Dr. Praful P. Pai, Education Technical Evangelist, Mathworks, Delhi	Deep Learning 101 - Applying Deep Learning in Science and Engineering	16	46
5	9-Jun-2020		Executive Committee meeting	5	0
6	22-Jun-2020	Dr. Zheng Chen	Leveraging the heterogeneity and randomness of mobile data traffic	5	8
7	30-Jun-2020		Executive Committee meeting	5	0
8	10-Jul-2020	Prof. M. Padmavati	Innovation and Research-Path to Patents	12	22
9	14-Jul-2020		Executive Committee meeting	5	0
10	28-Jul-2020	Prof. Sahana Murthy	Transitioning to Online Instruction	11	8
11	3-Aug-2020	Prof. Rajkumar Buyya	New Frontiers in Cloud and Edge Computing for Big Data & Internet-of- Things Applications	8	10
12	11-Aug-2020		Executive Committee meeting	5	0
13	17-Aug-2020	Prof. Shreya Matilal	Online Copyright Infringement and Safe Harbour	12	6
14	24-Aug-2020	Prof. Marco Ruffini	Embedding SDN and virtualization into 5G Telecommunications Networks and Beyond	21	11
15	10-Sep-2020	Prof. Saptarshi Ghosh	Frequency Selective Surface and its Applications	16	11
16	3-Oct-2020	Aditya K. Rao Nandula, and Sawon Pratiher	LaTeX Workshop	13	55
17	06-Oct-2020	Prof. Debarati Sen	IEEE Day - Know your IEEE	8	14
18	10-Oct-2020	Aditya K. Rao Nandula, and Sawon Pratiher	Beamer Workshop	13	23

19	15-Sept-2020		Executive Committee meeting	5	0
20	17-Sept-2020	Prof. Birenjith Sasidharan,	On Theory of Simulators on Covid-19 Outbreak in India.	6	12
21	29-sept-2020		Executive Committee meeting	5	0

IIT Kharagpur Student Branch (Geo Code - STB20461), Chair: Ms. Devarpita Sinha

Sl.	Date	Speaker	Topic	Attendance	
				IEEE	Non IEEE
1	29-Nov-2019 to 11-Dec-2020		Robotix Workshop	433 (1st Phase) and 219 (2nd Phase)	
2	10-Dec-2019		Events plan for 2020 and SAC selection	18	0
3	27-Dec-2019	Sandeep Anand, Dept. of EE, IIT Kanpur	Towards Reliable Power Electronic Converters	23	13
4	3-Jan-2020	Sourya Dey, Univ. of Southern California	Exploring Complexity Reduction in Deep Learning	12	16
5	4-Jan-2020	Miss Megha Ben	IEEE Computer Society - The Community for Technology Leaders: Engaging Members to Grow Impact	25	15
6	4-Jan-2020	Adway Mitra, IIT Kharagpur	Artificial Intelligence and Machine Learning: Widening the Frontiers	25	15
7	4-Jan-2020	Mr. Shivam Abhilash	Basics of Machine Learning and solving business problems using Machine Learning and Artificial Intelligence (ML and AI)	25	15
8	17-19 Jan-2020		Eureka-An innovative paper presentation event and Math Olympiad	3	78
9	5-Mar-2020	Dr. Joy Kuri, IISc, Bangalore	Optimal Placement of Virtual Network Functions and Traffic Routing for Balanced Bandwidth Consumption	21	8
10	6-Mar-2020		Administrative meeting	4	
11	9-Apr-2020	Mathworks	Online MATLAB workshop	41	200
12	20-Apr-2020	Banishree Ghosh, A-Star, Singapore	Forecasting Spatio-temporal Impact of traffic incidents in Transportation Networks.	7	2
13	5-Sept-2020		Execom Meeting	10	
14	3-Oct-2020		IEEE Day Celebration Online Quiz Competition "Test Your Mettle"- Prelim. round	10	23
15	5-Oct-2020		IEEE Day Celebration Online Quiz Competition "Test Your Mettle"- Final round	10	21

IIT Kharagpur EMBS Student Branch (Geo Code - SBC20461C), Chair: Mr. Chiranjib Bhowmick

Sl.	Date	Speaker	Topic	Attendance	
				IEEE	Non IEEE
1	16-Dec-2019	Dr. Namrata Gundiah (IISc Bangalore)	Mechanobiology in Cancer Metastasis	6	21
2	27-Jan-2020	Prof. Ram Bilas Pachori (IIT Indore)	Signal Processing and Machine Learning based Methods for Computer-Aided Medical Diagnosis	4	12
3	18-Feb-2020	Prof. Anil K. Bera (University of Illinois)	The History of the First Nonlinear Function in Econometrics	6	13
4	4-Mar-2020	Dr. Pedro Estrela (University of Bath)	Electrochemical Biosensors and Biodevices for Medical Diagnosis and Water Monitoring	5	8
5	14-Jul-2020	Mr Harender Kumar	Demonstration of Synopsys Quantum ATK Software	7	5
6	10-Sep-2020	Dr. Himanshu Shekhar	Harnessing ultrasound and microbubbles for next-generation imaging and therapy	6	11
7	11-Sep-2020	Dr. Hari M Varma	Diffuse optics for in vivo imaging	7	8
8	25-Sep-2020	Dr. Biswarup Mukherjee	Sonomyography: Towards Natural and Intuitive Control of Biomechatronic Devices	4	9
9	30 Sept 2020	Chiranjib Bhowmick	Discussion about IEEE Day	4	0
10	3-Oct-2020		IEEE Day Online Quiz - Prelim Round	10	23
11	5-Oct-2020		IEEE Day Online Quiz - Final Round	10	21
12	5-Oct-2020	Dr. Suyash P Awate	Learning Challenges in Medical Image Computing	8	12

IEEE SPS Student Branch Chapter (Geo Code - SBC20461A), Chair: Md. Ismail Yasar Arafath K.

Sl.	Date	Speaker	Topic	Attendance	
				IEEE	Non IEEE
1	20-Dec-2019	Prof. Anna Scaglione	Distributed Algorithms for Principal Component Analysis	17	24
2	28-Jan-2020		Administrative meeting	6	0
3	26-Feb-2020	Prof. Siddhartha Chattopadhyay	Signal Processing methods for Inflation forecast	7	11
4	10-Mar-2020	Mr. Sourish Sarkar	Low Rank and Sparse Methods in Signal Processing	5	2
5	18-Jul-2020		Administrative meeting	5	3
6	16-Aug-2020	Prof. Saumik Bhattacharya	Beyond the real-valued neural nets	12	10
7	9-Sep-2020	Prof. Manas Kumar Mandal	Intuition, Innovation & Technology - Putting learning to test	12	32

8	12-Oct-2020	Prof. Amit Patra	Some Recent Experiences in Signal Processing for Detection of Cardio-vascular Diseases	12	23
9	17-Oct-2020		Administrative meeting	7	1
10	20-Oct-2020	Prof. Gaurav Sharma	Leveraging Old Tricks in A New World: Efficient Generation of Labeled Data for Deep Learning	13	13

IEEE AP-MTTS Student Branch Chapter (Geo Code - SBC20461B), Chair: Mr. Anirban Sengupta

Sl.	Date	Speaker	Topic	Attendance	
				IEEE	Non IEEE
1	29-Nov-2019	Prof. Fan Yang, Tsinghua University, China	Surface Electromagnetics: Physics Exploration and Engineering Applications	17	8
2	3-Dec-2019		Administrative meeting	6	1
3.	21-Feb-2020	Saptarshi Ghosh, IIT Indore	Passive/Active Microwave Absorbers based on Frequency Selective Surfaces	14	4
4	28-Feb-2020	Soumyabrata Chakrabarty, ISRO	Low Cross-polarised Antennas for Satellite Applications	14	8
5.	4-Mar-2020	Execom members	1st Quarterly meeting	10	6
6	21-Apr-2020	Mr. Pratik Khurana, Keysight Technologies	SystemVue software	18	39
7	29-Apr-2020	Mr. Abhishekh Tiwari, Mathworks	Modeling Multi- Function Phased Array RADARs with MATLAB and Simulink	30	55
8	1-Jun-2020	Execom members	2nd Quarterly meeting	9	3
9	13-Jun-2020	Mr. Bijit Biswas, SAMEER, Kolkata	Current trends in Millimeter wave application and challenges in system development	20	20
10	4-Jul-2020	Execom members	General meeting on online Internship program	12	4
11	16-Jul-2020	Prof. Gopi Shrikanth Reddy, IIT Mandi	Printed Ultra Wideband Antennas Design and Analysis	27	41
12	27-31 July-2020	SAC members	Online pan India workshop for B.Tech/M.Tech/Diploma students	11	26
13	31-Jul-2020	Prof. Sankaran Aniruddhan, IIT Madras	5G NR: The India Perspective	36	23
14	11-Aug-2020	Prof. Ho Jin Song, POSTECH, Korea	Terahertz Communications at 300 GHz : Devices, Packages and Systems	20	34
15	29-Aug-2020	Prof Mei Song Tong, Tongji University, China	Dynamical Modeling for Electromagnetic Problems: The Need of Artificial Intelligence Era	35	23
16	11-Sept-2020	Execom	3rd Quarterly meeting	12	5
17	25-Sep-2020	Prof. Subal Kar,	Metamaterials and Metasurfaces - An	25	17

		Univ. of Calcutta	Emerging Field of Research in Microwaves and Photonics		
18	03-Oct-2020		IEEE day celebration Online Quiz Competition “Test Your Mettle” – Preliminary Round	10	23
19	05-Oct-2020		IEEE day celebration Online Quiz Competition “Test Your Mettle” – Final Round	21	10

IEEE CS Student Branch Chapter (Geo Code - SBC20461), Chair: Mr. Deborsi Basu

Sl.	Date	Speaker	Topic	Attendance	
				IEEE	Non IEEE
1.	25-Feb-2020		Exe-com Meeting - Meet 1	7	0
2.	9-Apr-2020	Praful P. Pai, Education Tech. Evangelist, Mathworks	Online WebEx Sessions using MATLAB R2020a and Learning Resources	41	200
3.	15-May-2020	Dr. Tirthankar Dasgupta, Tata Consultancy Services	NLP, ML, and Deep Neural Network in Mining Clinical Trials for Auto. Matching of Patient Eligibility Criteria	18	12
4	19-May-2020		Exe-com Meeting - Meet 2	7	
5.	1-Jun-2020	Dr. Dilip Krishnaswamy - VP - R&D, Reliance Ind.Ltd	An Introduction to Quantum Physics and Quantum Computing	18	24
6	10-Jun-2020	Dr. Sangharatna Godbole, NUS, Singapore	Program Analysis and Testing	21	65
7	10-Jul-2020	Praful P. Pai, and other Experts, Mathworks	From Pixels to Models: Image Processing, Computer Vision, and Machine Learning through MATLAB	17	62
8	12-Jul-2020		Exe-com Meeting -Meet 3	7	0
9	3-Aug-2020	Mr. Adwaith S. Kumar, R10 Asia Pacific Lead at IEEEExtreme 2020, Mr. Meet Joshi, India Gold Medalist in IEEEExtreme 2019	IEEE Xtreme 14.0 - Outreach & Awareness Program 2020 (The largest Global Online Programming Competition of IEEE)	12	18
10	12-Aug-2020		Exe-com Meeting -Meet 4	7	0
11	1-Sep-2020	Prof. Amlan Chakrabarti, Univ. of Calcutta	IoT Data Analytics and Fog Computing	16	24
12.	15-Sept-2020		Exe-com Meeting - Meet 5	7	0
13	28-Sep-2020	Prof. Swarup Bhunia, University of Florida	Innovations in IoT for Solving Global Problems, including the Covid-19 Pandemic	13	12
14	03-Oct-2020		IEEE day Online Quiz Competition “Test Your Mettle” – Prelim. Round	10	23

15	05-Oct-2020		IEEE day Online Quiz Competition “Test Your Mettle” – Final Round	21	10
16	17-Oct-2020	Dr. Shantha Mohan, Carnegie Mellon University	Indian Women Engineers - A historical perspective and future prospects	12	21

B5. Student Activities

- Total number of Student Branches in the Section: 1
- Number of Student Chapters: 4
- IEEE Computer Society SBC got approval from IEEE on 26 Jan. 2020
- Organized School Outreach Programme at Assam, 21-24 Dec, 2020 (150 participants)
- Branch level student activities : 1 Boot camp, 7 Technical talks, 3 Workshops, 2 Outreach programs
- Members of the IEEE SB and IEEE CS SBC participated in the IEEE TechX Congress hosted by the IEEE Kolkata Section
- Members of YP Affinity Group actively participated and represented in 3 different events organized by IEEE Bangladesh Section and its OU's

B6. Affinity Group Activities:

- WIE Affinity Group organized 3 Technical talks and 5 Life-skill talks, 2 Outreach programs
- YP Affinity group organized 8 Technical talks, 2 Workshops, and 1 Social event.

B7. Awards & Recognition Activities:

- \$400 - Received by Computer Society for IEEE Outreach Program - Benefits of IEEE and its Computer Society membership
- \$650 - Received by AP-MTTS as Annual Support for Organizing Chapter's meetings
- \$150 - Received by Computer Society for IEEE SBC Activities and Events
- \$200 - Received by SPS Chapter as SPS Certified Chapter Membership Grown Reward
- \$250- Received for securing runner up position in foundation category in IEEE Day Celebration Photo Contest 2020
- AP-MTTS event got featured in R10 Newsletter (October 2020 issue)
- R10 Outstanding Small Section Award plaque received in Dec 2020
- IEEE Member Highest Voting Award 2020
- IEEE Brand Ambassador 2020 - Mr. N. Aditya Kameswara Rao
- Won UAV innovation challenge sponsored by IEEE VTS and IEEE Bangalore Section (Students - Kirtan G. Panda, Shrayan Das, Aunullah Qaiser, Mentor - Prof. Debarati Sen)

B8. Communication Activities:

Regular e-mails were sent to all the section members informing them about seminar notices, conference announcements, India Council and R10 events and membership renewal dates.

B9. Industry Relations

Industry Virtual Tour was organized for the members and student body members on November 4, 2020 to the L&T Electrical and Automation Factory as mentioned in **B1**

B10. Humanitarian Technology Activities:

Nothing to report

B11. Community Activities:

Nothing to report

PART C - OTHER ACTIVITIES**C1. Special Events**

- IEEE Xtreme event (19 Oct. 2019)

C2. Relationship with National and International Societies and Non-Govt. Organizations (NGO)

- Kshitij 2020 (Techno-management festival of IIT Kharagpur)
- Technology Robotix Society of IIT Kharagpur

C3. Collaboration with other IEEE Sections

- Sri Lanka Section
- Central Region sub-section Sri Lanka
- IEEE India Council

C4. Support extended to Sub-sections & Society Chapters within the Section

All financial transactions, seed grants and special opportunities grants facilitated, audited and managed by the section for following OUs

- Control Systems Society Chapter (CH10150)
- Engineering in Medicine and Biology Society Chapter (CH10723)
- Signal Processing Society Chapter (CH10742)
- Women in Engineering Affinity Group (WE00155)
- Young Professional Affinity Group (YP00155)
- IIT Kharagpur Student Branch (STB20461)
- IEEE SPS Student Branch Chapter (SBC20461A)
- Antenna and Propagation and Microwave Theory and Techniques (AP-MTTS) Student Branch Chapter (SBC20461B)
- IEEE EMB Student Chapter (SBC20461C)
- IEEE CS Student Chapter (SBC20461D)
- IEEE Computer Society Student Branch Chapter (SBC20461D)

C5. Joint activities for membership development:

- Membership drive conducted on December 27, 2020 via online mode

C6. Best Practices of your Section (which you would like to share with other Sections for the benefits of members)

- Regular administrative meeting and joint meeting involving all OUs and drawing of charters in joint consultations
- Regularly high level technical talks are organised (online wherever applicable) whenever some domain expert shares their knowledge and experiences

C7. Problems anticipated and suggestions for solutions, if any

- Spare time with officers for Section and Chapter activities is decreasing fast. Need to motivate young volunteers capable of dedicated enough time for Section level activities.

PART D - GOALS AND PLANS**D1. Continuation of project/activity in progress and their implementation plans**

- International Conference ICIIS, 2021
- International Conference ICPS, 2021

D2. Goals and Future Plans

- To increase membership by reaching out to new faculty members of IIT Kharagpur.
- To start Humanitarian Activity of the Section as earlier
- To start Community activity of the Section by initiating a TISS (Teacher in Service Scheme) with IIT Kharagpur campus schools.
- To organize TechSym 2021 with the help of IIT Kharagpur student branch
- To maintain and regularly update the Section webpage
- To increase members under Section and OUs
- To increase number of members in IC
- To complete the process of starting a new chapter: IEEE Instrumentation and Measurement Society Chapter
- To complete the process of Registration under Societies Act

D3. Any innovative ideas to make IEEE more creative and value added for sustaining the membership retention and recruitment goals.

- Membership boot camp at regular intervals and to address the benefits to students mainly from the second year of their undergraduate studies

D4. Business Plan for Sustainable Growth and Financial Stability.

- Organization of joint workshops to raise money

MINUTES of AGM of IEEE Kharagpur Section for 2019
held at GSSST NKN Room on
February 26, 2020

Chair: Prof. Shailendra Kumar Varshney

Vice Chair: Prof. Debarati Sen

Secretary: Prof. Sudip Misra

Treasurer: Prof. Debdoot Sheet

Asst. Secretary: Prof. Sanjay Kumar Chaturvedi

Student Branch Counselor / Student Activities Chair: Prof. Mrinal Kanti Mandal

Nomination Committee Chair: Prof. Chittaranjan Mandal

Control System Society Chair: Prof. Alok Kanti Deb

Engineering in Medicine and Biology Society Chair: Prof. Sudip Nag

Signal Processing Society Chair: Prof. P K Dutta

- Prof. Shailendra Kumar Varshney welcomed all members and delivered his speech
- Prof. Debarati Sen presented minutes of the last AGM. The minutes were confirmed by the voice vote.
- Prof. Shailendra Kr. Varshney mentioned major organizational activities of the IEEE Kharagpur Section
- Prof. Debdoot Sheet has presented the audit report of the section
- Prof. Alok Kanti Deb presented the report for the Control System Society
- Prof. Sudip Nag presented the report for the Engineering in Medicine and Biology Society.
- Ms. Rachna Satish presented the report for the Women in Engineering Affinity group
- Ms. Devarpita Sinha presented the activities of IIT Kharagpur Student Branch
- Ms. Priyanka Deb Sinha presented the report of IEEE AP/MTT SBC and events plan for 2020
- Ms. Akanksha Pathak presented the activities of the SPS SBC and events plan for 2020
- Mr. Chiranjib Bhowmick presented the activities of the EMBS SBC and events plan for 2020
- Mr. Deborsi Basu presented the activities planned for the newly constituted CS SBC for 2020
- Prof. Shailendra Kumar Varshney requested Prof. Amitabha Bhattacharya to present the new slate. Prof. Amitabha Bhattacharya welcomed the new office bearers.

Chair	: Prof. Debarati Sen
Vice Chair	: Prof. Sudip Misra
Secretary	: Prof. Debdoot Sheet
Treasurer	: Prof. Sanjay K Chaturvedi
Assistant Secretary	: Prof. Mrinal Kanti Mandal

- Mementos were presented to the outgoing Section Chair and various Chapter Chairs
- Vote of thanks was presented by Prof. Sudip Misra

Programme of IEEE AGM 2020 (March 11, 2021)

Venue : online via Google Meet (<https://meet.google.com/wbx-yycr-sio>)

- *Attendance*
- *Welcome address by Chair, Prof. Debarati Sen*
- *Presentation of Minutes of AGM 2019 by Vice Chair, Prof. Sudip Misra*
- *Presentation of Kharagpur Section Annual Organizational Report, 2020 by Chair, Prof. Debarati Sen*
- *Presentation of Kharagpur Section Financial Report, 2020 by Treasurer, Prof. Sanjay K Chaturvedi*
- *Presentation of Signal Processing Society Chapter Annual Report, 2020 by Prof. Sudipta Mukhopadhyay*
- *Presentation of Control System Society Chapter Annual Report, 2020 by Prof. Alok Kanti Deb*
- *Presentation of Engineering in Medicine and Biology Society Chapter Annual Report, 2020 by Prof. Sudip Nag*
- *Presentation of Women in Engineering Affinity Group Annual Report, 2020 by Prof. Manjira Sinha and welcome to incoming slate*
- *Presentation of Young Professionals Affinity Group Annual Report, 2020 by Mr. Aditya K. Rao and welcome to incoming slate*
- *Presentation of IIT Kharagpur Student Branch Report, 2020 by Ms. Devarpita Sinha and welcome to incoming slate*
- *Presentation of Antenna and Propagation / Microwave Theory and Technique Society Student Branch Annual Report, 2020 by Mr. Anirban Sengupta and welcome to incoming slate*
- *Presentation of Signal Processing Society Student Branch Annual Report, 2020 by Md. Ismail Yasar Arafath and welcome to incoming slate*
- *Presentation of EMBS Student Branch Annual Report, 2020 by Mr. Chiranjib Bhowmick and welcome to incoming slate*
- *Presentation of Computer Society Student Branch Annual Report, 2020 by Ms. Arpita Dutta and welcome to incoming slate*
- *Presentation of new slate of Kharagpur section office bearers for 2021 by Nomination Committee Chair, Prof. Shailendra Kumar Varshney*
- *Handover of Charges*
- *Presentation of Mementoes to outgoing office bearers*
- *Presentation of Vote of Thanks by Secretary 2020, Prof. Debdoot Sheet*



INDEPENDENT AUDITOR'S REPORT

To
Managing Committee / Governing Body
The Institute of Electrical and Electronics Engineers, INC. (IEEE)
Kharagpur Section, I.I.T. Kharagpur
Kharagpur, Paschim Medinipur

Opinion

We have audited the financial statements of "THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC." (the entity), which comprise the Balance Sheet at 31st December, 2020, and the Income and Expenditure Account and the Receipts and Payments Account for the year then ended, and ~~the notes to the financial statements, including a summary of significant accounting policies.~~

In our opinion, the accompanying financial statements give a true and fair view of the financial position of the entity as at December 31, 2020 and of its financial performance for the year then ended in accordance with the Accounting Standards issued by the Institute of Chartered Accountants of India (ICAI).

Basis for Opinion

We conducted our audit in accordance with the Standards on Auditing (SAs) issued by ICAI. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the entity in accordance with the Code of Ethics issued by ICAI and we have fulfilled our other ethical responsibilities in accordance with the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation of these financial statements that give a true and fair view of the state of affairs, results of operations and cash flows of the entity in accordance with the accounting principles generally accepted in India. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the entity's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of the auditor's responsibilities for the audit of the financial statements is located at Institute of Chartered Accountants of India (ICAI) website at: www.icaai.org. This description forms part of our auditor's report.

For,
RAJESH KUMAR SINGH & CO
CHARTERED ACCOUNTANTS
F.R.N.- 326428E



RK Singh 26/02/2021
(R. K. Singh, Proprietor)
M.NO. - 065855

UDJN - 21065855 AAAACL2912

Midnapore
The 26th February, 2021

BALANCE SHEET AS AT 31ST DECEMBER 2020

LIABILITIES	Amount (Rs.)	Amount (Rs.)
General Fund		
As per Last Balance Sheet	878776.00	
Add: Excess of Income over Expenditure	826870.43	1705646.43
Student Support Fund		
As per Last Balance Sheet	34027.00	34027.00
Students' Branch Operation Fund		
As per Last Balance Sheet	160645.00	160645.00
Outstanding Audit Fees		
As per Last Balance Sheet	2500.00	
Add: This Year	5000.00	
	7500.00	
Less: Paid	2500.00	5000.00
TOTAL (Rs.)		1905318.43
ASSETS	Amount (Rs.)	Amount (Rs.)
FIXED ASSETS		
Computer		
As per Last Balance Sheet	700.00	
Less: Depreciation	330.00	370.00
Furniture		
As per Last Balance Sheet	20623.00	
Less: Depreciation	2062.00	18561.00
CURRENT ASSETS		
Fixed Deposits		
FD A/c No- 371889865433	120818.00	
FD A/c No- 33590291148	39990.00	
FD A/c No- 33590297286	80861.00	
FD A/c No- 39715965108	500000.00	741669.00
CLOSING BALANCE		
Cash at Bank	1144560.43	
Cash in Hand	158.00	1144718.43
TOTAL (Rs.)		1905318.43

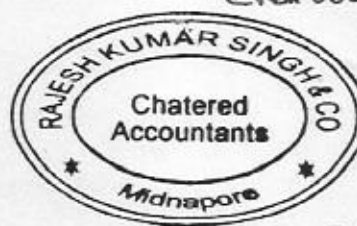
Debarati Sen
(Debarati Sen)
Chair

Sudip Misra
(Sudip Misra)
Vice-Chair

Debdeep Sheet
(Debdeep Sheet)
Secretary

S.K. Chaturvedi
(S.K. Chaturvedi)
Treasurer

As per my report of
even date



RAJESH KUMAR SINGH & CO
Chartered Accountants
F.R.N.-326428E

Rajesh Singh
26/02/2021
Rajesh Kumar Singh
Proprietor
M. No.-065855

UDIN - 21065855AAAACL2912

INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD 01/01/2020 TO 31/12/2020

INCOME	Amount (Rs.)	Amount (Rs.)
To Travel Expenses Receipts		10564.00
" IEEE HQ & Societies		728244.00
" Savings Bank Interest Receipts		25210.00
" Fixed Deposit Interest Receipts		7433.00
" Accrued Interest on Fixed Deposit		5202.00
" Other Receipts		8820.00
" Adjustment in Opening Balance		0.01
" Receipt from Students Branch Account Closure		385531.00
TOTAL (Rs.)		1171004.01
EXPENDITURE	Amount (Rs.)	Amount (Rs.)
To Travel Expense		5517.00
" Grants and Awards Expenses		80007.08
" Meetings and Social Events Expenses		208583.00
" Other Program Expenses		1681.50
" Audit Fees (2020)		5000.00
" Audit Expenses		3500.00
" Student Activities		37453.00
" Depreciation		2392.00
" Excess of Income over Expenditure		826870.43
TOTAL (Rs.)		1171004.01

Debarati Sen
(Debarati Sen)
Chair

Sudip Misra
(Sudip Misra)
Vice-Chair

Debdoot Sheet
(Debdoot Sheet)
Secretary

S.K. Chaturvedi
(S.K. Chaturvedi)
Treasurer

As per our report of even date



RAJESH KUMAR SINGH & CO
Chartered Accountants
F.R.N.-326428E

Rajesh Singh
Rajesh Kumar Singh
Proprietor
M. No.-065855

26/02/2021

UDIN - 21065855 AAAACL2912

RECEIPTS AND PAYMENTS ACCOUNT FOR THE PERIOD 01/01/2020 TO 31/12/2020

RECEIPTS	Amount (Rs.)	Amount (Rs.)
To Opening Balance		
Cash at Bank	825433.00	
Cash in Hand	158.00	825591.00
" Travel Expenses Receipts		10564.00
" IEEE HQ & Societies		728244.00
" Savings Bank Interest Receipts		25210.00
" Fixed Deposit Interest Receipts		7433.00
" Other Receipts		8820.00
" Receipts from Students Branch Account Closure		385531.00
" Fixed Deposit Matured		120851.00
" Adjustment in Opening Balance		0.01
TOTAL (Rs.)		2112244.01
PAYMENTS	Amount (Rs.)	Amount (Rs.)
To Travel Expense		5517.00
" Grants and Awards Expenses		80007.08
" Meetings and Social Events Expenses		208583.00
" Fixed Deposit Made		500000.00
" Fixed Deposit Re-invested		120818.00
" Other Program Expenses		1681.50
" Audit Fees (2019)		2500.00
" Audit Expenses		3500.00
" Student Activities		37453.00
" Opening Balance		
Cash at Bank	1144560.43	
Cash in Hand	158.00	1144718.43
TOTAL (Rs.)		2104778.01

Debarati Sen
(Debarati Sen)
Chair

Sudip Misra
(Sudip Misra)
Vice-Chair

Sheet
(Debdoot Sheet)
Secretary

Chaturvedi
(S.K. Chaturvedi)
Treasurer

As per oral report of
even date



RAJESH KUMAR SINGH & CO
Chartered Accountants.
F.R.N.-326428E

Rajesh Singh
26/02/2021
Rajesh Kumar Singh
Proprietor
M. No.-065855

UDIN - 21065855AAAACL2912

STATEMENT OF FIXED DEPOSIT AS ON 31ST DECEMBER 2020

<u>Account Number</u>	<u>Date of Issue</u>	<u>Date of Maturity</u>	<u>Op. Balance</u>	<u>This Year / Re-invested</u>	<u>Intt. Recd.</u>	<u>Accd. Intt.</u>	<u>Cl. Balance</u>	<u>Maturity Value</u>
37188865433	08-11-2020	08-11-2021	113385.00	120818.00	7433.00	0.00	120818.00	126848.00
33590291148	16-01-2020	16-01-2021	38268.00	0.00	0.00	1722.00	39990.00	40600.00
33590297286	16-01-2020	16-01-2021	77381.00	0.00	0.00	3480.00	80861.00	82095.00
39715965108	07-10-2020	07-10-2021	0.00	500000.00	0.00	0.00	500000.00	524954.00
TOTAL (Rs.)			229034.00	620818.00	7433.00	5202.00	741669.00	774497.00

Debarati Sen
(Debarati Sen)
Chair

Sudip Misra
(Sudip Misra)
Vice-Chair

Debdoot Sheet
(Debdoot Sheet)
Secretary

S.K. Chaturvedi
(S.K. Chaturvedi)
Treasurer

As per my report of
even date



RAJESH KUMAR SINGH & CO
Chartered Accountants
F.R.N.-326428E

RK Singh
Rajesh Kumar Singh
Proprietor
M. No.-065855

26/02/2021

UDIN - 21065855AAAACL2912