

Minutes of the Eighth  
BoG Meeting on April 12, 2016



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# Minutes of the Eighth Meeting of the Board of Governors College of Engineering Karunagappally

Agenda for April 12, 2016

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## **Part I**

# **Procedural Items**

### **1 Silent Prayer**

The eighth BoG held a silent prayer for the victims of Puttingal Temple fireworks tragedy.

### **2 Confirmation of the Minutes of the 7<sup>th</sup> BoG Meeting**

#### **2.1 Decision:**

The BoG is requested to approve the courses and to ratify the payment of Rs. 785080.00. The minutes of the seventh BoG was sent to the Chairman and members for approval.

Bog sanctioned the minutes of the seventh meeting.

### **3 Report on the Action Taken/Pending on the Decisions in the 7<sup>th</sup> BoG**

There were 24 decisions in the sixth BoG, the details of execution of which were presented in the BoG.

#### **3.1 Decision :**

The BoG decided to approve the action taken report.

## Part II

# Discussion, Ratification and Approval

### 4 Procurement Activities

The details of completed, cancelled, initiated and in progress packages are discussed.

#### 4.1 Completed Packages

The details of payment made for various goods to the firms, as listed in the Table 1, are presented in the BoG.

**4.1.1 Decision:** The BoG ratified the payment of Rs. 20,46,617.00 towards the payment of 12 completed packages.

**Table 1:** The details of completed packages

No.	Package no	Package name	Mode	Actual cost	Estimated cost	Difference
1	...I/KL/KL1G18/196	E-journal subscription Science Direct	Direct Contract	556756	5,00,000	56,756.00
2	...I/KL/KL1G18/108	Books for Competitive Exams	Shopping	1,09,066.00	1,09,810.00	-744.00
3	...I/KL/KL1G18/116	Library Applied science	Shopping	2,60,000.00	2,59,204.00	796.00
4	...I/KL/KL1G18/166	Display Board	Shopping	73,738.00	56,000.00	17,738.00
5	...I/KL/KL1G18/174	Springer E journal	Direct Contract	2,03,837.00	2,07,000.00	-3,163.00
6	...I/KL/KL1G18/186	Computer table	Shopping	1,23,431.00	1,27,400.00	-3,969.00
7	...I/KL/KL1G18/187	3D Printer	Shopping	1,53,000.00	1,50,000.00	3,000.00
8	...I/KL/KL1G18/188	currency counter	Direct Contract	11,850.00	10,000.00	1,850.00

9	...I/KL/KL1G18/176 Portable Hardware Device	Direct Contract	37,280.00	42,000.00	-4,720.00
10	...I/KL/KL1G18/179 Microwave Test Benches	Shopping	1,86,942.00	1,95,000.00	-8,058.00
11	...I/KL/KL1G18/190 Keil development tools	Shopping	1,36,267.00	1,40,000.00	-3,733.00
12	...I/KL/KL1G18/191 Electronic Private Automatic Branch Exchange	Shopping	1,94,450.00	2,00,000.00	-5,550.00
Total			20,46,617.00	1996414.00	50,203.00

#### ***4.2 Packages with Revision in Estimate***

The details of packages with revision in price are presented in Table 2.

**4.2.1 Decision** The BoG approved the two packages with the new estimate of of Rs. 14, 19, 000.00.

**Table 2:** The packages with revision in price

No	Package no	Package name	Mode	Estimated cost
1	...I/KL/KL1G18/195	E-journal subscription IEEE	Direct Contract	6,19,000
2	...I/KL/KL1G18/205	High Performance Cloud Computing(HPCC)	Shopping	8,00,000

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Total	14,19,000.00
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### ***4.3 Packages to be Cancelled***

The details of packages to be cancelled are listed in Table 3.

**4.3.1 Decision** The BoG approved the cancellation of packages.

**Table 3:** The details of packages to be cancelled

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No.	Package No.	Name	Type	Price	Reason
1	...I/KL/KL1G18/198	TV demo kit	Shopping	60,000	TV demo kit with CRT is not available. Only kits with LCD/LED sreena are available.

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## 5 Academic Activities

The details of academic activities conducted post the 7<sup>th</sup> BoG are detailed below.

### ***5.1 In house programmes post the 7<sup>th</sup> BoG Meeting***

The details of in house programmes conducted are detailed in the Table [4](#) in page [9](#).

**Decesion :** The BoG approved the courses and to ratify the payment of Rs. 785080.00.

**Table 4:** The details of in house programmes conducted by the faculty

Sl No	Title	Coordinator	Dept	No. of External Participants	Date	Advance (Rs.)	Settled (Rs.)	Amount spent (Rs.)
1	PCB DESIGN AND FAB- RICATION TECHNIQUES	KURYACHAN T D	ECE	11	16 SEPT 2015- SEPT 2015	78000	7508	37508.00
2	LINEAR AL- GEBRA AND ITS APPLICA- TIONS	BINU V P	CS	3	28 OCT 2015- 30 OCT 2015	56000	4641	60641
3	EXPERT LEC- TURE ON MACHINE LEARNING TECHNIQUES AND APPLI- CATIONS	REMYA R S	CSE	NIL	27/11/2015 and 9/12/2015	NIL	8136	8136
4	WORKSHOP ON STATIS- TICS APPLI- CATION OF IMAGE PRO- CESSING AND PROBABILITY	GEETHA S	CSE		16-Dec-15	10000	2220	12220

5	RESEARCH ISSUES AND EMERGING TRENDS IN CONTROL and AUTOMATION ENGINEER- ING	LIBI A	EEE	44	13 JAN 2016 -17 JAN 2016	99000	107060	206062
6	ADVANCEMENT AND ALGO- RITHMS IN IMAGE PRO- CESSING	SHANI RAJ	CSE	26	27 JAN 2016-01 FEB 2016	75000	23549	98549
7	WORKSHOP ON INTRO- DUCTION TO PYTHON PRO- GRAMMING	JYOTHI R L	CSE	Nil	17 DEC 2015	10000	4494.00	14494.00
8	AUTOMATED ACCOUNTING SYSTEM US- ING TALLY ERP 9 SOLU- TION	SHEEJA, SANDHYA MURALI	Administrative Office	35	21 JAN 2016-23 JAN 2016	40000	43796	83796
9	MECHATRONICS ROBOTICS MEMS	RAJU M	EEE	34	3/12/2015- 5/12/2015	75000	6333.00	81333.00

[illegible]

**5.2 In house programmes post the 7<sup>th</sup> BoG Meeting whose bill settlement is pending**

The details of in house programmes conducted are detailed in the Table 5 in page 12.

**Decision :** The BoG approved the in house courses in Table 5 presented before the BoG .

**Table 5:** The details of in house programmes conducted by the faculty

Sl No	Title	Coordinator	Dept	No. of Ex-ternal Par-ticipants	Date	Advance (Rs.)
1	WORKSHOP ON COMPUTER VISION :TECHNIQUES AND APPLICATION	GEETHA S	CSE	NIL	17 March- March 19	0.0
Total						0.00

The in house academic programmes and the outstation programmes planned for the next three months are detailed.

**5.3 Outstation Programmes and the Expenditure Incurred**

The details of outstation programmes attended by faculty and staff and the expenditure incurred, as listed in Table 6, were presented in the meeting.

**Decision:** The BoG ratified the outstation courses in Table 6 and the expenditure of Rs. 782,943.00, incurred under this.

**Table 6:** The details of outstation programmes attended by the faculty and the expenditure

No. Name	Title	Course	Institution	Date	Advance (Rs.)	Settled (Rs.)	Spent (Rs.)	Repaid (Rs.)
1 SYLISH S V	Asst. Prof. in ECE	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CENTRE, IIT MADRAS	21 SEPT 2015- 23 SEPT 2015	Nil	8177	8177	Nil
2 DEEPA S	Asst. Prof. in ECE	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CENTRE, IIT MADRAS	21 SEPT 2015- 23 SEPT 2015	Nil	8177	8177	Nil
3 ANUJA NAIR	Asst. Prof. in ECE	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CENTRE, IIT MADRAS	21 SEPT 2015- 23 SEPT 2015	Nil	7891	7891	Nil
4 RAJU M	Asst. Prof. in EEE	POWER INDUSTRIALISATION AT PETARC	PETARC, MOOLAMATTOM, IDUKKI	15 OCT 2015 - 17 OCT 2015	11000	1191	12191	Nil
5 AJMAL K	Asst. Prof. in EEE	POWER INDUSTRIALISATION AT PETARC	PETARC, MOOLAMATTOM, IDUKKI	15 OCT 2015 - 17 OCT 2015	11000	700	11700	Nil
6 REVIKUMAR THAMPI V R	Asst. Prof. in ME	ACADEMIC LEADERSHIP FOR TEQIP INSTITUTIONS	IIM KOZHIKODE	27 OCT 2015 - 1 NOV 2015	Nil	2083	2083	Nil
7 ASWATHY S S	Asst. Prof. in ECE	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CENTRE, IIT MADRAS	29 OCT 2015 - 31 OCT 2015	3000	357	3357	Nil

8	CHIPPY VIJAYAN	Asst. Prof. in ECE	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CENTRE, IIT MADRAS	29 OCT 2015 - 31 OCT 2015	3000	357	3357	Nil
9	PREEMA R CHANDRAN	Asst. Prof. in EEE	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CENTRE, IIT MADRAS	29 OCT 2015 - 31 OCT 2015	3000	357	3357	Nil
10	RENJINI S	Asst. Prof. in ECE	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CENTRE, IIT MADRAS	29 OCT 2015 - 31 OCT 2015	3000	357	3357	Nil
11	ALKHA MOHAN	Asst. Prof. in CSE	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CENTRE, IIT MADRAS	3 NOV 2015 - 5 NOV 2015	3000	1157	4157	Nil
12	JISSY RAJU	Asst. Prof. in CSE	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CENTRE, IIT MADRAS	3 NOV 2015 - 5 NOV 2015	3000	1157	4157	Nil
13	SREE BHAGYA	Asst. Prof. in CSE	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CENTRE, IIT MADRAS	3 NOV 2015 - 5 NOV 2015	3000	1157	4157	Nil
14	HASEENA P Y	Asst. Prof. in EEE	FDP ON SIGNAL PROCESSING FOR BIOMEDICAL APPLICATIONS	MES COLLEGE OF ENGINEERING KUTTIUPURAM	16 NOV 2015 - 20 NOV 2015	Nil	4654	4654	Nil
15	JAYAKRISHNA A	Asst. Prof. in CSE	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CENTRE, IIT MADRAS	16 NOV 2015 - 18 NOV 2015	3000	748	3748	Nil
16	NIMMI V	Asst. Prof. in CSE	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CENTRE, IIT MADRAS	16 NOV 2015 - 18 NOV 2015	3000	748	3748	Nil

17	RESMI RA- MACHAN- DRAN	Asst. Prof. in CSE	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CEN- TRE, IIT MADRAS	16 NOV 2015 - 18 NOV 2015	3000	748	3748	Nil
18	MEERA MURALI	Asst. Prof. in EEE	FDP ON ELEC- TRICAL SYS- TEM DESIGN AND ELECTRI- CAL CAD	CE VADAKKARA	16 NOV 2015 - 21 NOV 2015	3000	1488	4488	Nil
19	PREEMA R CHAN- DRAN	Asst. Prof. in EEE	FDP ON ELEC- TRICAL SYS- TEM DESIGN AND ELECTRI- CAL CAD	CE VADAKKARA	16 NOV 2015 - 21 NOV 2015	3000	1488	4488	Nil
20	ANU MO- HAN	Asst. Prof. in ECE	FDP ON RE- SEARCH METHOD- OLOGY	CE ADOOR	16 NOV 2015 - 20 NOV 2015	Nil	1878	1878	Nil
21	RAJU M	Asst. Prof. in EEE	STTP ON SO- LAR ENERGY CONVERSION AND MANAGE- MENT	IIT GUWAHATI	23 NOV 2015 - 27 NOV 2015	25000	7772	32772	Nil
22	GANESH	Asst.Prof. in ME	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CEN- TRE, IIT MADRAS	18 JAN 2016 20 JAN 2016	10000	3180	13180	Nil
23	RETHEEKUMAR S	Asst. Prof. in Physics	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CEN- TRE, IIT MADRAS	18 JAN 2016 20 JAN 2016	10000	3367	13367	Nil

24	SHEELA R	Asst. Prof. in Maths	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CEN- TRE, IIT MADRAS	18 JAN 2016 20 JAN 2016	10000	3367	13367	Nil
25	LIBI A	Asst. Prof. in EEE	WORKSHOP ON ADVANCED CONTROL EN- GINEERING (ACE - 2015 )	NIT THIRUCHIRA- PALLI, TN	9 OCT 2015 10 OCT 2015	Nil	6651	6651	Nil
26	HASEENA P Y	Asst. Prof. in EEE	WORKSHOP ON ADVANCED CONTROL EN- GINEERING (ACE - 2015 )	NIT THIRUCHIRA- PALLI, TN	9 OCT 2015 10 OCT 2015	Nil	6511	6511	Nil
27	BINU V P	Asso. Prof. in CSE	WORKSHOP ON CYBER SECURITY- FUNDAMEN- TALS AND ADVANCE- MENTS	IIT, DELHI	4 NOV 2015 6 NOV 2015	32250	1620	33870	Nil
28	JYOTHI R L	Asst. Prof. in CSE	WORKSHOP ON CYBER SECURITY- FUNDAMEN- TALS AND ADVANCE- MENTS	IIT, DELHI	4 NOV 2015 6 NOV 2015	32250	1317	33567	Nil

29	GEETHA S	Asst. Prof. in CSE	WORKSHOP ON CYBER SECURITY- FUNDAMEN- TALS AND ADVANCE- MENTS	IIT, DELHI	4 NOV 2015 NOV 2015	6	32250	1317	33567	Nil
30	REMYA R S	Asst. Prof. in CSE	WORKSHOP ON CYBER SECURITY- FUNDAMEN- TALS AND ADVANCE- MENTS	IIT, DELHI	4 NOV 2015 NOV 2015	6	32250	1317	33567	Nil
31	REVIKUMAR THAMPI V R	Asst. Prof. in ME	WORKSHOP ON DESIGN AND ENGI- NEERING	CE TRIVANDRUM	31 OCT 2015 1NOV 2015	2083	Nil	2083	2083	Nil
32	ARYA A P	Asst. Prof. in EEE	WORKSHOP ON POWER SYSTEM SIMU- LATION STUD- IES USING ETAP SOFT- WARE	GEC, Barton Hill	12 NOV 2015 NOV 2015	13	2000	-392	1608	392

33	SUJITHA SUREN- DRAN	Asst. Prof. in EEE	WORKSHOP ON POWER SYSTEM SIMU- LATION STUD- IES USING ETAP SOFT- WARE	GEC, Barton Hill	12 NOV 2015 13 NOV 2015	2000	-392	1608	392
34	PRASANTHI R S	Asst. Prof. in EEE	WORKSHOP ON POWER SYSTEM SIMU- LATION STUD- IES USING ETAP SOFT- WARE	GEC, Barton Hill	12 NOV 2015 13 NOV 2015	2000	-392	1608	392
35	RENJINI S	Asst. Prof. in ECE	NATIONAL WORKSHOP ON ADVANCED DESIGN NANOSCALE DEVICE USING Tcad	CE CHENGAN- NOOR	28 DEC 2015 30 DEC 2015	Nil	1980	1980	Nil
36	ANILKUMAR C V	Asso. Prof. in ECE	WORKSHOP ON MATH- EMATICAL ANALYSIS AND ITS APPLI- CATIONS TO ENGINEERING	IIT GUWAHATI	2 JAN 2016 - 4 JAN 2016	30000	10994	40994	Nil

37	Premakumary K. R.	Prof.	WORKSHOP ON MATHEMATICAL ANALYSIS AND ITS APPLICATIONS TO ENGINEERING	IIT GUWAHATI	2 JAN 2016 - 4 JAN 2016	30000	10994	40994	Nil
38	DR. C. GOPAKUMAR	Asst. Prof. in ECE	WORKSHOP ON MATHEMATICAL ANALYSIS AND ITS APPLICATIONS TO ENGINEERING	IIT GUWAHATI	2 JAN 2016 - 4 JAN 2016	30000	10994	40994	Nil
39	SMITHA P.	Asst. Prof. in CSE	WORKSHOP ON ENGLISH FOR WRITING Ph D THESIS AND JOURNAL PAPERS	NIT TRICHY	20 JAN 2016 - 22 JAN 2016	Nil	7937	7937	Nil
40	LISSA A.	Librarian	OPEN SOURCE LIBRARY MANAGEMENT SOFTWARE ( KOHA)	KERALA AGRICULTURAL UNIVERSITY, VEL- LANIKKARA, THRISSUR	24 JULY 2015- 25 JULY 2015	Nil	982	982	Nil
41	Retheekumary S.	Asst. Prof. in Physics	STTP ON RECENT TRENDS IN APPLIED PHYSICS	DIVISION OF APPLIED SCI- ENCE AND HU- MANITIES SOE, CUSAT	21 JAN 2016- 15 JAN 2016	Nil	5136	5136	Nil

42	REMYA R S	ASST.PROF. MICROSOFT IN CSE	MAR BASELIOUS COLLEGE OF ENGINEERING AND TECHNOLOGIES	07 SEPT 2015 - 12 SEPT 2015	Nil	2818	2818	Nil
43	RAJU M	Asst. Prof. in EEE	FDP ON MICROCONTROLLER AND ITS APPLICATION TO POWER CONVERTERS	21 DEC 2015 - 25 DEC 2015	22500	6107	28607	Nil
44	BAIJU V	Asst. Prof. in ME	COMPUTATIONAL FLUID DYNAMICS	11 JAN 2016 15 JAN 2016	5000	1218	6218	Nil
45	PREMNATH G	Asst. Prof. in ME	COMPUTATIONAL FLUID DYNAMICS	11 JAN 2016 15 JAN 2016	Nil	6218	6218	Nil
46	RAJU M	Asst. Prof. in EEE	CLEAN ENERGY SYSTEM AND TECHNOLOGY	7 DEC 2015 - 11 DEC 2015	15000	496	15496	Nil
47	AJMAL K	Asst. Prof. in EEE	CLEAN ENERGY SYSTEM AND TECHNOLOGY	7 DEC 2015 - 11 DEC 2015	15000	14584	438	
48	JYOTHI R L	Asso. Prof. in CSE	LANGUAGE COMPUTING	CDAC LAYAMBALAM	18 JAN 2016 22 JAN 2016	5235	30235	Nil
49	SYLISH S V	Asst. Prof. in ECE	LANGUAGE COMPUTING	CDAC LAYAMBALAM	18 JAN 2016 22 JAN 2016	6118	31118	Nil

50	ANILKUMAR A	SYSTEM ANALYST	LANGUAGE COMPUTING	CDAC LAYAMBALAM	VEL-	18 JAN 2016 JAN 2016	25000	6118	31118	Nil
51	ANILKUMAR A	System analyst	STTP RESEARCH SKILLS AND METHODS	IIT KANPUR		19 FEB 2016 FEB 2016	12000	3303	15303	Nil
52	REJI THANKACHAN	Asst. Prof. ECE	STTP RESEARCH SKILLS AND METHODS	IIT KANPUR		19 FEB 2016 FEB 2016	18000	2982	20988	Nil
53	SHAJY L	Asst. Prof. in ECE	STTP RESEARCH SKILLS AND METHODS	IIT KANPUR		19 FEB 2016 FEB 2016	13000	2302	15303	Nil
54	JYOTHI R L	Asst. Prof. in ECE	STTP RESEARCH SKILLS AND METHODS	IIT KANPUR		19 FEB 2016 FEB 2016	18750	5223	23973	Nil
55	SHANI RAJ	Asst. Prof. in ECE	STTP RESEARCH SKILLS AND METHODS	IIT KANPUR		19 FEB 2016 FEB 2016	18750	5223	23973	Nil

56	P C SUNIL	Trademan	SDP ON A GLIMPSE INTO THE DESIGN AND IMPLEMENTATION OF ELECTRONICS HARDWARE RESOURCES	CE ADOOR	10 FEB 2016 12 FEB 2016	Nil	528	528	Nil
57	ANSAR	Demonstrator	SDP ON A GLIMPSE INTO THE DESIGN AND IMPLEMENTATION OF ELECTRONICS HARDWARE RESOURCES	CE ADOOR	10 FEB 2016 12 FEB 2016	Nil	528	528	Nil
58	SHAMNA S S	Asst. Prof. in ECE	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CENTRE, IIT MADRAS	25 FEB 2016 27 FEB 2016	Nil	3758.00	3758.00	Nil
59	RESHMA ITIACHAN	Asst. Prof. in ECE	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CENTRE, IIT MADRAS	25 FEB 2016 27 FEB 2016	Nil	3758.00	3758.00	Nil
60	ARYA A P	Asst. Prof. in EEE	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CENTRE, IIT MADRAS	25 FEB 2016 27 FEB 2016	Nil	3758.00	Nil	Nil
61	MEERA MURALI	Asst. Prof. in EEE	PEDAGOGICAL TRAINING PROGRAMME	TEACHING LEARNING CENTRE, IIT MADRAS	25 FEB 2016 27 FEB 2016	Nil	3758.00	3758.00	Nil

Minutes of the Eighth Meeting of the Board of Governors College of Engineering Karunagappally, April 12, 2016											
62	SHAJY L	System analyst	NATIONAL WORKSHOP ON PATENTS AND INTELLECTUAL PROPERTY RIGHTS	DEPT. OF MANITIES AND SCIENCE, NIT GOA	4 MARCH 2016 5 MARCH 2016	7000	10934.00	3934	Nil		
63	REMYA R S	Asst. Prof. in CSE	NATIONAL WORKSHOP ON PATENTS AND INTELLECTUAL PROPERTY RIGHTS	NIT GOA	4 MARCH 2016 5 MARCH 2016	7000	10378	3378	Nil		
64	SHANI RAJ	Asst. Prof. in CSE	NATIONAL WORKSHOP ON PATENTS AND INTELLECTUAL PROPERTY RIGHTS	NIT GOA	4 MARCH 2016 5 MARCH 2016	7000	10378	3378	Nil		
Total expenditure									782,943.00		

#### 5.4 Outstation Programmes Attended by Faculty with Bill Settlement Pending

The details of the outstation programmes, attended by the faculty and staff, whose bill settlement is pending are listed in Table 7 in page 24, were presented before the BoG for approval.

**Decision:** The BoG is decided to approve the courses in Table 7.

**Table 7:** The details of outstation programmes attended by the faculty whole settlement is pending

Sl No	Name	Title	Course	Institution	Date	Advance Amount
1	PREMNATH G	Asst. Prof. in ME	GREEN NANO TECHNOLOGY IN MATERIALS ENGINEERING AND ENERGY APPLICATION	CE ADOOR	15 DEC 2015 - 19 DEC 2015	Nil
2	SHEELA R	Asst. Prof. in Maths	ONE DAY SEMINAR ON DIFFERENTIAL EQUATIONS AND FOURIER SERIES - SOME APPLICATIONS	MAR BASE-LIOUS COLLEGE OF ENGG AND TECH-NOLOGY, TVM	14 JAN 2016	Nil
3	ASWATHY S S	Asst. Prof. in ECE	FDP ON ESTIMATION AND DETECTION THEORY	CE CHERTHALA	10 FEB 2016	Nil

### 5.5 Conferences Attended

The details of conferences attended by the faculty and staff and the expenditure incurred, listed in Table 8, are presented before the BoG for the approval.

**Decision** The BoG approved the conferences in Table 8 and sanctioned the payment of Rs. 9702.00 made to Alkha Mohan.

**Table 8:** The details of conferences attended post the seventh BoG and the expenditure incurred

Sl. No.	Participant	Title	Conference	Institution	Date(s)	Amt. Paid
1	Mr. Anilkumar C V	Asso. Prof in EC	IEEE TENCON	Macau, China	Nov 4 to 5	Unsettled
2	ALKHA MOHAN	Asst. Prof. in CSE	IEEE INTERNATIONAL CONFERENCE ON DATA MINING AND ADVANCED COMPUTING. (SAPIENCE - 16)	SN GURUKULAM COLLEGE OF ENGG, ERNAKULAM	16 MARCH 2016 to 18 MARCH 2016	9702.00
3	MANOJ RAY D	Asso. Prof. in CSE	INTERNATIONAL CONFERENCE ON INNOVATIONS IN BIO-INSPIRED COMPUTING AND APPLICATIONS	MIR LABS, TIST KOCHI, INDIA	16 DEC 2015 to 18 DEC 2015	Unsettled

### 5.6 Management Capacity Development Programme

The details of the management capacity enhancement programmes, attended by the faculty, are presented in Table 9.

**Decision** The BoG for the ratified the payment of Rs. 2,29,449.00 towards the management capacity development programmes in Table 9.

**Table 9:** The details of management capacity development programmes attended post the seventh BoG

Sl No	Name	Title	Course	Institution	Date	Advance (Rs.)	Settled (Rs.)	Spent (Rs.)
1	REVIKUMAR THAMPI V R	Asst. ME	HI in PACT LEAD- ERSHIP BLUEPRINT FOR SUC- CESS	GEC, Bar- ton Hill, TVM	8 OCT 2015 - 10 OCT 2015	36000	2329	38329
2	REMYA R S	Asst. CSE	HI in PACT LEAD- ERSHIP BLUEPRINT FOR SUC- CESS	GEC, Bar- ton Hill, TVM	8 OCT 2015 - 10 OCT 2015	36000	2154	38154
3	BAIJU V	Asst. ME	HI in PACT LEAD- ERSHIP BLUEPRINT FOR SUC- CESS	GEC, Bar- ton Hill, TVM	8 OCT 2015 - 10 OCT 2015	36000	2329	38329

4	GEETHA S	Asst. CSE	Prof.	in	HI PACT LEAD- ERSHIP BLUEPRINT FOR SUC- CESS	IM- GEC, ton TVM	Bar- Hill, 2015	8 OCT 2015 - 10 OCT 2015	36000	2154	38154
5	C V MAR	Asst. ECE	Prof.	in	HI PACT LEAD- ERSHIP BLUEPRINT FOR SUC- CESS	IM- GEC, ton TVM	Bar- Hill, 2015	8 OCT 2015 - 10 OCT 2015	36000	2329	38329
6	DEEPA T R	Asst. ECE	Prof.	in	HI PACT LEAD- ERSHIP BLUEPRINT FOR SUC- CESS	IM- GEC, ton TVM	Bar- Hill, 2015	8 OCT 2015 - 10 OCT 2015	36000	2154	38154
Total											2,29,449.00

### 5.7 EAP Activities–Soft Skill Training Conducted

The details of soft skill training given to students post the seventh BoG, as listed in Table 10 are presented for approval.

**Decision** The BoG ratified of the payment of Rs. 346, 522.00 towards soft skill training.

**Table 10:** The details of soft skill training conducted for students post the seventh BoG

Sl No	Programme	Batch	Date	Trainer	Advance Amount	Reimburse Amount	Spent Amount
1	SOFTSKILL TRAINING FOR FINAL YEAR STUDENTS	B.Tech Sem 8 - ECE, CSE, IT, and 13th year	5,6,11,12 and 13th SEPT 2015	CL cate, TVM	100000	97272	197272
2	SOFTSKILL TRAINING FOR THIRD YEAR STUDENTS	B.Tech Sem 6 - ECE, CSE, IT, and 14th year	FEB13-14, FEB 19,20,21 2016	CL cate, TVM	99000	50250.00	149250
Total							346,522.00

### 5.8 EAP Activities - Counseling Course Conducted

The details of the counseling class given to students post the seventh BoG, as listed in Table 11 are presented for approval.

**Decision** The BoG approved the counseling conducted and the ratified the payment of Rs. 12122.00.

**Table 11:** The details of soft skill training conducted for students post the seventh BoG

Sl No	Programme	Batch	Date	Trainer	Advance Amount	Reimburse Amount	Spent Amount
1	Mind Tun- ing/Motivation for S <sub>6</sub> EEE students	B.Tech EEE	Sem 6 February 11-12, 2016	Dr. T Padmakumar	9500.00	2622.00	12122.00

### 5.9 Remedial Courses Conducted

The details of the remedial classes given to students in the odd semester are listed in Table 12 are presented.

**Decision** The BoG ratified the payment of Rs. 68,400.00 towards remedial course conducted, as listed in Table 12.

**Table 12:** The details of remedial courses conducted for students in the odd semester

No	Faculty	Subject	Class	Date	Hours	Gen. Students	SC/ST students	Passed Gen.	Passed SC/ST	Expenditure
1	Jayadeepkumar.J (AP in ME)	Engineering graphics	S1EE	27/9/15	6	19	1	16	0	3600.00
2	Jayadeepkumar.J (AP in ME)	Fluid mechanics and heat engines	S3EE	1/8/15, 12/9/15	8	19	1			4800.00
3	Niyas.S (Research Associate IIITMK TVM)	Network theory EC1303	S3EC	08/01/2015	3	37	2			1800.00

4	Niyas.S (Research Associate IITMK TVM)	Digital signal processing EC1506	S7EC	8/8/15, 9/8/15, 15/8/15, 16/8/15	24	11	0	14400.00
5	Chippy Vijayan (AP in ECE)	Electro magnetic theory	S5EC	1/8/15, 4/8/15	5	2	0	3000.00
6	Sree Bhagya (AP in CSE)	Advanced computer networks	S7CS	15/9-18/9, 22/9, 23/9, 28/9, 5/10 -7/10 of 2015	10	14	0	6000.00
7	Haseena.P.Y(AP in EE)	Circuits signals and systems	S3EE	1/8/15 13/8/15	4	15	0	2400.00
8	Haseena.P.Y(AP in EE)	Circuits signals and systemsEE	S5EE	4/11/15, 6/11/15	8	13	0	4800.00
9	Haseena.P.Y(AP in EE)	Control systems II	S7EE	08/01/2015	2	8	0	1200.00
10	Preena R Chandran(AP in EE)	Introduction to electrical engg;	S1EE	10/10/2015	3	10	3 0	1800
11	Preena R Chandran(AP in EE)	Electronics devices and circuits	S7EE	27/11/15	3	5	0	1800
12	Sujitha Surendran(AP in EE)	Electrical machines II	S5EE	16/11/15	5	4	0	3000
13	MeeraMurali(AP in EE)	Linear integrated circuits	S5EE	5/11/15, 6/11/15	6	3	0	3600

14	MeeraMurali(AP inEE)	Design estimation and costing	S7EE	10/10, 17/10, 13/11, 14/11 of 2015	10	4	0	6000		
15	Arya.A(AP inEE)	Microprocessor based systems	S5EE	23/11/15, 24/11/15	8	4	0	4800		
16	Prasanthi.P.S(AP inEE)	Power system engg II	S7EE	3/11/15, 5/11/15, 6/11/15	9	12	0	5400		
17	Ajmal.K(AP inEE)	Field theoryEE1506	S7EE	15/8/15	6	8	1	4	1	Submitted
18	Ajmal.K(AP inEE)	Field theoryEE1506	S5EE	09/05/2015	6	8	1	Unsubmitted		
19	Ajmal.K(AP inEE)	EL2 HVDC1705	S7EE	26/11/15	3	10	0	Unsubmitted		
20	Ajmal.K(AP inEE)	Power system I 1505	S7EE	23/11/15	3	9	1	Unsubmitted		
<hr/>										
Total										68,400.00

Table 13 details the remedial teaching conducted for students in the even semester whose bills are not submitted and the examination results are not announced.

**Decision** The BoG decided to approve the remedial courses conducted, as in Table 13.

**Table 13:** The details of remedial courses conducted for students in the even semester whose bills are not submitted and the examination results are not announced

No	Faculty	Subject	Class	Date	Hours	Gen. Students	SC/ST students
1	Subeena H (AP in ECE)	Microprocessor architecture and programming	S4EC	20/2/16	2	5	2
2	Anu Mohan (AP in ECE)	Electronic circuits II	S4EC	17/3/16	1	4	1
3	Chippy Vijayan (AP in ECE)	Signals and systems	S4EC	5/3/16, 12/3/16, 19/3/16	9	28	3
4	Renjini S (AP in ECE)	Communication engg I	S4EC	02/05/2016	1	7	1
5	C.V.Anilkumar(Asso Prof: in ECE)	VLSIDesign	S6EC	23/1/16	2	22	2
6	Shamna S.S (AP in ECE)	Electronic measurements and circuits	S6EC	24/2/16,	1	3	0
7	Subeena H (AP in ECE)	Microwave techniques and devices	S6EC	5/2/2016, 24/03/2016	5	11	1
8	Aswathy S.S(AP in ECE)	Communication engg III	S6EC	02/04/2016	1	4	1
9	Anu Mohan (AP in ECE)	Hardware modeling	S6EC	23/2/16	1	19	2
10	Chippy Vijayan (AP in ECE)	Signals and systems EC1404	S8EC	5/3/16, 12/3/16	6	22	0

11	Renjini S (AP in ECE)	Wireless communication	S8EC	29/1/16	1	20	2
12	Deepa.A.K (AP in ECE)	Radar and navigation	S8EC	28/1/16	1	5	1
13	Sylsh S V (AP in ECE)	Multimedia Communication Systems	S8EC	03/04/2016	1	2	0
14	AswathyS.S(AP in ECE)	Communication engg III	S8EC	21/03/2016, 28/03/2016	3	6	0
15	Subeena H (AP in ECE)	Microwave techniques and devices	S8EC	28/03/2016, 29/03/2016	3	1	1

### ***5.10 Refund of Fees towards Membership in Professional Societies***

Mrs. Jyothi R L, AP in CS, Mr. Sylish S V, AP in EC had placed requests for the refund of half the annual membership fee of IEEE viz. Rs. 3275.00 and Rs. 2794.00 respectively. Anilkumar C V, Asso. Prof, in EC placed request for the refund of Rs 2630.00 towards half the amount paid to IEEE for refund from TEQIP.

**Decision** The BoG decided to ratify the payments to Mrs. Jyothi R L and Mr. Sylish S V and sanctioned the refund of Rs 2630.00 to Mr. Anilkumar C V.

### ***5.11 Refund of Fee for Journal Publication***

- Mr. Binu V P requested for the refund of an Amount of Rs. 14100.00 towards fee for publication of the paper titled *Secret Sharing Homomorphism and Secure E-Voting* in the *International Journal of Applied Engineering Research(IJAER)* .

The review comments for this paper is attached in the Appendix B in page 126.

**Decision** The BoG decided to sanction the amount of Rs. 14100.00 of to the author, Mr. Binu V P, towards the refund of fee for journal publication.

### ***5.12 Meeting of the Research Guidance Committee***

The meeting of the fourth Research Guidance Committee for TEQIP II at College of Engineering Karunagappally, Karunagappally, Kollam, Kerala Conducted on 30/01/2016 at 10:00 AM in Principal's room under the chairmanship of Senior Research Advisor Prof. E.Gopinathan. The Committee

- Examined the research proposals and suggested some changes before submission.
- Examined and approved the proposal for the international conference in July.

The draft minutes of the RGC meeting is included as Appendix C in page 129.

**Action Sought :** The BOG approved the draft minutes of the RGC meeting, included as Appendix C in page 129.

### ***5.13 Enhancement of PG Scholarship***

As per the SPFU direction ( Ref No. No. 199/SPFU/GOK/2012 dated 30.01.2016) the PG scholarship is increased to Rs. 8000/- with effect from 2016 December. This has been implemented from December 2016 scholarship onwards.

**Decision:** The BoG acknowledged the changes in the amounts of scholarship and directed the institution to comply with the new directive.

### ***5.14 Refund of Fee for Qualification Upgradation***

The Table 14 shows the requests for the refund of fee for the upgradation of qualification.

**Action sought:** The BoG decided to ratify the payment of Rs. 12260.00 to Mrs. Smitha P and Rs. 10640.00 to Mr. Shajy L towards the fee for the upgradation of qualification.

**Table 14:** The details of requests and the expenditure for the upgradation of qualification

Sl.No.	Name	Designation	Purpose	Amount
1	Smt.Smitha P	Asst. Prof. in CSE	Printing charges for PhD Thesis	12260.00
2	Mr.Shajy L	System Analyst	Printing charges for PhD Thesis	10640.00
Total				<b>22900.00</b>

The details of further requests by three more faculty are presented in Table 15.

**Decision:** The BoG decided to sanction the payment of Rs 79309.00 to members of the faculty, as listed in Table 15.

**Table 15:** The details of requests for the refund of fee for the upgradation of qualification

Sl.No.	Name	Designation	Purpose	Amount
1	Ms.Sabeena K	Asst. Prof. in CSE	Tuition Fee for M. Tech	32910.00
2	Mr.Vinod R	Asst. Prof. in CSE	Tuition Fee for M. Tech	17399.00
3	Ms.Shani Raj	Asst. Prof. in CSE	Ivth annual fee - Phd	29000.00
Total				<b>79309.00</b>

### ***5.15 Request for Support under ITSS - Sanction Pending***

The chairman approved the request by Mr.C V Anilkumar, Asso. Prof. in EC for support under ITSS for presenting paper at TENCON, Macau, China and submitted to NPIU through SPFU. The request was ratified by the seventh BoG. The applicant has attended the conference from Noveber 1–4, 2016 and presented the paper. But the request is not sanctioned by the NPIU

yet. Mr.C V Anilkumar, Asso. Prof. in EC has now placed a request to the Principal for getting the sanction. His request is appended in Appendix [D](#) in page [134](#).

**Decision:** It is decided to send a letter by the chairman of the Bog to NPIU to sort the matter out.

#### ***5.16 IIIC Activities–Industrial Visit to Nuclear Plant, Koodankulam***

Fifteen faculty visited the nuclear power plant at Koodankulam to get an exposure to the power generation and distribution from the plant.

**Action Sought :** The BoG decided to approve this industrial visit and to ratify the payment of Rs. 12,258.00, as listed in Table [16](#).

**Table 16:** The details of industrial visit by the faculty to Nuclear Plant, Koodankulam

Sl No	Coordinator	Activity	Department	Date	Advance Amount	Reimburse Amount	Amount Spent
1	LIBI A	KUDAMKULAM NUCLEAR POWER PLANT THIRUNELVELI, T N	FACULTY -EC, EEE	30 NOV 2015	10000	2258	12258.00

### 5.17 IIIC Activities–Industrial Tutoring

The details of industrial tutoring conducted post the seventh BoG is presented in Table 17.

**Decesion :** The BoG is decided to approve the industrial tutoring activities and ratified the payment of Rs. 1, 65, 870.00 as presented in Table 17.

**Table 17:** The details of industrial tutoring conducted for students post the seventh BoG

Sl No	Programme	Dept.	Industry	Advance (Rs.)	Settled (Rs.)	Amount (Rs.)	Date
1	INDUSTRIAL TALK ON ELECTRONIC PRODUCTION DESIGN	ECE	SFO GIES, EKLM	NIL	4915	4915	15 SEPT 2015
2	INDUSTRIAL TALK ON INTERNET OF THINGS	ECE	EARLY BIRD SECURITY SYSTEM, TVM	NIL	5615	5615	22 SEPT 2015

3	JAVA PROGRAMMING	CS, IT	SEAVIEW SUPPORT SYSTEM	26000	851	26851	30 SEPT 2015, 17 OCT 2015, 20 OCT 2015
4	MULTIMEDIA PROJECT USING MAYA	IT	SPOT WRITER TECHN. PVT LTD, TECHNO, TVM - ENTIRESOFT TECH. NILA, TVM	16875	6273	23148	19 and 26 SEPT 2015, 3 OCT 2015
5	PRINCIPLES and TECHNIQUES USED IN TI SIGNALING	ECE	BSNL, TVM	6000	3371	9371	9 OCT 2015
6	TALK ON AN-TENNA TYPES	ECE	DOORDARSHAN, OOTY	6500	5254	11754.00	16 OCT 2015
7	EMBEDDED SYSTEM DESIGN USING KEIL AND PROTEUS	ECE	TATA ELXSI, TVM	NIL	9994	9994	17 OCT 2015
8	INDUSTRIAL WORKSHOP ON RASPBERRY PI	ECE	BEGINOW, TVM	15000	6454	21456.00	31 OCT 2015, 1 NOV 2015
9	WORKSHOP ON MOBILE AND LAPTOP SERVICE	ECE	P C ENGINEERS, TEMPLE ROAD, THIRUNAKKARA, KOTTAYAM	NIL	5530.00	5530.00	16 NOV 2015

10	EXPERT TALK CS ON ADVANCE- MENTS AND APPLICATIONS IN INTERNET OF THINGS	GREY TECHNOLO- GIES, COCHIN	5600	2009	7609	18 FEB 2016
11	TALK ON SWITCH EEE GEAR AND PROJECT	KSEB 220 Kv SUB- STATION, MOOLA- MATTOM	NIL	9651.00	9651	15 MARCH 2016 16 MARCH 2016
12	MOBILE APPLI- ECE CATION DEVEL- OPMENT USING PHONE GAP	TENDER WOODS SO- LUTIONS PVT, BAN- GALORU	22500	7476.00	29976	29 FEB 2016 01 MARCH 2016
Total					1,65,870.00	

### 5.18 IIIC Activities–Industrial Visits by Students

The details of industrial visits made by students is presented in Table 18.

**Point of Discussion :** Industrial visits are permitted in the guidelines in Annexure IX in the new Project Implementation Plan, The copy of the annexure is included in the Appendix E in page 136. It is to debated whether payment may be given to students in respect of their traveling expenses.

**Decision :** The BoG decided to give the minimal and admissible TA to students but without any allowance.

**Table 18:** The details of industrial visits conducted for students post the seventh BoG

1	Industrial Visit	Electrical and Electronics	Nuclear Power Plant, Koodankulam	19 Feb 16	Not settled
2	Industrial Visit	Electrical and Electronics	BHEL and KDPP Nal- lalam	01/16	Not settled
3	Industrial visit by S8 EC	Electronics and Communication	FCRI	01/16	NOT SET- TLED
4	Industrial visit by S6 EC	Electronics and Communication	FCRI	03/16	NOT SET- TLED

### **5.19 IIIC Activities–Internship by Students**

The revised PIP include provision for reimbursing the TA, boarding, loading and sundry expenses to students who undertake internship, subject to the norms approved by the BoG. The extract of the relevant page of PIP is included as Appendix F in page 138.

**Decision :** BoG is requested to frame policies for student internship.

### **5.20 International Conference on Computing, Communication and Signal Processing**

The report, highlighting the progress of work in conducting the international conference is included in the Appendix G in page 140.

**Selection of Publisher of the Conference Proceedings** Being the first international conference, publishers such as Springer, Elsevier etc. were reluctant to publish the proceedings of the conference online. Mc Graw Hill has agreed to publish the hard copy of the conference proceedings with the following specifications.

- Book Size: Crown Quarto (trim size:  $7\frac{1}{4}in \times 9\frac{1}{2}in$ ; print area:  $6in \times 8in$ )
- Pages: 400
- Book Cover: 4-Colour
- Paper: 70 GSM (White) Text Paper with Text printing in 1-colour
- Book Binding: Softcover
- Print-ready PDFs: we will receive camera ready copy (high resolution PDFs for printing) of the book for printing Based on the above specifications, the fresh quotes by McGraw Hill Education was:
- 120 copies in Paperback @ INR 895/- per copy
- 150 copies in Paperback @ INR 815/- per copy
- Total Amount is Rs. 1,07,400.00

This amount is to paid in bulk on May 20, 2016.

**Decision :** The BoG is decided to approve the publisher and sanctioned the payment of Rs. 1,07,400.00 to McGraw Hill towards the cost of publication.

**Revision of the Estimate of Conference** The unanticipated item *Stage Decorations and Logistics* with estimated expenditure of Rs. 170,000.00 is to be included in the original estimate of conference, approved in the seventh BoG. The revise estimate now becomes Rs. 17,95000.00.

**Decision :** The BoG is requested to include the item *Stage Decorations and Logistics* in the estimate of conference and to sanction the revised estimate of Rs. 17,95000.00.

**Payment to Beach Hotel, Kollam** Beach Hotel, Kollam has raised an invoice for Rs. 449,525.00 towards the cost of venue. The invoice is included in the Appendix H in page 156. A token advance amount of Rs 50000.00 will be paid initially.

**Decision :** The BoG decided to approve the cost of Rs. 449,525.00 and the token advance payment of Rs 50000.00.

**Point of Discussion** We needed the NOC from Ministry of External Affairs, Ministry of Home Affairs and Ministry of Human Resources Development for foreign delegate to attend the conference. We submitted the application through proper channel on February 2, 2016 but the necessary papers are still held up in the state home department. They instruct that the application for the NOC should be routed directly to the central ministries with a copy for information to the state home department, on account of the recent changes in procedure. Accordingly, we sent the letters directly. The concern on the chance of not getting the NOC in time is shared with the BoG.

**Decision :** The BoG made the recommendation to contact Mr. Ajayan, Liason Officer, Kerala Hoose, Delhi to ease the affairs related to the international conference in Central Ministries.

### 5.21 Quarterly Plan for In House Training

The plan for in house training for the next three months is presented in Table 20.

**Decesion :** The BoG is requested to approve the plan and the estimate of Rs. 14.20 lakh.

**Table 19:** The courses planned for the next three months

No	Title	Coordinator	Month /Year	No of Days	Expenditure ( in lakhs)
1	Tools for Biomed- ical Research	Remya S, Geetha S	R April	5 days	1
2	Research Methodology	Mr. C V Anil Ku- mar, Smt. Deepa A K	April	5 days	1.2
3	Student coun- selling and stress relief techniques	Mrs. Deepa T R,	April	3 days	0.5
4	Circuit design tools	Mr. Kuriachan T D	April	5 days	1.25
5	Workshop on Fuzzy Logic and Neural Network	Raju M	April	6 Days	1

6	Mathematics for engineering research	Jyothi R L,Shani Raj	May	5 days	1
7	Networking and Simulation using NS2	Binu V P ,Remya R S	May	3 days	0.75
8	How to do a Good Phd	Libi A	May	5 days	1.25
9	Electrical System Design	Haseena PY	May	5 days	1
10	KSR rules	Vidhya	May	3 days	0.75
11	Pattern recognition and optimization Techniques in Image Processing	Geetha S,Jyothi R L	June	5 days	1
12	English for Thesis writing	Binu VP,Smitha P	June	3 days	0.75
13	Design and Development of Electronic products	Mr. Sylish S V, Mrs Renjini S	June	3 days	0.5
14	Signal and Image Processing	Dr. Gopakumar, Remya R S	June	5 days	1.5
15	Personality Development	Sandhya	June	3 days	0.75
Total					14.20

### 5.22 Quarterly Plan for Outstation Training

The plan for the outstation training for the next three months is presented. The plan for outstation training for the next three months is presented in Table 20.

**Decesion :** The BoG is requested to approve the plan and the estimate of Rs. 19.0 lakh.

**Table 20:** The outstation training planned for the next three months

No	Title	Participants	Month /Year	No of Days	Expenditure (' in lakhs)
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1	Algebra and number Theory ,IIT GUWAHATI	Binu V P	April 5 days	0.45
2	Mobile Application Development,ESCI	Binu V P,Anilkumar A,Shaji L	April 5 days	1
3	Pedagogy, IIT Madras	Mr. C V Anil Kumar	April 3 days	0.05
4	Pedagogy, IIT Madras	Dr. Gopakumar C	April 3 days	0.05
5	Mobile Application Development Using Android,ESCI	Mr. Reji Thankachan	April 5 days	0.4
6	Mobile Application Development Using Android,ESCI	Mr. Kuriachan T D	April 5 days	0.4
7	EMBEDDED SYSTEM DESIGN,IIT Kharagpur	Anilkumar.A,Shaji L	May 5 days	0.75
8	Pedagogy,IIT Madras	Smitha P,Shani Raj,Binu V P	May 3 days	0.75
9	Cyber defence tools for mobile and wireless technologies,ESCI	Jyothi R L,Shani Raj,Geetha.S,Remya R S	May 5 days	1.15
10	Pedagogy, IIT Madrass	Mrs. Shiny C	May 3 days	0.05
11	Technology 5G Wireless Communication Network,IIT Kanpur	Mr. C V Anil Kumar	May 5 days	0.35
12	Technology 5G Wireless Communication Network,IIT Kanpur	Dr. Gopakumar C	May 5 days	0.35
13	Mobile Application Development Using Android,ESCI	Mr. Sylish S v	May 5 days	0.4
14	Personality Development ,ESCI	Raju M	May 3 days	0.35
15	Personality Development ,ESCI	Libi A,Haseena PY	May 3 days	0.35

16	Refresher course in Software Engineering,IIT Kharagpur	Manoj Ray D, Jyothi R L, Shani Raj	June 5 days	1
17	Pedagogy,IIT Madras	Remya R, S,Sabeena K,Geetha S	June 3 days	0.75
18	EMBEDDED SYSTEM DESIGN,IIT Kharagpur	Reji Thankachan,Sylish S V	May 5 days	0.8
18	Mobile Application Development Using Android,ESCI	Mrs. Deepa A K	June 5 days	0.4
19	Energy management and energy efficiency at IIT, Guwahati	Mrs. Libi A, Mrs. haseena P Y, Mr. Raju M	May 23-27	1.0
20	Pedagogy,IIT Madras	Baiju V	April 3 days	0.25
21	Pedagogy,IIT Madras	Mrs. Prema	April 3 days	0.25
22	Recent Advancements in Computing by IHRD at MEC, Ekm	Geetha S Jyothi R.L Remya R.S Shani Raj Anil Kumar Jisy Raju Alka Mohan Jayakrishnan Vidhya S Binu V.P Smitha P	April 18-22,2016	3.85
23	Recent Advanced Linux Adminstration by IHRD at MEC, Ekm	Preema R Chandran Prasanthi P.S Arya A.P Sujitha Surendran Anu Mohan Aswathy S.S Renjini S Subeena H Deepa T.R Ganesh R Sheela R	April 18-22,2016	3.85
Total				19.0

### 5.23 Plan for the IIIC Activities for the Next Three Months

The plan for IIIC activities for the next ththree months is presented in Table 21.

**Action Sought:** The details are placed before the BoG for approval of the planned IIIC activities.

**Table 21:** The for IIIC activities for the next three months

Sl. No.	Programme	Dept.	Industry	TARGET GROUP	Date	Estimate
1	Expert lecture	EE	Startup Mission Kerala	S8 and S6 EEE students	04/16	1500
2	Expert lecture	EE	Energy Management Cell	S8 and S6 EEE students	04/16	7500
3	Expert lecture	EE	Electrical Inspectorate	S8 and S6 EEE students	06/16	7500
4	Industrial Visit	EE	High Voltage India Bangalore	EEE Dept Faculty	04/16	15000
5	Internship	EE	Nuclear Power Plant, Koodankulam	S8 and S6 EEE students	06/16	20000
6	Internship	EE	Advanced Training Institute, Madras	S6 EEE students	06/16	20000
7	Workshop on PCB Design	EC	Ebird	S7EC	07/16	20000
8	Internet of things	EC	Ebird	S5EC	07/16	5000
9	Electronic Production Design	EC	SFO Technologies	S7EC	07/16	5000
10	Internship	EC	KMML	S6EC/M2	May/June 2016	10000
11	Internship	EC	KELTRON	S6EC/M2	May/June 2016	10000
12	Internship	EC	BSNL	S6EC/M2	May/June 2016	10000
13	Talk on Nuclear Power Station	EC	Nuclear Power Station, Koodankulam	S2EC	04/16	5000

14	Entrepreneurship Development	EC	Union Bank	Mtech	04/16	5000
15	Talk on air-port communication	EC	Airport authority	M Tech	03/16	5000
16	Industrial training for staff	EC	Texas Instruments Bangalore	Faculty	May/June 2016	30000
17	Industrial visit of staff	EC	NeST	Faculty	May/June 2016	40000
18	Industrial visit of staff	EC	ITI	Faculty	May/June 2016	10000
19	Industrial visit of staff	EC	High voltage India	Faculty	May/June 2016	10000
20	Industrial visit of staff	EC	Startup Village	Faculty	May/June 2016	10000
21	Industrial visit of staff	EC	SCTIMST	Faculty	May/June 2016	10000
22	Graphics and Web Designing	CS	Seaview Support System Pvt. Ltd. Technopark	B-Tech	May/June 2016	15,000
23	JAVA Application Development	CS	Softtex digital private limited Technopark	B-Tech	May/June 2016	15,000
24	Android Application Development	CS	Seaview Support System Pvt. Ltd. Technopark	B-Tech and M-Tech	May/June 2016	45,000
25	DOT NET Technologies	CS	Seaview Support System Pvt. Ltd. Technopark	B-Tech	May/June 2016	30,000
26	Linux Customization	CS	Softtex digital private limited Technopark	B-Tech	May/June 2016	30,000
27	Industrial visit	CS	Cdot Bangalore	Faculty	May/June 2016	30,000
28	Industrial visit	CS	CDAC, Trivandrum	Faculty	May/June 2016	20,000
29	Industrial visit	CS	IBM, Bangalore	Faculty	May/June 2016	40,000

30	Industrial visit	CS	NeST Institute of Fiber Optic Technologies	Faculty	May/June 2016	20,000
31	Industrial visit	CS	Seaview Support System Pvt. Ltd. Technopark	Faculty	May/June 2016	20,000
32	Training on database administration	CS	Seaview Support System Pvt. Ltd. Technopark	Faculty	May/June 2016	70,000
33	Training on Network Administration	CS	Seaview Support System Pvt. Ltd. Technopark	Faculty	May/June 2016	70,000
34	Training on Information Security	CS	Appins Technologies, Trivandrum	Faculty	May/June 2016	70,000
35	Linux Administration	CS	Seaview Support System Pvt. Ltd. Technopark	B-Tech	May/June 2016	40,000
36	Graphics Implementation with OpenGL	CS	Technopark, Trivandrum	M-Tech	May/June 2016	20,000
37	Internship	CS	BSNL Training Centre, Trivandrum	B-Tech	May/June 2016	70,000
38	Industrial visit	CS	VSSC, Trivandrum	B-Tech	May/June 2016	20,000
39	Industrial visit	CS	CDAC, Trivandrum	B-Tech	May/June 2016	20,000
40	Industrial visit	CS	IBM, Bangalore	M-Tech	May/June 2016	50,000
41	Industrial visit	CS	Infopark, Cochin	B-Tech	May/June 2016	30,000
Total						981500.00

#### 5.24 Plan for Remedial Courses

The plan for conducting remedial classes prior to University Examinations is presented in Table 22.

**Action Sought :** BoG is requested to approve the plan for remedial teaching and the estimate of Rs. 391,500.00.

**Table 22:** The remedial teaching planned for April and May 2016

SI No	Name and designation of faculty	Subject	Class	Hours	Estimate
1	Shiny.C (AP in ECE)	Digital system design	S8EC	20	12000
2	Deepa.T.R (AP in ECE)	Digital system design	S8EC	20	12000
3	Chippy Vijayan (AP in ECE)	Signals and systems	S8EC	20	12000
4	AswathyS.S(AP in ECE)	Communication engg III	S8EC	5	3000
5	Subeena H (AP in ECE)	Microwave techniques and devices	S8EC	6	3600
6	Shiny.C (AP in ECE)	Digital system design	S6EC	20	12000
7	Deepa.T.R (AP in ECE)	Digital system design	S6EC	20	12000
8	Chippy Vijayan (AP in ECE)	Signals and systems	S6EC	20	12000
9	Shiny.C (AP in ECE)	Digital system design	S4EC	15	9000
10	Deepa.T.R (AP in ECE)	Digital system design	S4EC	15	9000
11	Renjini S (AP in ECE)	Communication engg III	S4EC	8	4800
12	MeeraMurali(AP inEE)	Electrical machines design	S8EE	8	4800
13	Prasanthi.P.S(AP inEE)	Power systemIII	S8EE	6	3600
14	Preema R Chandran(AP inEE)	Electronic instrumentation	S8EE	6	3600
15	Ajmal.K,Sujitha(AP inEE)	Digital system processing	S6EE	10	6000

16	Preema R Chandran(AP inEE)	Electrical machines III	S6EE	10	6000
17	Haseena.P.Y(AP inEE)	Control system I	S6EE	8	4800
18	Arya.A,Prasanthi.P.S(AP inEE)	Electrical drawing	S6EE	8	4800
19	Libi.A(AP inEE)	Optimization technique	S6EE	6	3600
20	MeeraMurali(AP inEE)	Industrial power electronics	S4EE	15	9000
21	Preema R Chandran(AP inEE)	Digital electronics	S4EE	10	6000
22	Haseena.P.Y Libi.A(AP inEE)	Circuits,Signals and systems	S4EE	10	6000
23	Arya.A(AP inEE)	Analog communication	S4EE	6	3600
24	Renu.K.K	Engg Mathematics III	S4EE	5	3000
25	Preema R Chandran(AP inEE)	Basic electrical engg	S2EE	8	4800
26	Jayadeepkumar.J (AP in ME)	Engg Mechanics	S2EE	10	6000
27	Shiny.C (AP in ECE)	Basic electronics engg	S2EE	8	4800
28	Jyothi.R.L(A.P in CS)	Introduction to Computing and problem Solving	s2CS	8	4800
29	Binu VP(Asso Prof in CS)	Introduction to Computing and problem Solving	s2CS	8	4800
30	Achama O N(AP in Applied Sciene)	Engineering Chemistry	S2CS	10	6000
31	Ajilkumar A(Asso Prof in M.E)	Engineering Mechanics	S2CS	10	6000
32	Ajmal K(AP in EE)	Basic Electrical Engg	S2CS	10	6000
33	Sree Bhagya	Data Communication	S6 CS	8	4800

34	Remya R S(AP in CS)	Automata lan- guages and computations	s4CS	10	6000
35	Premakumari(AP in Ap- plied Science)	Engineering Mathamematics IV	S6IT	10	6000
36	Libi.A(AP inEE)	Electrical Technology-S3	s6IT	10	6000
37	Nimmy V(AP in ECE)	Logic System and Electronic Circuits	S6IT	10	6000
38	Alkha Mohan(AP in CS)	Data and Com- puter Networks	s4IT,S6IT	10	6000
39	Suni .S(AP in CS)	Microprocessor Architecture and System Design	S6IT	10	6000
40	Nimmy V(AP in ECE)	Knowledge Engi- neering	S6IT	10	6000
41	Jyothi.R.L(A.P in CS)	DBMS	S6IT	10	6000
42	Sree Bhagya(AP in IT)	Data Structures and Algorithm	S6IT	10	6000
43	Suni .S(AP in CS)	Internet Pro- gramming	S6IT	10	6000
44	Baiju V(AP in ME)	Financial Man- agement and E Banking	S6IT	10	6000
45	Alkha Mohan(AP in CS)	Compiler Con- struction	S6IT	10	6000
46	Geetha S.(AP in CS)	System Program- ming	S4IT	10	6000
47	Remya R S(AP in CS)	Formal Lan- guages and Automata The- ory	S6IT	10	6000
48	Arya Chandran (AP in CS)	Computer Graph- ics and Anima- tion	S6IT	10	6000
49	Vidhya S(AP in CS)	Datamining and Ware housing	S6IT	10	6000

50	Ganesh R(AP in ME)	Enginneering Me- chanics	S4IT	10	6000
51	Renu K K(AP in Applied Science)	Enginnering Mathematics	S4IT	10	6000
52	Geetha S.(AP in CS)	Computer Archi- tecture and Or- ganisation	S4 CS	10	6000
53	Renu K K(AP in Applied Science)	Engineering Mathematics	S4CS	10	6000
54	Suni .S(AP in CS)	Micro processor	S4CS	10	6000
55	Binu VP(Asso Prof in CS)	Data Structures and Algorithm	S4CS	10	6000
56	Premnath.N	Engineering Me- chanics	S4CS	10	6000
57	Premnath.N	Engineering Graphics	S4CS	10	6000
58	Achama O N(AP in Ap- plied Sciene)	Engineering Chemstry	S4CS	10	6000
59	Premakumari(AP in Ap- plied Science)	Engineering Mathematics -II	S4CS	10	6000
60	Nimmy V(AP in CS)	Logic Design	s4CS	10	6000
61	Binu VP(Asso Prof in CS)	Object oriented Programming	S4CS	10	6000
62	Geetha S.(AP in CS)	Principles of Programming Languages	S4CS	10	6000
63	AswathyS.S(AP in ECE)	Electronic devices and Circuits	S4CS	10	6000
Total					<b>391, 500.00</b>

## Part III

# Reports

### 6 Summary of Expenditure

The statement of expenditure post the sixthg BoG is presented in Table [23](#). The total expenditure as on March 31, 2016 is Rs. **72276930.00** out of the nine crore we received.

**Decision:** The BoG examined and approved the statement of expenditure, given in Table [23](#).

**Table 23:** The statement of expenditure from November 1, 2015

Sr.No.	Expenditure Name	Cumulative Expendi- ture up to october 2015	Expenditure for Novem- ber 2015	Expenditure for Decem- ber 2015	Expenditure for January 2016	Expenditure for Febru- ary 2016	Expenditure for March 2016	Cumulative Expendi- ture up to March 31, 2016
1	Procurement	46971684	109066	260000	492118	630494	418672	48882034
2	Providing As- sistantships for Increased enrolment in existing and new PG Programmes in Engineering Disciplines	6701000	624000	Nil	900000	630000	504000	9359000
3	Enhancement of Re- search and Devel- opment and Insti- tutional Consultancy Activities	645846	24650	Nil	Nil	23957	47955	742408
4	Faculty and staff development for improved compe- tence based on Training Needs Analysis(TNA)	4778138	54897	261083	159246	331222	769185	6353771
5	Enhanced Interac- tion with Industry	411593	49999	12258	32586	34791	57230	598457

6	Institutional Management Capacity enhancement	379835	229449	Nil	Nil	Nil	Nil	609284
7	Implementation of Institutional reforms	898880	Nil	Nil	Nil	Nil	Nil	898880
8	Academic support for weak students	724254	Nil	197272	Nil	12122	149250	1082898
9	Incremental Operating Cost	3264623	161075	49200	127323	88762	59215	3750198
9.1	Salaries	1145048	50000	49200	50000	50000	50000	1394248
9.2	Consumables	380115	7947	Nil	500	19865	9215	417642
9.3	Operation and Maintenance	1709360	103928	Nil	76823	18897	nil	1909008
To tal		64775853	1253136	779813	1711273	1751348	2005507	<b>72276930</b>

## **Part IV**

# **Any Other Item with the Permission of the Chair**

There were no special item, presented before the BoG.

## **Part V**

# **Appendices**

### **A Minutes of the Seventh BoG**

## Minutes of the Seventh BoG Meeting on November 16, 2015



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**Seventh Meeting of the Board of Governors  
College of Engineering Karunagappally**

Minutes for November 16, 2015

**Present:**

**Prof. V P N Nampoori, Professor Emeritus** (Chair)

Mr. Sherif M, Govt.Representative

Dr. Hari V S, Principal

Dr. Sureshkumar P, Educationist, Addln. Director,IHRD

Dr. Sam Thomas, Representative of CUSAT

Mr. Manoj Ray D, Member

**Absent:**

Dr. V P Devassia, Educationist, Addln. Director,IHRD

Dr. Ajilkumar A,Member, HOD(Mechanical Engg.)

Mr. James, Govt.Representative

**Invitees:**

Dr. V Gopakumar, Director (SPFU)

Mr. Sylish S V, Procurement coordinator

Mrs. Deepa V S, Academic Coordinator

Mr. Shajy L, Finance Coordinator

Mrs. Premakumari K R, EAP Coordinator

Mr. Baiju V, IIIC Coordinator

Mrs. Smitha P, R and D Coordinator

## Part I

# Procedural Items

### 1 Opening of Meeting

The meeting started at 09 : 30 *AM* with a silent prayer followed by the welcome address by the Hon. Chairman, BoG.

### 2 Confirmation of the Minutes of the 6<sup>th</sup> BoG Meeting

The minutes of the sixth meeting of the BoG was considered by the members.

#### *2.1 Decision*

BoG approved the minutes of the sixth meeting of the BoG held on May 4, 2015

### 3 Report on the Action Taken/Pending on the Decisions in the 6<sup>th</sup> BoG

There were 24 decisions in the sixth BoG, the details of execution of which are presented in the meeting.

- The principal requested, on behalf of the faculty, to reconsider the decision 3.1 (in page 18 of the minutes of the 6<sup>th</sup> BoG). The members pointed out that the restriction of two faculty per Department per outside FDP is to ensure that there are enough people to handle the classes. It can be judiciously decided without disturbing the classes.

#### *3.1 Decision*

The BoG approved the action taken report and acceded to the request of the Principal in regard to the Decision 3.1 in the minutes of the sixth BoG.

## Part II

# Discussion, Ratification and Approval

### 4 Procurement Activities

The details of completed, cancelled, initiated and in progress packages are discussed.

#### *4.1 Completed Packages*

The details of payment made for various goods to the firms, as listed in the Table 1, are presented in the BoG.

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*4.1.1 Decision* — The BoG ratified the payment of Rs. 40,14,965.00 towards the payment of 5 completed packages.

**Table 1:** The details of completed packages

Sl. No.	Package No.	Name	Type	Firm	Amt. Paid
1	TEQIP-II/KL/KLIG18/170	DreamSpark Shopping		Technology Excellence Group, Kochi	139106.00
2	TEQIP-II/KL/KLIG18/168	Water cooler	Shopping	ABM Cooling Solutions, Kochi	70500.00
3	TEQIP-II/KL/KLIG18/169	DC Machines and Servomotors	Shopping	Scientific Enterprises, Kochi	815557.00
4	TEQIP-II/KL/KLIG18/48	Microprocessors and microcontrollers	Shopping	Scientific Enterprises, Kochi	544504.00
5	TEQIP-II/KL/KLIG18/125	Unitized sub-station	NCB	V S Associates, Karunagappally	2445298.00
Total					40,14,965.00

## 4.2 Cancelled Packages

The packages listed in Table 2 in page 4 are cancelled. The reasons for cancellation are also indicated. The BoG expressed concern that some purchases are not completed due to many reasons, with the consequent cancellation of those packages. The members suggested that cancellation should be the last resort, before which every effort should be taken to procure the item. The members urged that

- The package No. 188, Currency counting machine should have the fake currency detection facility
- The rest of the procurement should be done in one stretch.
- The procurement coordinator pointed out that the total plan, that exceeds the balance amount for procurement, is presented and the purchase will be in full swing when the PMSS gets ready.

**4.2.1 Decision** — The BoG gave approval for the cancellation of 9 packages.

**Table 2:** The details of cancelled packages

Sl. No.	Package No	Package Name	Mode	Reason
1	...II/KL/KL1G18/70	Digital meters Electrical	Shopping	The supplier is unable to supply the items as one of the items with the given specification is not available with them
2	...I/KL/KL1G18/167	EPBAX	Shopping	Supplier is unable to supply as the item is not available in the market
3	...I/KL/KL1G18/171	APFC	Shopping	None of the quotations satisfy the warranty condition
4	...I/KL/KL1G18/172	IEEE journal	Direct Contract	The validity of quotation is not as per our invitation. and Due to lack of funds
5	...I/KL/KL1G18/173	Science Direct journal	Direct Contract	The validity of quotation is not as per our invitation. and Due to lack of funds
6	...I/KL/KL1G18/181	Tools for Foundry Shop	Shopping	No quotation has been received
7	...II/KL/KL1G18/58	Spectrum analyzer	Shopping	L1 supplier has given more than one options in the quotation. So the quotation is invalid. The prices quoted in all other quotations were more than 25% of the estimated cost
8	...I/KL/KL1G18/177	HF PCB Manufacturing Facility	Shopping	one of the item in the package was not quoted by any of the firms

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9	...I/KL/KL1G18/138	Furniture for Lab and class-room	Shopping	No quotations has been received
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### 4.3 Packages to be Initiated

The list of packages to be initiated, as detailed in Table 3, were placed before the BoG for approval.

4.3.1 **Decision** — The BoG sanctioned approval for the nine packages.

**Table 3:** The details of packages to be initiated

Sl. No.	Package No	Package Name	Mode	Estimated Cost
1	...I/KL/KL1G18/182	Satellite Receiver set	Direct Contract	6,000.00
2	...I/KL/KL1G18/188	currency counter	Direct Contract	10,000.00
3	...I/KL/KL1G18/178	Analog meters	Shopping	25,000.00
4	...I/KL/KL1G18/176	Portable Hardware Device	Direct Contract	42,000.00
5	...I/KL/KL1G18/144	Public Address System	Shopping	1,00,000.00
6	...I/KL/KL1G18/189	corridor surveillance system	Shopping	1,00,000.00
7	...I/KL/KL1G18/113	Library EC2	Shopping	1,73,880.00

8	...I/KL/KL1G18/191	Electronic Private Automatic Branch Exchange	Shopping	2,00,000.00
9	...I/KL/KL1G18/174	Springer E journal	Direct Contract	2,07,000.00
Total				8,63,880.00

#### 4.4 Procurement Plan for the Next Three Months

Due to the cancellation of some packages, some more funds became available for procurement. Table 4 that details the plan for this new procurement for the next three months for an estimated amount of Rs. 53,76,000.00, was presented before the BoG for approval.

4.4.1 Decision — BoG approved the packages with estimated value of Rs. 53,76,000.00.

**Table 4:** The plan of procurement for the next three months

Sl. No.	Name of package	Mode	Estimated cost (in lakhs)
1	Automatic Power factor correction unit	Shopping	3
2	Chemistry Lab Equipment	Shopping	3
3	Physics lab equipment	Shopping	2.1
4	E-journal subscription IEEE	Direct Contract	4
5	E-journal subscription Science Direct	Direct Contract	5
6	Smithy and foundry	Shopping	1
7	TV demo kit	Shopping	0.6
8	Teachers PA System	Direct Contract	0.4
9	Teaching aids in class rooms	Shopping	5.16

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10	Minor civil works	Shopping	9
11	Extension of computer network	Shopping	3.75
12	Electrical meters	Direct Contract	0.5
13	Machines lab Equip-ment	Shopping	3.25
14	Optical Lab Equip-ment	Shopping	3
15	Embedded Develop-ment Board	Shopping	1
16	Solar Driven inverter w/o battery	Shopping	4
17	HPCC	Shopping	5
Total			Rs. 53,76,000.00

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## 5 Academic Activities

The details of academic activities conducted post the 6<sup>th</sup> BoG are detailed below.

### ***5.1 In house programmes post the 6<sup>th</sup> BoG Meeting***

The details of in house programmes conducted are detailed in the Table 5 in page 9.

- The members suggested that the the agenda should also contain the advance amount and the amount spent and the balance also.
- The monitoring and evaluation cell should look into the progress of courses.

**5.1.1 Decision** — The BoG approved the conducted programmes and ratified the payment of Rs. 53426.00.

**5.1.2 Decision** — The BoG directed to include the advance received, amount spent and the balance paid in the agenda of future meetings.

**Table 5:** The details of in house programmes conducted by the faculty

Sl. No.	Title	Coordinator	Dept.	No. of Ext. Participants	Date	Amt. Spent
1	Workshop on PCB design and Fabrication Techniques	Mr.Kuryachan T D	EC	11	16.09.15 – 18.09.2015	not settled
2	Linear Algebra and Application	Mr.Binu V P	CS	3	28 – 30 Oct.2015	not settled
3	Recent Issues In Biomedical Research	Ms.Remya R S	CS	3	29 July 2015 – 31 July 2015	53426.00
Total						53426.00

### ***5.2 Outstation Programmes and the Expenditure Incurred***

The details of outstation programmes attended by faculty and staff and the expenditure incurred, as listed in Table 6, are presented in the meeting.

**5.2.1 Decision** — The BoG ratified the payment of Rs. 387719.00.

**Table 6:** The details of outstation programmes attended by the faculty and the expenditure

Sl. No.	Name	Title	Course	Institution	Date	Amt spent
1	Ms.Mili Roseline Mathews	Asst. In ECE	Pedagogical Training	IIT Madras	23 to 25 feb 2015	10023
2	Ms.Deepa T R	Asst. In ECE	Pedagogical Training	IIT Madras	23 to 25 feb 2015	10023
3	Ms.Jyothi R L	Asst. In CSE	Pedagogical Training	IIT Madras	23 to 25 feb 2015	10023
4	Dr.Ajikumar A	Asso. In ME	Pedagogical Training	IIT Madras	26 to 28 feb 2015	5175
5	Mr.Revikumarthampi V R	Asst. In ME	Pedagogical Training	IIT Madras	26 to 28 feb 2015	5175
6	Mr.Raju M	Asst. In EEE	Pedagogical Training	IIT Madras	26 to 28 feb 2015	5175
7	Mr.Premnath G	Asst. In ME	Pedagogical Training	IIT Madras	May 21 to 23 2015	5000
8	Mr.Jayadeepkumar J	Asst. In ME	Pedagogical Training	IIT Madras	May 21 to 23 2015	5000
9	Mr.Reji Thankachan	Asst. In ECE	Pedagogical Training	IIT Madras	May 21 to 23 2015	5000
10	Ms.Renu K K	Asso. In Maths	Pedagogical Training	IIT Madras	25 to 27 may 2015	14175

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11	Ms. Deepa A K	Asst. Prof .in ECE	Pedagogical Training	IIT Madras	20 to 22 aug 2015	5032
12	Ms Haseena PY	Asst. prof.in EEE	Pedagogical Training	IIT Madras	20 to 22 aug 2015	4678
13	Ms .Libi A	Asst. prof.in EEE	Pedagogical Training	IIT Madras	20 to 22 aug 2015	4678
14	Dr. C Gopakumar	Asst.Prof .in ECE	Summer School On Image Processing	NIT Ku- rushetra	8/6/2015 to 12/6/2015	40050
15	Anuja V Nair,	Asst.Prof .in ECE	Summer School On Image Processing	NIT Ku- rushetra	8/6/2015 to 12/6/2016	37554
16	Jyothi R L	Asst. Prof. In CSE	Summer School On Image Processing	NIT Ku- rushetra	8/6/2015 to 12/6/2017	30838
17	Remya R S	Asst. Prof. In CSE	Summer School On Image Processing	NIT Ku- rushetra	8/6/2015 to 12/6/2018	37554
18	Mr. Anilkumar A	System Ana- lyst	Summer School On Image Processing	NIT Ku- rushetra	8/6/2015 to 12/6/2019	20085
19	C V Anil Kumar,	Asso. Prof. In ECE	Sttp On Antennas and Microwave Pas- sive Components to Designand Measure- ments	IIT Kharag- pur	22/6/2015 to28/6/2015	44404
20	Dr. C Gopakumar	Asst.Prof .in ECE	Sttp On Antennas and Microwave Pas- sive Components to Designand Measure- ments	IIT Kharag- pur	22/6/2015 to28/6/2015	44404

[illegible]

### ***5.3 Outstation Programmes Attended by Faculty with Bill Settlement Pending***

The details of the outstation programmes, attended by the faculty and staff, whose bill settlement is pending are listed in Table 7 in page 15, were presented before the BoG for approval.

**5.3.1 Decision** — The BoG decided to ratify the decision of the principal to depute the faculty to these courses in Table 7.

**Table 7:** The details of outstation programmes attended by the faculty whole settlement is pending

Sl.No	Name	Designation	Course	Date
1	Ms.Jyothi R L	Asst. Prof. In CSE	Workshop on Cyber Security to Fundamentals and Advancements at IIT, Delhi	Nov. 4 to 6, 2015
2	Mr.Binu V P	Asso. Prof. In CSE	Workshop on Cyber Security to Fundamentals and Advancements at IIT, Delhi	Nov. 4 to 6, 2015
3	Ms.Geetha S	Asst. Prof. In CSE	Workshop on Cyber Security to Fundamentals and Advancements at IIT, Delhi	Nov. 4 to 6, 2015
4	Ms.Remya R S	Asst.Prof. In CSE	Workshop on Cyber Security to Fundamentals and Advancements at IIT, Delhi	Nov. 4 to 6, 2015
5	Mr.Sylish S V	Asst. Prof. In ECE	Pedagogical Training IIT Madras	21 to 23 Sept. 2015
6	Ms.Deepa V S	Asso. Prof. In ECE	Pedagogical Training IIT Madras	21 to 23 Sept. 2015
7	Ms.Anuja V Nair	Asst. Prof. In ECE	Pedagogical Training IIT Madras	21 to 23 Sept. 2015
8	Ms.Preema R Chandran	Asst. Prof. In EEE	Pedagogical Training IIT Madras	29 to 31 Oct. 2015
9	Ms.Aswathy S S	Asst. Prof. In ECE	Pedagogical Training IIT Madras	29 to 31 Oct. 2015

10	Ms.Chippy Vijayan	Asst. Prof. In ECE	Pedagogical Training IIT Madras	29 to 31 Oct. 2015
11	Ms.Renjini SS	Asst. Prof. In ECE	Pedagogical Training IIT Madras	29 to 31 Oct. 2015
12	Ms.Jissy Raju	Asst. Prof. In CSE	Pedagogical Training IIT Madras	3 to 5 Nov. 2015
13	Ms.Sree S Bhagya	Asst. Prof. In CSE	Pedagogical Training IIT Madras	3 to 5 Nov. 2015
14	Ms.Alkha Mohan	Asst. Prof. In CSE	Pedagogical Training IIT Madras	3 to 5 Nov. 2015
15	Ms.Meera Murali	Asst. Prof. In EEE	National Level FDP on Electrical System Design and Electrical CAD at College of Engineering Vadakara	16 to 21 Nov. 2015
16	Ms.Preema R Chandran	Asst. Prof. In EEE	National Level FDP on Electrical System Design and Electrical CAD at College of Engineering Vadakara	16 to 21 Nov. 2015
17	Ms.Arya A P	Asst. Prof. In EEE	Power System Simulation using ETAP Govt. College of Engineering Barton Hill	12 to 13 Nov. 2015
18	Ms.Sujitha Surendran	Asst. Prof. In EEE	Power System Simulation using ETAP Govt. College of Engineering Barton Hill	12 to 13 Nov. 2015

19	Ms.Prasanthi P S	Asst. Prof. In EEE	Power System Simulation using ETAP Govt. College of Engineering Barton Hill	12 to 13 Nov. 2015
20	Mr.Revikumar Thampi V R	Asst. Prof. In ME	Workshop on Design Engi- neering Govt. College of Engineering, TVM	31 Oct. 2015

#### ***5.4 Conferences Attended***

The details of conferences attended by the faculty and staff and the expenditure incurred, listed in Table 8, are presented before the BoG for the approval. It was also requested to ratify the payment of Rs. 1,40,428.00.

**5.4.1 Decision** — The BoG decided to ratify the action of the Principal to depute the faculty to these conference and to ratify the payment of Rs. 1,40,428.00.

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**Table 8:** The details of conferences attended post the sixth BoG and the expenditure incurred

Sl. No.	Participant	Title	Conference	Institution	Date(s)	Amt. Paid
1	Mr.Manoj Ray D	Asso. Prof. In CSE	3rd Ieee International Conference On Moocs, Innovation And Technology In Education At	Amritsar Cet, Amritsar	1 Oct 2015 to 2 Oct 2015-	39893
2	Jayadeepkumar J	Asst. Prof. In ME	International Conference on Energy, Environment, Materials and safety(ICEEMS' 14)	School of Engineering CUSAT	10-12 Dec,2014	7803
3	Ms.Smitha P	Asst. Prof. In CSE	2014 IEEE International Conference on Computational intelligence and Computing Research IEEE	Park College of Engineering and Technology, Coimbatore, Tamilnadu	18-20 Dece,2014	11328
4	Mr.Shajy L	System Analyst	2014 IEEE International Conference on Computational intelligence and Computing Research IEEE	Park College of Engineering and Technology, Coimbatore, Tamilnadu	18-20 Dece,2014	12328
5	Ms.Remya R S	Asst. Prof. In CSE	International Conference on Engineering and Technology(ICETECH 15), IEEE	Rathinam Technological unsettled Campus, Coimbatore	20/03/15	6330

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6	Mr.Shajy L	System Analyst	International Conference on Engineering and Technology (ICETECH 15), IEEE	Rathinam Technological Campus, Ciombatore	20/03/15	6772
7	Mr.Reji Thankachan	Asst. Prof. In ECE	4th International Conference on Communication and Signal Processing (ICCCSP 15), IEEE	Adhiparasakthi Engineering College, Melmaruvathur, Tamilnadu	2-4 Aprl.2015	15674
8	Mr.Shajy L	System Analyst	International Conference on Recent advances in Engineering, Science and Technology (icon 15), ISTE, New Delhi	Noorul Islam university, Kumaracoil, Kanyakumary	17 Aprl.2015	4900
9	Ms.Smitha P	Asst. Prof. In CSE	International Conference on Recent advances in Engineering, Science and Technology (icon 15), ISTE, New Delhi	Noorul Islam university, Kumaracoil, Kanyakumary	17 Aprl.2015	7400
10	Ms.Smitha P	Asst. Prof. In CSE	International Conference on Advances in Engineering and Applied Science (ICAEAS 15) IEEE	Noorul Islam university, Kumaracoil, Kanyakumary	29 Aprl.2015	10250

11	Mr. Shajy L	System Analyst	International Conference on Advances in Engineering and Applied Science (ICAEAS 15) IEEE	Noorul Islam university, Kanyakumary	29 Apr. 2015	17750
12	Mr. Anilkumar C V	Asoc. Prof in EC	IEEE TENCON	Macau, China	Nov 4 to 5	Unsettled
Total						1,40,428.00

### 5.5 Management Capacity Development Programme

The details the management capacity enhancement programmes, in Table 9 attended by the faculty, are presented in the BoG for approval.

**5.5.1 Decision** — The BoG ratified the action of the Principal to depute the faculty and staff to the management capacity programmes as detailed in Table 9.

**Table 9:** The details of management capacity development programmes attended post the sixth BoG

Sl. No	Participant	Title	Programme	Date
1	Mr.Revikumar Thampi V R	Asst. Prof. In ME	Hi Impact Leadership Blueprint For Success at Govt.Eng.College, Bartonhill, Thiru- vananthapuram	8th to 10th Oct
2	Ms.Remya R S	Asst.Prof. In CSE	Hi Impact Leadership Blueprint For Success at Govt.Eng.College, Bartonhill, Thiru- vananthapuram	8th to 10th Oct
3	Mr.Baju V	Asst. Prof. In ME	Hi Impact Leadership Blueprint For Success at Govt.Eng.College, Bartonhill, Thiru- vananthapuram	8th to 10th Oct
4	Ms.Geetha S	Asst. Prof. In CSE	Hi Impact Leadership Blueprint For Success at Govt.Eng.College, Bartonhill, Thiru- vananthapuram	8th to 10th Oct
5	Mr. C V Anilku- mar	Asso. Prof. In ECE	Hi Impact Leadership Blueprint For Success at Govt.Eng.College, Bartonhill, Thiru- vananthapuram	8th to 10th Oct
6	Ms.Deepa T R	Asst. Prof. In CSE	Hi Impact Leadership Blueprint For Success at Govt.Eng.College, Bartonhill, Thiru- vananthapuram	8th to 10th Oct

### 5.6 *Soft Skill Training Conducted*

The details of soft skill training given to students post the sixth BoG, as listed in Table 10 are presented for approval. BoG suggested that

- a firm other than *CL Educate* may be employed in future, as all colleges are resorting to them for soft skill training.
- To place students in start up firms first, so that they gain expertise before getting lauched to core companies.

**5.6.1 Decision** — The BoG granted ratification for the soft skill training conducted.

**5.6.2 Decision** — It is also decided to pay the bus hiring and refreshment charges for attending pooled drives from the TEQIP funds.

**Table 10:** The details of soft skill training conducted for students post the sixth BoG

Sl. No.	Year	Branch	Programme	No. of Days	Trainer	Date
1	Final Batch	yr 1	CS- EC- training	Test for Year students	5	CL Educate, Tvm
	Batch 2		EE- Final			6,7,11,12
	Batch 3		IT- students			13 /9/2015
	Batch 4					
2	First Year	EC EE	CS	Student Orientation Program Explore	1	ICT Academy
						5 /10/15

### 5.7 *Training fee Paid To KTU*

A P J Abdul Kalam Kerala Technological University is conducting many subject domain courses for the sake of faculty members, towards which the institution has to pay Rs.100,000.00 online in two equal installments. Accordingly an amount of Rs. 50023.00 (inclusive of transaction charges) has been paid. The BoG was prayed to ratify this payment.

**5.7.1 Decision** — The BoG decided to ratify the payment of Rs. 50023.00 to KTU.

### ***5.8 Refund of Fees towards Membership in Professional Societies***

Dr. Hari V S, Principal, Mrs. Deepa V S, Asso. Prof. (EC) Mrs. Deepa A K, Asst. Prof. (EC) and Prof C V Anilkumar, Asso. Prof. (EC) have placed requests for the refund of half the annual membership fee of IEEE viz. Rs. 2550.00, Rs. 2577.00, Rs. 2574.00 and Rs. 2592.00 respectively.

**5.8.1 Decision** — The BoG decided to sanction the payment of Rs. 2550.00, Rs. 2577.00, Rs. 2574 and Rs. 2592.00 to Dr. Hari V S, Mrs. Deepa V S, Mrs. Deepa A K and Prof C V Anilkumar respectively.

### ***5.9 Refund of Fee for Journal Publication***

- Dr. Gopakumar C, AP (EC) requested for the refund of an Amount of Rs. 6000.00 towards fee for publication of the paper titled *Wavelet based analysis of ECG Signal for the Detection of Miocardial Infarction using SVM Classifier* in the *International Journal of General Engineering and Technology*.
- Mr. Shajy L, System Analyst (CS) requested for the refund of an Amount of Rs. 10500.00 towards fee for publication of the paper titled *Analysis of Textures of Sputum Cytology Images for Lung Cancer Diagnosis Using Discrete Wavelets Transform* in the *Research India Publications*.
- Mrs. Smitha P, AP (CS) requested for the refund of an Amount of Rs. 8550.00 towards fee for publication of the paper titled *Feature Extraction from Immunohistochemistry Images to classify ERPR Score* in the *Indian Journal of Science and Technology*.

The BoG is requested to sanction these amounts, subject to merit, to the above authors.

BoG discussed the above requests and studied the comments of the reviewers for the three publications and reached the following decisions.

**5.9.1 Decision** — It is decided to sanction the payment of Rs. 6000.00, Rs. 10500.00 and Rs. 8550.00 to Dr. Gopakumar C, Mr. Shajy L and Mrs. Smitha P respectively.

**Point of Discussion** The point whether the fee for *open access publication* to reputed journals such as IEEE, Elsevier, Springer etc. could be paid from TEQIP is considered.

The BoG inquired on the merit of having open access publication. It was clarified that the journal papers, published by IEEE, Elsevier, Springer etc. are fruits of original research. By paying the fee for open access publication, these results will have enhanced readership. The name and merits of the institution and the researchers will reach far and wide.

**5.9.2 Decision** — It is decided that the principal prepares a list of meritorious journals such as the list provided by the KTU and present in the next meeting to identify the cases where the fee for open access publication is permissible.

### ***5.10 Refund of Fee for Qualificatin Upgradation***

- Mr. Raju M, AP, Department of EE, placed a request for the refund of the doctoral committee fee of Rs. 6000.00.
- Mr. Shajy L, System Analyst, Department of CS and Mrs. Smitha P, AP, Department of CS, submitted requests for the refund of tuition fee of Rs. 15,100.00 each paid in the eleventh semester of their PhD programme.

**5.10.1 Decision** — The BoG is decided to sanction the payment of Rs. 6000.00 to Mr. Raju M and Rs.15,100.00 to Mr. Shajy L and Mrs. Smitha P each.

### ***5.11 PG Scholarship***

- Fathima Zulfiqer of M. Tech CS [IP] has submitted a request for PG Non-GATE scholarship continuation (Due to medical reasons she has discontinued in the academic year 2014 - 2015).
- First semester results of M. Tech CS [IP] 2013 admission has been modified by the university and all the six students are passed in that semester. Now they are eligible for the scholarship for the remaining period. They have done the work load allotted to them willingly in that period. The matter is placed before the BoG to take suitable decision, subject to merit.

**5.11.1 Decision** — BoG decided to reinstate the scholarship of Fathima Zulfiqer of M. Tech CS [IP] wef the date of her rejoining.

**5.11.2 Decision** — BoG decided to give the scholarship to all non-GATE PG students, whose results were modified by the university, with retrospective effect.

**5.11.3 Decision** — BoG decided to give the scholarship to all non-GATE PG students, even during vacation, as per the norms of the GATE scholarship norms irrespective of the University results.

**5.11.4 Decision** — Decided to give one time exemption from stoppage of scholarship to those students who failed at the first attempt of the University examination.

### ***5.12 Interaction with ICT Academy***

College of Engineering Karunagappally signed Memorandum of Understanding (MoU) with Information and Communication Technology Academy of Kerala (ICTAK) on 28.09.2015 for improving employability skills of the Students and the teaching skills of faculty. Academic membership fee of Rs. 68400.00 (including service tax) was paid to ICTAK.

**5.12.1 Decision** — BoG approved the MoU with ICT Academy, Kerala

**5.12.2 Decision** — The BoG decided to discontinue the association with ICT Academy from the next year onwards in the light of the fact that ICT Academy is offering the same training jointly with KTU, whose payment is already made from TEQIP funds.

**5.12.3 Decision** — The BoG ratified the payment of Rs. 68400.00 to ICT Academy.

**5.13 *International Conference on Computing, Communication and Signal Processing***

The Departments of Electronics and Communication and Computer Science and Engineering have proposed to conduct an International Conference on Computing, Communication and Signal Processing on 8 and 9 July 2016. The draft copy of the brochure has been circulated among the BoG members. The brochure included the venue, suggested patrons, international advisory committee and various topics of interest. The estimate, listed in Table 11, is presented before the BoG.

**Table 11:** The estimate for the international conference

Sl. No.	Item	Amount
1	Venue	4,50,000
2	Printing of Brochures and Posters	50,000
3	TA for resource persons	4,50,000
4	Remuneration to resource persons	1,00,000
5	Publication of Conference Proceedings	2,50,000
6	Printing of Certificates	5,000
7	Conference Kit	70,000
8	Accommodation	90,000
9	Publicity	40,000
10	Transportation	50,000
11	Other Miscellaneous expenses	70,000
Total Amount		Rs. 16,25,000

The BoG suggested to

- Inform the Government of India about the International Conference at the earliest so that issue of VISA to external participants can be facilitated.
- instruct all PG students and faculty to contribute as many papers to the conference as possible.

- submit finalized brochure, the details of various committees, details of patrons and other relevant documentation regarding the International conference in the next BoG meeting.

**5.13.1 Decision** — The BoG decided to sanction the proposal for conducting the international conference and approved the estimate of Rs. 16,25,000.00.

**5.14 ITSS for TENCON Attended by Mr.C V Anilkumar at Macau, China**

The proposal from Mr. C V Anilkumar, Asso. Professor, Department of Electronics and Communication for funding under ITSS to attend the IEEE conference, IEEE-TENCON 2015 at Macau, China from November 1, 2015 to November 4, 2015 is presented in The BoG. The proposal is attached as Appendix A in page 44. Mr. C V Anilkumar presented paper in IEEE-TENCON 2015, organized by the IEEE Asia Pacific region, with the prior approval of the Chairman, BoG. The Govt. of Kerala also has issued sanction for the international travel and paper presentation in the conference. The request of Mr. C V Anilkumar was approved by the SPFU, Kerala and forwarded to the NPIU for sanction, which is still pending decision. The BoG was requested to ratify the approval, issued by the Chairman to Mr. C V Anilkumar.

**5.14.1 Decision** — The BoG has ratified the approval, issued by the Chairman to Mr. C V Anilkumar to present the paper at the conference with financial assistance from TEQIP-II under ITSS.

**5.14.2 Decision** — The reimbursement of the expenses incurred in the conference can be made once the sanction from NPIU is obtained.

**5.15 Plan for the In House Training for the Next Three Months**

The Table 12 that details the plan for conducting in house training for the next three months. The plan is placed before the BoG for the approval of the courses

**5.15.1 Decision** — BoG examined and approved this plan.

**Table 12:** The plan for the In House Training for the next Three Months

Sl. No.	Title	Coordinator	Dept.	Tentative Date	Estimate Amt.
1	Tools for Biomedical Research	Remya R S, Geetha S	CS	11/15	100000.00
2	Machine learning Applications in Image Processing	Jyothi R L, Remya R S	CS	12/15	100000.00

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3	Number Theory and Cryptography	Binu VP, Jyothi R L	CS	01/16	100000.00
4	Human Computer Interaction	Remya R S, Geetha S	CS	02/16	100000.00
5	Image and Video Security	Binu V P, Geetha S	CS	03/16	100000.00
6	Networking and Simulation using NS2	Binu V P, Remya R S	CS	01/16	60000.00
7	Network Administration	Geetha S, Jyothi R L	CS	02/16	60000.00
8	Advanced Python Programming	Binu V P, Jyothi R L	CS	03/16	60000.00
9	Labview and USRP	Deepa T R Libi A	EC	11/2015	52000.00
10	Research Methodology	Deepa AK	EC	23-25 Nov. 2015	75000.00
11	Technology incubation	CV Anil Kumar	EC	12/2015	25000.00
12	Digital Signal Processing	Reji Thankachan	EC	02/2016	120000.00
13	Raju M	Mechtronics, Robotics and MEMS	EE	03 to 05 Dec 2015	60,000.00
Total					10,12,000.00

### ***5.16 Plan for Outstation Programmes for the Next Three Months***

The Table 13 that details the plan for conducting in house training for the next three months is presented before the BoG for approval.

**5.16.1 Decision** — The BoG examined these in house programmes and sanctioned approval of the courses.

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**Table 13:** The plan for the outstation training for the next three months

Sl. No.	Title	Participant(s)	Institution	Tentative Date	Estimate Amt.
1	Pedagogy	Smitha P, Binu V P, Remya R S, Geetha S, Sabeena K, Suni S	IIT Madras,	Jan., Feb. 15	225000
2	Gradient based numerical optimization algorithms	Binu V P	IIT kharagpur	12/15	80000
3	Short term course on application of logic	Remya R S, Geetha S, Jyothi R L	IIT kharagpur	12/15	80000
4	Pedagogy Training	C V Anil Kumar Dr. Gopakumar Shyni C	IIT Madras	Dec. 2015 Jan. 2016	25000
5	Workshop on TCAD	Renjini Anu Mohan	CE, Chengannur	28 Dec. 2015-1 Jan	4000
6	MATLAB- A tool in research	Deepa A K Dr. Gopakumar	MNIT, Jaipur	2015-12-01	45000
7	Pedagogy	Mrs. Retheekumary, Mrs. Premakumari R, Mrs. Sheela R	IIT, Madras	Dec. 15	25000
8	FDP on Signal Processing for Biomedical Applications	Ms.Haseena PY Asst. Prof. In EEE	MES College of Engineering Kuttipuram	Nov.11 to 20, 2015	5000
Total					4,89,000

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### 5.17 EAP Sessions

The details of remedial classes conducted for 181 hours, as listed in Table 14 in page 30. An amount of Rs. 108600.00 has been paid. The matter is placed before the BoG to ratify the payment of Rs. 108600.00.

**5.17.1 Decision** — The BoG examined the EAP sessions and ratified the payment of Rs. 108600.00.

**Table 14:** The details of remedial classes taken and expenditure incurred

Sl.No	Name	Class	Paper	Hrs	Amt. Paid
1	Ms.Deepa A K, A P in ECE	B Tech EC 3rd Sem	ECE 1303	15	9000.00
2	Dr.C.Gopakumar, A P in ECE	S5 EC, S7 EC, S5EC,S3EC,S7EC	EC1306	22	13200.00
3	Ms.Jisy Raju, A P in CSE	S5 CS	CS 1503	2	1200.00
4	Ms.Remya R S, A P in CSE	S3 CSIT, S6, S8 CSIT	1303,1404	14	8400.00
5	Ms.Renu K K, Asso. Prof. In Maths	S7 EC	401	4	2400.00
6	Ms.Renjini S, A P in ECE	S3 EC	EC/EC1 303	7	4200.00
7	Ms.Meera Murali, A P in EE	S7EEE	702	11	6600.00
8	Ms.Ambili Mathew, AP in EEE	S5EEE	1504	16	9600.00
9	Ms.Prema R Chandran, A P in EEE	S5EEE	1502	7	4200.00
10	Ms.Mary M S, A P in EEE	S3 EE	304	4	2400.00
11	Mr.Jayakrishnan A, A P in CSE	S3 IT	1305	11	6600.00
12	Mr.Deepak Kumar G K, former faculty(CEK)	ECE3	ECI306	4	2400.00

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13	Ms.Divya Raj, AP in EEE	S6 EE	603	5	3000.00
14	Ms.Ambili Mathew, A P in EEE	S4 EEE	1406	4	2400.00
15	Ms.Meera Murali, A P in EEE	S1, S2 EEE	1107	6	3600.00
16	Ms.Libin Muslih	S4 EEE,ECE, CS	1109	3	1800.00
17	Ms.Mili Rosline Math- ews, A P in ECE	S8 ECE	EC 804A	4	2400.00
18	Ms.Aswathy S S, A P in ECE	S8 ECE	EC 801	5	3000.00
19	Ms.Alkha Mohan, A P in CSE	S1, S2 EEE	EE 1108	11	6600.00
20	Ms.Jisy Raju, A P in CSE	S1, S2 ECE	1108	13	7800.00
21	Ms.Alkha Mohan, A P in CSE	S1, S2 CS/IT	1108	13	7800.00
Total				181	108600.00

### 5.18 Bridge Courses

The details of bridge courses conducted and the payments, as listed in Table 15 in 31 are presented before the BoG. A total of 39 hours of bridge courses are conducted by three external resource persons for whom a payment of Rs. 23400.00 is made.

**5.18.1 Decision** — The BoG ratified the payment of Rs. 23400.00 towards bridge courses.

**Table 15:** The details of bridge courses and the expenditure incurred

Sl.no.	Faculty	Date	Total Hours	Amt. Paid
1	Mr.Jayaram D S, Prof. In Maths	29.07.15– 31.07.15	12	7200.00
2	Ms.Neethu A S, Fac- ulty in Physics	28.07.15– 31.07.15	21	12600.00

3	Ms.Sheena A, Faculty in Maths	30.07.2015	6	3600.00
Total			39	23400.00

### 5.19 Plan for the Remedial Courses for the Next Three Months

The plan for remedial teaching, as listed in Table 16 is placed before the BoG for approval.

5.19.1 **Decision** — The BoG approved the plan for remedial courses.

**Table 16:** The plan for remedial classes for the next three months

Sl.No.	Class	Subject	No of Hrs	Amount
1	S4EE	Engg Mathematics III	10	6000
2	S4EE	Digital Electronics	8	4800
3	S4EE	Circuits, Signals and Systems II	10	6000
4	S4EE	Analog Communica- tion	5	3000
5	S4EE	Power Electronics	8	4800
6	S6EE	Modern Communica- tion Engg	8	4800
7	S6EE	DSP	10	6000
8	S6EE	Control System I	6	3600
9	S6EE	Optimization Tech- nique	6	3600
10	S6EE	Electrical Drawing	6	3600
11	S8EE	Electrical Machine Design	6	3600
12	S8EE	Power System III	6	3600
13	S8EE	Electronic Instrumen- tation	8	4800

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14	S8EE	Mechatronics	5	3000
15	S2EE	Differential Equations	6	3600
16	S2EE	Engineering Mechan- ics	10	6000
17	S2EE	Basics of Electronics Engg	6	3600
18	S2EE	Engg Physics	5	3000
19	S4EC	Electronic circuits	4	2400
20	S4EC	Signals and Systems	4	2400
21	S4EC	DSD	4	2400
22	S6EC	Microwave Theory	4	2400
23	S6EC	VLSI Design	4	2400
24	S8EC	Computer Communi- cation and Network- ing	4	2400
25	S2EC	Differential Equations	8	4800
26	S2CS	Differential Equations	8	4800
27	S1CS	Calculus	5	3000
28	S1CS	Basic Electrical Engi- neering	5	3000
29	S1CS	Python programming	5	3000
30	S1CS	Engg Mechanics	5	3000
31	S1CS	Chemistry	5	3000
32	S4CS	Data structures and Algorithms	15	9000
33	S4CS	Computer Architec- ture and Organization	15	9000
34	S6CS	Compiler Construc- tion	15	9000
35	S6CS	Control System	15	9000
36	S6CS	Digital Signal Pro- cessing	15	9000

37	S8CS	Advanced Architecture and Parallel Processing	15	9000
38	S8CS	Object Oriented Modelling	15	9000
39	S8CS	Data Mining	15	9000
40	S8CS	Mobile Computing	15	9000
41	S1EC	Calculus	5	3000
42	S1EE	Calculus	5	3000
Total			339	203400.00

### 5.20 High Intensity Training Programme

The plan for the high intensity training programme in *Embedded System Design and Programming* to enhance the employability of passed out students by the Department of Electronics and Communication is placed before the BoG. The Terms of Reference are also presented. The estimated expenditure is Rs. 6,00,000.00. The matter is placed before the BoG for the approval of the course and the estimate.

**5.20.1 Decision** — The BoG approved the high intensity training programme in *Embedded System Design and Programming*

### 5.21 IIIC Programmes

The Department of Electrical and Electronics Engineering conducted all the internship programmes, presented before the sixth BoG. The IIIC activities conducted by the Department of EC and CS post the sixth BoG is presented in Table 17. The BoG is requested to approve the conducted IIIC programmes and to ratify the payment of Rs. 22,500.00.

**5.21.1 Decision** — The BoG examined the IIIC programmes conducted and ratified the payment of Rs. 22,500.00.

**Table 17:** The details of industry interaction and the expenditure incurred

Sl. No.	Programme	Dept.	Industry	Amt. Paid Date
1	internship in-ternship	ECE	BSNL, KMML, KELTRON	NA May, Jun 15

2	Talk on electronic Product Design Industrial talk	ECE	SFO Technologies	Unsettled 09/15
3	Talk on internet of things Industrial talk	ECE	e bird	Unsettled 09/15
4	Industrial talk on Antenna Types Industrial talk	ECE	Doordarsan	Unsettled 10/15
5	Industrial talk on embedded System Development using Keil and Proteus Industrial talk		Tata Elxsi	Unsettled 10/15
6	Industrial workshop on workshop on Raspberry Pi	ECE	Beginow	Unsettled 10/15
7	Industrial Tutoring on Java Projects	CS	Seaview Support Systems	22500 03/15
8	Industrial Tutoring on Java Programming	CS	Seaview Support Systems	Unsettled 10/15
9	Industrial Tutoring on Multi-media Projects	CS	Spot Writers Technologies	Unsettled 10/15
Total				22500.00

### 5.22 The IIIC Plan for the Next Three Months

The IIIC activities, planned for the next three months, as listed in Table 18 are placed before the BoG to approve the activities.

**5.22.1 Decision** — The BoG approved the IIIC activities, planned for the next three months.

**Table 18:** The plan for the of industry interaction and the anticipated expenditure for the next three months

Sl. No	Activity	Industry	Dept	Month /Year	Amt.
1	Expert Lecture	Load Despatch Centre	EE	12/16	7500
2	Expert Lecture	Energy Man-agement Cell	EE	01/16	7500
3	Expert Lecture	Electrical Inspec-torate	EE	02/16	7500
4	Short term training	Nayak Power system	EE	02/16	40,000
5	Graphics and Web Designing	Seaview Support System Pvt. Ltd. Technopark	CS	2015-12-01	35000
6	Project Development Using JAVA	Softtex digital private limited Technopark	CS	2015-12-01	35000
7	Software Development Process	Seaview Support System Pvt. Ltd. Technopark	CS	2015-12-01	35000

8	Android Appli- cation Develop- ment	Seaview Support System Pvt. Ltd. Technopark	CS	2016- 01-01	35000
9	.NET Frame- work	Softtex digital private limited Technopark	CS	2016- 01-01	35000
10	Workshop on PCB Design	IHRD	EC	12/15	20000
11	Expert lecture Entrepreneur- ship	Union Bank	EC	11/15	5000
12	Talk on Commu- nicaion	BSNL	EC	12/15	5000
13	Tutoring PIC	Brain Bitz	EC	01/16	20000
14	Talk on indus- tries	Department of Indus- tries	EC	01/16	5000
15	Talk on VLSI	CDAC	EC	02/16	5000
16	Workshop on Open Hardware	zyxware	EC	01/16	20000
Total					3,17,500.00

### ***5.23 Research and Development Activities***

- Eight faculty members obtained seed money worth Rs. 100,000.00 each for making project proposals to be submitted to funding agencies. Though the duration of the advance was one year, the period was extended twice by the Research Guidance committee.
- An MoU has been signed with Regional Cancer Center, Thiruvananthapuram in respect of Research activities.
- All bills are settled and the details are listed in Table 19. The total expenditure is Rs. 532.346.00. The remaining amooount has been paid back by the investigators.

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The BoG is requested to approve the project proposals and the expenditure.

**Table 19:** The details of expenditure of seed money

Sl. No	Name of PI	Name of Proposal	Advance amount received	Amount Spent	Amount Returned
1	Dr. Hari V S	Development of Visualizer, based on VTK, for k-space MRI Data and the Implementation of Quadratic Systems for Periphery Detection, De-noising and Brain Segment Volume Detection	1,00,000	39967	60033
2	Deepa A K	Image processing Techniques for Breast Image Analysis	1,00,000	46505	53495
3	Smitha P	Grading through H and E images and Scoring using IHC images for Automation of breast cancer	1,00,000	100691	NIL
4	Jyothi R L	Hand written character recognition of current and ancient Malayalam fonts	1,00,000	40146	59854
5	Remya R S	Automated detection of Acute Lymphatic Lukhemia	1,00,000	98272	1728

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6	Shajy L	Analysis of chromatin texture for the estimation of malignancy associated changes	1,00,000	99087	913
7	Jyothi R L	Hand written character recognition of manuscript in ancient Grandha script	1,00,000	51890	48110
8	Remya R S	Automated video forgery detection	1,00,000	55788	44212
Total				5,32,346.00	268345.00

**5.23.1 Decision** — The BoG approved the extensions granted by the RGC to PIs upto October 31, 2015.

**5.23.2 Decision** — The BoG approved the MoU signed with RCC, Thiruvananthapuram for the project “*Automated detection of Acute Lymphatic Leukemia*”

**5.23.3 Decision** — BoG ratified the expenditure of Rs. 532.346.00 towards seed money..

## 6 Other Matters

The status of accreditation and the summary of expenditure are presented before the BoG.

### 6.1 *Status of Accreditation*

It is presented that the Department of EC and CS have submitted the SAR. The credits for the self assessment gained by each department is also presented.

**6.1.1 Decision** — The BoG instructed to pay the fee and submit the SAR for the PG programme in Computer Science and Engineering so that all the key performance indicators are met.

### 6.2 *Statement of Expenditure*

The statement of expenditure post the sixth BoG, as detailed in Table 20, is presented before the BoG.

**6.2.1 Decision** — The BoG examined and approved the statement of expenditure.

### 6.3 *Celebration of the International Year of Light*

Prof. V P N Nampoori, the chairman suggested that the International Year of Light should be celebrated in College of Engineering Karunagappally.

**6.3.1 Decision** — Decided to conduct a one day programme for the 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> standard students of nearby schools and our students. The programme should contain demonstrations and projects.

With this the meeting came an end at 01 : 30 *PM*.

**Next Meeting:** In three months

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**Table 20:** The statement of expenditure from May 1, 2015

No	Expenditure Name	Expenditure up to April 30 2015	Expenditure for May 2015	Expenditure for June 2015	Expenditure for July 2015	Expenditure for August 2015	Expenditure for Sept. 2015	Expenditure for Oct 2015	Cumulative expenditure till 31-10-2015
1	Procurement	4,13,51,031	0	11,16,074	2,09,606	10,34,118	0	32,60,855	4,69,71,684
2	Providing As-sistantships for Increased enrolment in existing and new PG Pro-grammes in Engineering Disciplines	35,99,000	13,50,000	0	0	10,92,000	4,50,000	2,10,000	67,01,000
3	Enhancement of Research and Devel-opment and Institutional Consultancy Activities	8,74,130	0	-8,00,000	39,370	0	0	5,32,346	6,45,846

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4	Faculty and staff development for improved competence based on Training Needs Analysis(TNA)	41,30,579	0	36,102	1,88,014	0	3,22,703	1,13,766	47,91,164
5	Enhanced Interaction with Industry	3,97,889	0	0	13,704	0	0	0	4,11,593
6	Institutional Management Capacity enhancement	3,79,835	0	0	0	0	0	0	3,79,835
7	Implementation of Institutional reforms	8,98,880	0	0	0	0	0	0	8,98,880
8	Academic support for weak students	5,59,757	0	38,400	70,200	0	23,400	0	6,91,757
9	Incremental Operating Cost	26,84,257	67,979	77,251	1,10,486	55,510	1,28,437	1,35,267	32,59,187
9.1	Salaries	8,71,408	48800	50,000	50,000	49,600	48,000	48,800	11,17,808
9.2	Consumables	3,70,999	19,179	750	500	0	1,600	0	3,93,028

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9.3 Operation and Maintenance	14,41,850	0	26,501	59,986	5,910	78,837	86,467	16,99,551
Total	5,48,75,358	14,17,979	12,67,827	6,31,380	21,81,628	9,24,540	42,52,234	6,47,50,946

## **Part III**

# **Appendix**

### **A Proposal for ITSS, submitted by Prof. C V Anilkumar**

Seventh Meeting of the Board of Governors  
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( Govt. of Kerala, Managed by IHRD)

Thodiyoor P.O., Kollam Dist., PIN- 690523

Phone 0 0476- 2665935, 2666160 Fax : 0476 - 2665935

[www.ccknpy.ac.in](http://www.ccknpy.ac.in) e-mail : [cckarunagappally@ihrd.ac.in](mailto:cckarunagappally@ihrd.ac.in)



From

The Principal  
College of Engineering  
Karunagappally

To

The Director  
SPFU, Kerala  
Directorate of Technical Education  
Thiruvananthapuram

Sir,

Sub:Request of Mr. C V Anilkumar for ITSS for presenting paper at the IEEE conference at Macau, China

A research publication of Mr. C V Anilkumar, Associate Professor, Department of Electronics and Communication has been accepted into The IEEE TENCON 2015, the international conference, organized by IEEE Asia Pacific Region from November 01, 2015 to November 04, 2015 at Macau, China. His request for the sanction for ITSS, the brochure, the details of registration fee and the original manuscript are attached with this. Kindly do whatever is required to sanction his request for foreign travel and paper presentation.

Thanking you,

Yours faithfully,

Dr. Hari V S  
Principal

Karunagappally  
August 13, 2015

PRINCIPAL  
COLLEGE OF ENGINEERING  
KARUNAGAPPALLY



**ANNEX-I**

**PROPOSAL FOR  
INTERNATIONAL TRAVEL  
UNDER TEQIP-II**

- Name of the Institution : COLLEGE OF ENGINEERING, KARUNAGAPPALLY
- Project Sub-Component : 1.1
- Category of the Institution (CFI/Govt. funded/Govt. Aided/Private Unaided) : Govt. Funded

1.

Name of the applicant	:	C. V. ANIL KUMAR
Designation	:	Associate Professor
Department	:	Electronics and Communication Engineering

2.

Academic Profile:		
Class/Institution	Year	Subject
UG	1994	Electronics and Communication Engineering
PG	2005	Microelectronics and VLSI Design
PhD.	Pursuing	Microwave Engineering
Post Doctoral	NA	
Any other	Nil	

3.

Experience Details:			
Experience	Details	Duration	Name of Employer
i) Teaching	Teaching in Engineering Colleges under IHRD as Assistant professor from January 1996 to July 2007 and as Associate Professor there after (working at CE Karunagappally from February 2014 onwards)	19 years and 7 months	Director, IHRD
ii) Research*	Nil		
iii) Industry	Nil		
iv) Any other	Nil		
*Details of research project may be provided separately, if any			

4.

Publications of the applicant during last five years:				
S. No.	Particulars	Year	Nos.	Impact factor
i)	Referred Journals	2013	1	Nil
ii)	Books	Nil		
iii)	Proceedings	2014 2013	1 1	
iv)	Popular Articles	Nil		
v)	Patents	Nil		

5. **Contribution of the applicant in enhancing academic excellence in the institution:**

S. No.	Year	Contribution of the Applicant (during last three years)	
		Project Activities	Institution development activities
	2010-2011		
	2011-2012		
	2012-2013		
	2013-2014	Joined the institute in 2014 February. Member of various TEQIP committees as HoD (EC). Coordinating all the Procurement and Academic activities under TEQIP in the EC Department as Head of the Department.	Joined the present institute in 2014 February for the project implementation.  Being the Head of the Department, actively leading all the departmental activities including various academic, co-curricular, professional activities in the department
	2014-2015	Coordinated B. Tech miniprojects. Guided UG students in their final year projects. Involved in the TEQIP activities as a member of various committees. Coordinating all the Procurement and Academic activities under TEQIP in the EC Department as HoD.	Prepared and submitted a proposal to RUSA for institutional development  Prepared and submitted a proposal for FIST funding from DST.  Coordinated a one day seminar on VLSI Design by an expert from industry

6.

Name of the International Event	:	IEEE TENCON 2015	
Venue & Date	:	Macao, Nov. 1 <sup>st</sup> to 4 <sup>th</sup> , 2015	

7. **Purpose of the event (put a tick mark against the appropriate place):**

Items	:	Remarks	
a) Paper presentation	:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
b) Chairing a Session	:	Yes <input type="checkbox"/>	No <input type="checkbox"/>
c) Keynote Speaker	:	Yes <input type="checkbox"/>	No <input type="checkbox"/>
d) Study & network tour	:	Yes <input type="checkbox"/>	No <input type="checkbox"/>
e) Enhancement of subject knowledge and research competence	:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
f) Collaboration with the organization	:	Yes <input type="checkbox"/>	No <input type="checkbox"/>

8.	<b>Provide write-up on the following (1 page on each) :</b>
(i)	<div data-bbox="313 394 1388 457">Focus on International visit on improving the quality of teaching and research (or the institutional effectiveness) of a Institution. Objectives of the visit be clearly mentioned.</div> <ul style="list-style-type: none"><li data-bbox="354 520 1388 846">• The Department of Electronics and Communication Engineering is offering B. Tech course on Electronics and Communication Engineering and M. Tech course on Signal Processing. The B. Tech students are using the software tool HFSS, purchased using TEQIP fund, for developing planar antenna geometries and other printed microwave components under my supervision. Now I am planning to focus on development of smart antennas also. This involves signal processing with the antenna design. So students from UG and PG programmes can involve in the development of smart antennas. My attendance in the conference will help me to understand what the nature of current research in this area is and to find new research problems to undertake in future.</li><li data-bbox="354 856 1388 1140">• The conference, I am planning to attend, is organized by IEEE Asia-Pacific region. This conference is one of the prestigious conferences organized by IEEE and organizing annually since 1980. As TENCON 2015 is its 35<sup>th</sup> edition, its reput is very high and hence well acclaimed researchers from academia and industry will attend the programme. So participation in the conference will give me a chance to interact with these well-known personalities and thereby understand academic and research activities going on at their institutes. This will help us to set our goals and to prepare strategic plans for the institutional development.</li><li data-bbox="354 1150 1388 1413">• The conference is covering a wide range of topics through 13 technical tracks, expert talks and plenary sessions. These talks will be useful for the enhancement of my subject knowledge and research competence. The conference will also provide a platform for the industry to exhibit their latest products. A visit in this exhibition stalls will give an insight about latest instruments and techniques from industry and help to improve our laboratory facilities to the state of art level. This indeed a mandatory requirement of any institute targeting to evolve as a world class institute.</li><li data-bbox="354 1423 1388 1602">• The papers presenting in the conference are accepted after the peer review of at least three experts in the respective area. So the scholars will discuss their latest findings in their papers and the information presented will be authentic. This will help me to identify potential areas for the research at our institute and guide our students to solve their problems using latest techniques and findings.</li><li data-bbox="354 1612 1388 1675">• It may also helpful to identify the possibility for collaborating with other reputed academic institutions and industry. So the visit will be helpful for improving industry interaction</li></ul>

(ii)	<p>Benefit to the applicant from the International visit and expected outcome from this visit to the institution.</p> <ul style="list-style-type: none"> <li>• IEEE TENCON is a prestigious international conference organising by Asia Pasific region of IEEE annually since 1980. Being a conference organised regularly for the last 35 years, researchers and engineers across the glob find it as one of the premier platform for presenting their latest work and networking with other scholars. The presence at the venue during the conference days will give me a chance to understand the latest research works carrying out at other institutions of excellence and industry.</li> <li>• My research paper titled “ A printed antenna with circular cut for bandwidth enhancement” accepted for oral presentation in the Antenna &amp; Microwave Theory and Applications track. A chance to orally present my results before an audience will be an encouragement for my future work.</li> <li>• The audience in the track will be experts from academia and industry. The discussion during my presentation will be useful for leading my research in right direction.</li> <li>• This conference will provide me a platform for networking with fellow researchers both from academia and industry. This may lead to collaboration with other institutions and industry and useful for boosting industry-institute interaction.</li> <li>• All the accepted papers will be published in the conference proceedings and IEEE-Xplore, the digital library. Hence my research findings may be useful for others in the scientific community. As the paper was reviewed by three reviewers, the accepted papers will get wide acceptance.</li> <li>• My research work was carried out using the software tool (HFSS) purchased using TEQIP fund. The fabrication and measurements were done at Department of Electronics, Cochin University of Science and Technology. Now I am trying to set up a fabrication and measurement set up in my institute itself. So the interaction with other scholars and exhibitors at the conference venue will help me in setting up of best of the class facilities in our lab.</li> </ul>
(iii)	<p>Visit linkage to the Institutional Development Proposal objectives and to the current training needs assessment.</p> <ul style="list-style-type: none"> <li>• The Department of Electronics and Communication Engineering is offering B. Tech course on Electronics and Communication Engineering and M. Tech course on Signal Processing. Electromagnetic Field Theory, Microwave Engineering, Antenna and Wave Propagation etc are some of core papers included in the UG curriculum. The keynote sessions by eminent personalities from various countries and the paper presentations on emerging topics will discuss all aspects of theory and its application for solving practical problems.</li> <li>• Attending international conferences of high standards is considered as one of the important objectives of IDP. It has become the need of the hour for teachers to understand and explore the new trends in the burgeoning field of engineering and technology. According to the current training needs assessment, it is necessary to upgrade oneself academically for qualitative teaching and research work.</li> </ul>

	<ul style="list-style-type: none"> <li>• Objective of the IDP is to upgrade the institution to a frontline institute and a centre of excellence in order to impart the best knowledge and expertise in the fields of engineering and to produce World class Engineers for converting global challenges through "Value Embedded Quality Technical Education" and also to develop this institution as an academy of higher learning in the field of Engineering and Technology. Participation in the internationally acclaimed conferences like IEEE TENCON will give good opportunity to know about excellent educational and research institutions and to know their best practices to promote research in the cutting edge technology.</li> <li>• In the IDP it has been clearly mentioned that the equipment purchased under TEQIPII shall be made used for research purposes. The UWB antenna design proposed in the accepted paper (for the presentation) was developed using HFSS software which was purchase using TEQIP fund. But the prototype was fabricated and tested using the facility available at Center for Research in Electromagnetics and Antennas (CREMA), Department of Electronics, CUSAT. To promote research in our institute, it is essential to arrange all facilities to design, fabricate and characterize the prototypes developed. The exhibition arranged along with TENCON 2015 will be useful for designing a best setup for fabrication and measurement.</li> <li>• Another important objective proposed in the IDP is the enhancement of teaching learning skills and research. This can be achieved through participation in seminars, workshop, conferences etc. In the IDP it is also proposed to develop research centres in the thrust area like VLSI, Signal Processing, Digital Image Processing to produce increased research outcome. All these topics are covered through thirteen different technical tracks.</li> </ul>
(iv)	<p>Plan of the applicant for sharing the gained information with fellow faculty members.</p> <ul style="list-style-type: none"> <li>• It will be a privilege to me to share the experiences gathered from the conference to my peers. I would take this opportunity to let my colleagues comprehend and appreciate the current trends and developments in this area of research. My participation in the international conference will be a cue to them and encourage them to be a part of such international conferences.</li> <li>• A PowerPoint presentation will be organized for the fellow faculty members about my paper as well as some of the relevant papers presented at the conference to let them know the quality of work undertaken by the international academic intelligentsia.</li> <li>• The new research ideas gained from the discussions with the expert participants in the conference will be shared with my colleagues and students.</li> <li>• The information regarding the latest equipments and software useful for research in the cutting edge technology proposed in the IDP, gathered from the exhibition, will also be delivered to my fellow faculty members and higher authorities.</li> </ul>

	<ul style="list-style-type: none"> <li>• A special session will be arranged for the final year students for whom Antenna is a topic for study. It will be a kind of exposure for them to know and comprehend the new findings and developments in the field of antenna.</li> <li>• Will try to motivate my faculty members and students to actively involve in research and development by sharing my experience in the conference TENCON 2015. I will also try to share my experience from the very beginning to the publication to encourage my fellow teachers.</li> </ul>
(v)	<p>Alternative arrangement planned by the applicant about the appropriate continuance of the teaching and research duties during the travel period.</p> <ul style="list-style-type: none"> <li>• The proposed conference IEEE TENCON 2015 is scheduled on 1<sup>st</sup> to 4<sup>th</sup> November 2015. As per university calendar, end semester examinations are chartered during this period. Hence there will not be any regular classes in November.</li> <li>• Examination duties, if any, assigned to me during these days will be arranged with my colleagues.</li> <li>• Requested the Principal to hand over my duties and responsibilities as Head of Department to the senior faculty member in the department</li> </ul>

9. **Travel Plan (from the place of working to the conference & back):**

S. N.	Date and Time	Departure	Date and Time	Arrival	Mode
1	30.10.2015 12 am	College of Engineering Karunagappally	31.10.2015 10pm	Holyday Inn, Macao	Rail/Air/ Taxi
2	05.11.2015 10am	Holyday Inn, Macao	06.11.2015, 10pm	College of Engineering, Karunagappally	Rail/Air/ Taxi

Details of Expenditure :			
1	Items	:	Remarks
0	a) Total air fare by shortest route by economy class	:	100000/-
.	b) Visa Fee	:	Nil
	c) Amount of registration fee	:	36000/-
	d) Accommodation and other logistic arrangement	:	64000/-

11. Details of International events attended during last five years (In Chronological order) ; NIL

Name of event	Date	Venue	Details of Sponsors

12. Any other information which you may like to furnish in support of your application.

IEEE TENCON is a premier international technical conference of IEEE Region 10, also referred as the Asia Pacific Region, one of the largest regional organizations of the IEEE. Held annually since 1980, TENCON provides an important forum for researchers and engineers from the industries, professors and graduate students from the academic to network and to discuss new ideas and development in emerging areas of electrical and engineering, computers science and related fields.

Place : CE, Karunagappally

(Signature of the applicant)

Date 30.07.2015

Encl.: Attach the following enclosures :

- Invitation letters from the institutions/organization to be visited
- Daily schedule of activities to be undertaken
- Availability of budget provisions with break-up of fee charges, accommodation, other logistic arrangements and travel expenses
- International travel plan for faculty of the concerned institution (duly approved by BoG)
- For all project institutions, NOC from BoG for undertaking International travel
- Any other deemed necessary

Invitation letters from the institutions/organization to be visited (paste the scanned image in the following box)

**2015**, 1-4 November

## TENCON 2015 - 2015 IEEE Region 10 Conference

<http://tencon2015.exordo.com>

Dear CV Anil Kumar,

Warm Congratulations! Thanks for your submission to TENCON 2015!

Following reviews by technical reviewers and committee, it is our pleasure to inform you that your submitted paper A Printed Antenna with Circular Cut for Bandwidth Enhancement (Paper ID: 745 ) has been accepted for Oral presentation at TENCON 2015 - congratulations.

Notice that your submitted paper will be submitted to IEEE Xplore (IEEE Catalog Number: CFP15TEN-ART, ISBN: 978-1-4799-8641-5) when you have completed ALL items below.

(Steps 1-4 should be finished on or before 15 Aug 2015)

Step 1: Revise the paper according to reviewer's comments. (Log in the [system](#) and click "View Reviews" todo)

Step 2: Prepare the final manuscript (.pdf) using [IEEE format](#) and create IEEE Xplore-compliant pdf file using [pdf eXpress plus](#). Remember to add proper copyright clearance code

Step 3: Download the [IEEE Copyright Form](#), sign and scan it

Step 4: Upload the final manuscript (.pdf and source files), as well as signed IEEE Copyright form to the system according to instructions before 15 Aug 2015

Step 5: Finish [on-line registration](#) on or before 25 Aug 2015. (Early bird registration ends on 15 Aug)

Step 6: Present (oral/poster) at TENCON 2015

Kindly notice that authors who fail to complete the procedures above may not be able to publish their papers in IEEE Xplore. Please refer to our website for details and most updated information: <http://ieeetencon2015.org>.

You can enjoy EARLYBIRD rate by completing your registration and payment by or before 15 August through our Online Registration Platform

at <http://www.ieeetencon2015.org/EN/Tencon/Registration>. Besides, you are most welcome to participate the below social activities for FREE during the conference. Final program will be announced in the conference web-site in Sep. 2015.

**Daily schedule of activities to be undertaken**

The daily schedule has not yet announced. Shall intimate as when it is uploaded

**Availability of budget provisions with break-up of fee charges, accommodation, other logistic arrangements and travel expenses**

**Details of expenditure involved**

Details of Expenditure :		
Items	:	Amount
a) Total air fare by shortest route by economy class	:	100000/-
b) Visa Fee	:	
c) Amount of registration fee	:	36000/-
d) Accommodation and other logistic arrangement	:	64000/-

Total

Rs. 200000/-

Recommendation of BoG (Paste image of the relevant pages from the minutes of Governing Body or approval from Chairman in the following box)

**princ hari**

Aug 4 (3 da

to me

----- Forwarded message -----

From: **V. P. N. Nampoori** <[nampoori@gmail.com](mailto:nampoori@gmail.com)>

Date: Mon, Aug 3, 2015 at 5:47 PM

Subject: Re: International travel proposal-reg.

To: princ hari <[princharicek@gmail.com](mailto:princharicek@gmail.com)>

The fund can be sanctioned provided the international travel and Regn fee can be sanctioned under TEQIP without any limit. The conference will benefit the teacher.

regards  
Nampoori

On 3 August 2015 at 10:16, princ hari <[princharicek@gmail.com](mailto:princharicek@gmail.com)> wrote:

Dear Sir,

The proposal for international conference and travel, submitted by Prof. CV Anilkumar, is forwarded. Please advise.

Regards,

Dr. Hari V S



Click here to [Reply](#) or [Forward](#)

**Using 7.76 GB**

[Manage](#)

[Program Policies](#)

Powered by

[Google](#)

Last account activity: 53 minutes ago

[Details](#)

[princ hari](#)

[princharicek@gmail.com](mailto:princharicek@gmail.com)

**Any other point the applicant consider as necessary**

- It is one of the prestigious conferences organized by IEEE Asia Pacific region (R10), one of the largest regional organizations of the IEEE
- The conference is organized annually since 1980.
- The submitted papers are peer reviewed by three experts
- The accepted papers will be published in IEEE xplore only if at least one author is registered and presented at the conference venue

**ANNEX-II**

**CHECK LIST FOR State Institutions/CFIs**

**Checklist for the proposals under TEQIP II involving International Travel in respect of Prof. C. V. Anil Kumar from College of Engineering, Karunagappally.**

1	Name of the participants undertaking the tour with Designation and Contact Number  ( A brief Bio-Data to be enclosed)	C. V. Anil Kumar  Associate Professor  Department of Electronics and Communication Engineering, College of Engineering, Karunagappally  Bio-Data attached in separate sheet
2	Purpose of the Visit	To present (oral) his research paper titled "A Printed Antenna with Circular Cut for Bandwidth Enhancement"
3	Place of visit with Contact Details of the institute proposed to be visited  (whether Consent Letter has been obtained and attached)	IEEE TENCON 2015 organized at Holiday Inn, Sands Cotai Central, Macao  E mail: <a href="mailto:secretariat@ieeetencon2015.org">secretariat@ieeetencon2015.org</a>  phone: + 853 2871 2020 at  Yes, Attached
4	Duration of visit  (whether Daily Schedule enclosed)	6 days, 31 <sup>st</sup> October to 5 <sup>th</sup> November 2015 (conference dates 1 <sup>st</sup> to 4 <sup>th</sup> November)  The daily schedule is not yet published
5	Date of his/her last foreign visit with duration, name of the institute visited, funding/sponsoring Agency and the purpose of such visit	This is the first foreign visit

del

**Signature of TEQIP coordinator**

**A brief bio-data of the applicant**

**Bio-data**

- |                              |        |  |
|------------------------------|--------|--|
| 1. Name                      | :      | C. V. Anil Kumar   |
| 2. Age and DoB               | :      | 43, 22. 04. 1972   |
| 3. Gender                    | :      | Male   |
| 4. Address(permanent)        | :      | Kailas, Prakkulam P.O, Kollam,<br>Kerala State, 691602   |
| (correspondence)             | :      | PRA23A, Krishnasree, Thekkevila PO, Kollam-<br>691016  |
| (off.)                       | :      | Associate Professor in Electronics Engineering,<br>College of Engineering, Karunagappally, Kerala-<br>689121 |
| 5. Phone                     | (res.) | :09605517645   |
|                              | (off.) | :04762665935   |
|                              | (mob.) | :919446108491  |
| 6. Educational qualification | :      | M. Tech in Microelectronics and VLSI Design(IIT<br>Madras)   |
| 7. Experience                | :      | 19 years and 7 months of teaching at UG & PG<br>level  |
| 8. Research interest         | :      | Planar microwave components, Applications of<br>Carbon Nanotubes in electronics and VLSI<br>Design           |

**Declaration**

I hereby declare that the information given above are true to the best of my  
knowledge

  
C. V. Anil Kumar

# A Printed Antenna with Circular Cut for Bandwidth Enhancement

C. V. Anil Kumar

CUSAT and College of Engineering, Karunagappally  
Karunagappally  
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**Abstract**— In this article, a novel design of coplanar wave-guide (CPW) fed printed antenna suitable for ultra-wideband applications is reported. The proposed antenna geometry is derived from rectangular resonator in a closed slot. Two circular portions were removed from lower corners of resonating stub to enhance the bandwidth. The antenna is designed with 1.6mm thick FR4 substrate with relative dielectric constant of 4.4 and loss tangent of 0.02. The overall dimensions of the antenna are 25 X 30 X 1.6mm<sup>3</sup> and fed by a 50 line. Antenna parameters like impedance matching, radiation patterns, gain and group delay are experimentally investigated and reported.

**Keywords**—*printed antenna; CPW feed; bandwidth enhancement; circular cutting; rectangular slot*

## I. INTRODUCTION

The development of ultra-wide band antennas became a hot research area, both in industry and academia since the release of 3.1 – 10.6 GHz frequency band for license free use in the commercial communication applications on February 14<sup>th</sup>, 2002 [1] by US Federal Communication commission (FCC). Conventional antennas are not suitable for meeting the requirements of this extremely wide band (7.5GHz) and its applications. The major challenges in developing ultra-wide band antennas for catering the current needs are the demand of low profile, low cost, light weight, ease of integration with other components, wide bandwidth, good radiation properties etc. Hence the printed antenna technique is evolved as a possible solution for achieving these requirements [2].

Numerous printed antenna geometries have been reported in literature for ultra wide band (UWB) applications. These designs are mainly differ in shape and configuration of conductors both in resonator and ground structure for arriving at impedance matching throughout the band and the materials used as substrate [3-7]. Different techniques used to achieve impedance matching and bandwidth enhancement are

discussed in [8]. The impedance transition from the coaxial probe to the radiator has a critical role in impedance matching. Hence the feed gap, location of the feed point and shape of the radiator etc. are some of the key points in the geometry which helps to achieve wider bandwidth.

This article presents, a coplanar waveguide (CPW) fed UWB antenna with rectangular slot designed on a 1.6mm thick FR4 sheet and its performance. Instead of using the conventional bevelling technique [8], two circular regions are removed from the lower corners of resonator to enhance the bandwidth. The antenna structure is simulated using Ansoft's HFSS software. The antenna measurements are carried out using R&S make vector network analyzer model ZVB20.

## II. ANTENNA DESIGN

Usually thick substrates with dielectric constants at the lower end of the range results in better efficiency and large bandwidth at the expense of larger antenna size where as thin substrates with high dielectric constants yield smaller element size with greater loss and smaller bandwidth [2]. The selected substrate is a compromise between the two. The antenna is developed on a 1.6mm thick FR4 substrate with dielectric constant and loss tangent of 4.4 and 0.02 respectively. It is also having good mechanical strength, easy to etch and locally available at lower rate.

The proposed antenna geometry is shown in Fig. 1. The antenna consists of a modified rectangular patch in a closed slot [4] and fed from CPW feed arrangement. The overall dimensions are 25 X 30 X 1.6 mm<sup>3</sup>. The simulation result (Fig. 2) shows good impedance matching from 2.6GHz to 10.9GHz. Various dimensions of the geometry are listed in table 1. The circles labeled as C1 and C2 are of radius 1.6mm and the other circles are of 1.1mm

Seventh Meeting of the Board of Governors  
College of Engineering Karunagappally, November 16, 2016

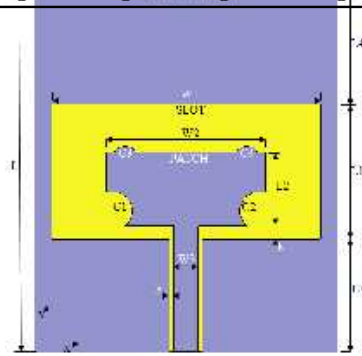


Fig. 1. Structure of the proposed antenna

TABLE I. Dimensions of the antenna in mm

L	W	L1	W1	L2	W2
30	25	11.1	22	6	13
L3	W3	L4	H	G	
9.4	2	9.5	1.1	0.35	

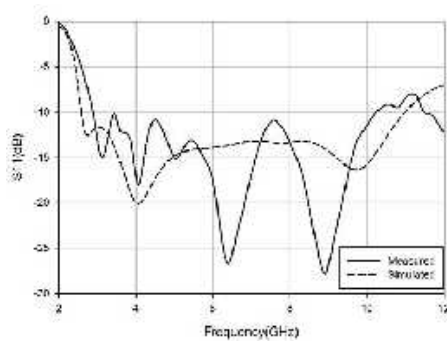


Fig. 2. Measured and simulated return loss

### III. RESULTS AND DISCUSSION

#### A. Bandwidth

The optimized geometry is fabricated using conventional lithographic techniques and the measurements carried out using R&S make vector network analyzer model ZVB20. Measured and simulated reflection characteristics are shown in Fig. 2. In the experimental result, radiating band starts from 3.1GHz but, upper limit is reduced to 10.15 from 10.9GHz obtained in simulation. This is due to the inhomogeneous nature of the substrate used and the increased reflections from input port at higher frequencies. Higher frequencies are more

sensitive to the changes in material properties. Minor errors in the measurements can also affect the upper frequency side more.

#### B. Radiation properties

The normalized radiation patterns (co polarized and cross polarized) at three frequencies in the desired band are shown in Fig. 3(a) to (f). The polarization margin is negligible and hence the antenna is suitable for applications which demand circular polarization.

#### C. Gain and delay performance

Transmission coefficients of the antenna at different frequencies are measured using a standard horn antenna as source. From the data collected, gain of the antenna under test is calculated with respect to the standard antenna used. The gain plot is given in fig. 4. It exhibits satisfactory performance in the desired band of operation with peak gain at around 7GHz.

Group delay is measured by keeping two identical antennas at a distance ensuring far field. Fig. 5, shows the measured group delay. The delay performance of the antenna is satisfactory (within a maximum of 1 nanoseconds) throughout the band. Hence the antenna is suitable for embedded wireless communication systems

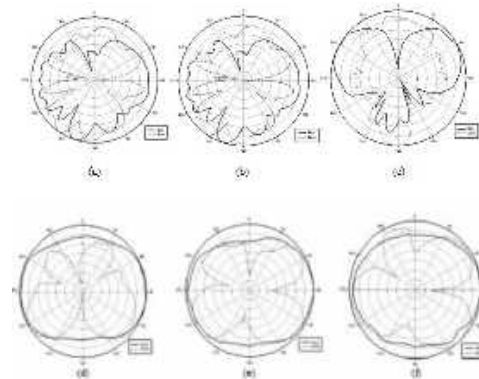


Fig. 3 Measured radiation patterns; (a) to (c) Eco and Ecross and (d) to (f) Hco and Hcross at 4GHz, 6GHz and 8GHz respectively.

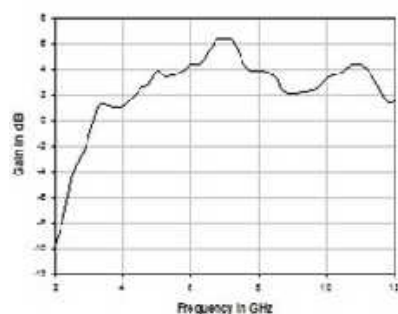


Fig.4 Measured gain of the antenna

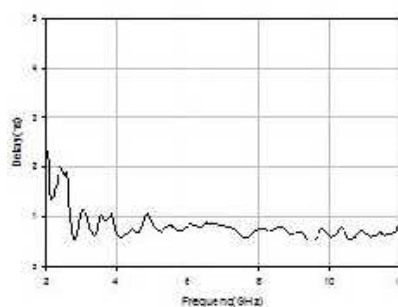


Fig. 5 Delay performance of the antenna

#### IV. CONCLUSION

A compact ultra-wideband antenna was designed using 1.6mm thick FR4 substrate. Two circular portions were removed from the lower corners of the radiating stub, which was very much effective to enhance the bandwidth. All the dimensions are optimized and the structure was fabricated and tested. Effect

of critical parameters on performance and the experimental results are discussed. The experimental results are almost matching with the simulation results. Radiation patterns and group delay are also measured and reported. The group delay is well within the standards throughout the band.

#### ACKNOWLEDGMENT

The authors would like to express their heart felt gratitude to Prof. P. Mohanan, Department of Electronics, Cochin University of Science and Technology (CUSAT) for granting permission to use the facilities at Center for Research in Electromagnetics and Antennas (CREMA). The authors would also like to thank the research scholars at CREMA, especially to Mr. C. M. Nijas and Mr. A. O. Lindo for the useful discussions and help in taking measurements.

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### **Report of Internal Scrutiny Committee for International Travel Under TEQIP-II**

A proposal from Mr. C. V. Anil Kumar, Associate Professor, Department of Electronics and Communication Engineering on 30-07-2015 for presenting his research paper titled "A printed antenna with circular cut for bandwidth enhancement" at the IEEE region 10 conference – TENCON 2015 to be held from 1<sup>st</sup> to 4<sup>th</sup> November 2015 at Macau, China is received.

The proposal was carefully perused and scrutinized by the committee, and the following conclusions have been made.

1. The paper to be presented is an original work carried out by him.
2. The research was designed at College of Engineering, Karunagappally using the software HFSS purchased under TEQIP-II.
3. Attending a highly reputed international conference of IEEE will be a source of motivation for achieving excellence in academics and research activities. This will also motivate other faculty members in the institute.
4. The IEEE TENCON is a premier international technical conference of IEEE Region 10 and is held annually since 1980. Being a conference organizing for last 35 years regularly, eminent researchers and engineers from industry will present their findings. So participation in this conference will be useful to achieve the objectives of TEQIP.
5. The students will be benefitted by this as 'Antenna theory and radio communication' is included in their curriculum.
6. The documents attached to the proposal were verified and found genuine.

The committee has found his work satisfactory and has no qualms about recommending him.

#### **Committee Members**

1. Dr. Gopakumar C.
2. Dr. Ajilkumar A.
3. Smt. Deepa A K
4. Prof. Binu V.P



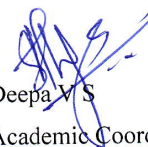
**Institutional Academic Committee's Scrutiny Statement of the proposal in relation to the candidates specialization vis-à-vis conference focus.**

A proposal from Mr. C. V. Anil Kumar, Associate Professor, Department of Electronics and Communication Engineering on 30-07-2015 for presenting his research paper titled "A printed antenna with circular cut for bandwidth enhancement" at the IEEE region 10 conference – TENCON 2015 to be held from 1<sup>st</sup> to 4<sup>th</sup> November 2015 at Macau, China is received.

Mr. C V AnilKumar, Associate Professor in ECE has been doing research activities in the area of Microwave Passive Components. He is pursuing part time PhD at Cochin University of Science & Technology. Under his supervision, B. Tech students are using the software tool HFSS, purchased using TEQIP fund, for developing planar antenna geometries and other printed microwave components. The Institute is trying to set up a fabrication and measurement set up for Microwave printed Antenna using TEQIP Fund. The interaction with other scholars and exhibitors at the conference venue will help him in setting up of best of the class facilities in the Department of Electronics and Communication Engineering .The conference is covering a wide range of topics through 13 technical tracks, expert talks and plenary sessions. These talks will be useful for the enhancement of research activities in the Institution.



Dr. AjilKumar A  
TEQIP Coordinator



Deepa V S  
Academic Coordinator

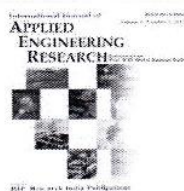
**Selection Criteria :** The following criteria will be used by the Screening Committee :

S. No.	Particulars	Evaluation Criteria	Points	Score
1	Is the international visit focused on improving the quality of teaching or research (or the institutional effectiveness) of a Project institution?	All the evidence that this criterion has been met is strong and clear	2	
		Some of the evidence that this criterion has been met is either weak or unclear or both.	1	
		No evidence that this criterion has been met	0	
2	Will the applicant benefit from the international visit?	All the evidence that this criterion has been met is strong and clear	2	
		Some of the evidence that this criterion has been met is either weak or unclear or both.	1	
		No evidence that this criterion has been met	0	
3	Is the visit linked to the Institutional Development Proposal objectives and to the current training needs assessment?	All the evidence that this criterion has been met is strong and clear	2	
		Some of the evidence that this criterion has been met is either weak or unclear or both.	1	
		No evidence that this criterion has been met	0	
4	Is the action plan for how the applicant will share the information gained likely to have an impact on others beyond the applicant?	All the evidence that this criterion has been met is strong and clear	2	
		Some of the evidence that this criterion has been met is either weak or unclear or both.	1	
		No evidence that this criterion has been met	0	
5	Has the institution ensured that teaching and research duties will be appropriately continued during the travel period?	All the evidence that this criterion has been met is strong and clear	2	
		Some of the evidence that this criterion has been met is either weak or unclear or both.	1	
		No evidence that this criterion has been met	0	
		TOTAL MARKS out of 10		

**Note:** Applicants will have to get a least one point in each category and get a total of at least 7 points in order for the application to be approved.

**B Review Comments to the Journal Publications**

## International Journal of Applied Engineering Research (IJAER)



Print ISSN 0973-4562

Online ISSN 1087--1090

### Paper Review Form

Paper Title	<b>Secret Sharing Homomorphism and Secure E-voting</b>
Authors	Binu V P, Divya G Nair, Sreekumar A

### Evaluation

	Poor	Fair	Good	Very Good	Outstanding
Originality Paper				X	
Innovation				X	
Technical merit			X		
Length			X		
Presentation and English			X		
Awareness of related work			X		
References				X	

	Strongly Reject	Reject	Marginally Accept	Accept	Strong Accept
Recommendation				X	
Reviewer's Name, Affiliation	Dr. Krishna A N, SJBIT, Bangalore				

#### Comments

Arrange references in order  
 Give organization of the paper at the end of introduction  
 Punctuations are not in proper place and no space after commas and full stops  
 Number the Equations and give proper reference in the text

Research India Publication  
B-2/84, Ground floor,  
Rohini Sector-16,  
Delhi-110089 INDIA

**C Draft Minutes of The Research Guidance Committee**

**Minutes of the Fourth Research Guidance Committee for TEQIP II at College of Engineering Karunagappally, Karunagappally, Kollam, Kerala Conducted on 30/01/2016 at 10:00 AM in Principal's room under the chairmanship of Senior Research Advisor Prof. E.Gopinathan**

No: CEK/TEQIP/RPC/04/2014.

30-01-2016

**Agenda**

Silent Prayer

Welcome address by the Principal.

**1.1 Confirming the Minutes of the Third Meeting of the Research Guidance Committee held on 21-03-2015 at College of Engineering Karunagappally.**

The Minutes of the third Meeting of the Research Guidance Committee held on 21-03-2015 at College of Engineering Karunagappally was sent to the Chairman for his approval and upon his approval copies were circulated among the other members of the RGC. A copy of the Minutes is appended as **Annexure 1** for confirmation.

The Committee may consider the Minutes for approval.

**1.2 Evaluation of the submission of the projects submitted by the Principal Investigators**

The Principal investigators submitted the project reports with financial statement on utilization of the fund for which they had availed Research Seed Money. The Principal Investigators may be asked to clarify the doubts in the reports. A copy of the final expenditure statement is appended as **Annexure 2** for verification.

**1.3 Ratifying the extension period based on the Extension request reports**

Extension reports of the principal investigators are submitted to chairman for his approval and got permission for the same. A copy of the extension requests and approval letters from Chairman-RGC are appended as **Annexure 3** for verification.

**1.4 Ratification of decision to conduct the International Conference on July 8th to 10th 2016.**

The details regarding the conduct of International Conference on Computing Communication and Signal Processing is also attached as **Annexure IV**.

**1.5 Any other matter regarding improvement of Research and Development**

**The following members were present:**

1. Prof. (Dr.) Gopinathan E, Former Director, NIT Calicut, SRA of the Institution (Chairman)
2. Prof. (Dr.) Hari V.S, Principal (Convenor)
3. Dr. Rajkumar Choudhary, Scientist Space Physics Laboratory, VSSC, Member
4. Sri. Shajahan M, Scientist Space Physics Laboratory, VSSC, Member
5. Dr. Ajilkumar A, TEQIP II Coordinator, Member
6. Ms. Smitha P, R&D Coordinator, Member

The following members of the RGC conveyed their inability to attend the meeting

1. Prof. Libi A, HOD EEE, Member
2. Prof. Anil Kumar C V, HOD ECE, Member
3. Prof. Binu V.P, HOD CE, Member

The Meeting started at 10.00.AM under the presidency of the Hon'ble Chairman with a silent prayer followed by welcome address by Dr. Ajilkumar A. He also briefed about TEQIP II and the progress of R & D activities at CE Karunagappally. .

The Principal introduced the agenda to the committee members and the agenda items were taken one by one for discussion.

**Resolutions Adopted**

**Item No 1.1 / RGC 4: Confirming the Minutes of the Third Meeting of the Research Guidance Committee held on 21-03-2015 at College of Engineering Karunagappally.**

Minutes of the first RGC meeting held on 21.03.2015 was circulated to the RGC members for confirmation. Based on the discussions, the RGC confirmed the approved minutes of the RGC meeting held on 21.03.2015.

**Item No 1.2 / RGC 4: Evaluation of the submission of the projects submitted by the Principal Investigators**

The Projects submitted by the Principal Investigators (PIs) were discussed in detail. The comments received from the Hon'ble Chairman were also discussed. The Committee approved the proposals pointing out the modifications that are to be done before submitting the proposals (which are not yet submitted) to external funding agencies and all the reports are verified by the chairman in first level. The committee discussed the proposal which are to be submitted first in the following order.

1. Dr. Hari V S: the proposal was submitted for 65.97 lakhs to DeiT. Rajkumar choudry sir suggested to aim for 100 percent fund and also added that with proper justification we can claim upto Crores. He also asked the justification for the instruments to be purchased.

Gopinathan sir suggested that we are having freedom to review and complete for success and asked to provide clear objectives. Latest literature survey is missing in the reference. Shajahan sir queried the quoted price for the Skin Tech is high. Also added that, methodology of the work and the results must be clear with appropriate title. Objective must help directly the society. or it must have some application to the society. He also suggested predicting, the indirect applications in other area. He added using reusable FPGA which will support other applications. Gopinathan sir asked quantifying the significance of a research assistance and the contribution. Finally all the committee members suggested bringing the amount down to 49.99 lakhs at least otherwise it will be facing critical review.

2. Deepa A K: Project proposal is for 25.35 lakhs and all the committee members had same opinion to increase the amount. Rajkumar chaoudry sir asked for proper justification in the purchase of a printer, and add references with latest papers. He also suggested equipment justification and reference in background part of the proposal. Gopinathan sir suggested having projective applications and content of the proposal to be explained elaborately with caching title. He added to have proper justification for equipment purchase in the budget. Shajahan sir asked for the scope of the work, contingency amount and stationary. Specification should not have any brand name and it must have future predictions. He suggested having solid state hard disks, FPGA software (required around 10 lakhs) for model simulation. In the manpower part qualification must be specified. All members had the opinion with the lack of background, latest technology and motivation.

3. Shajy L: Proposal amount is for 29.95 lakhs to the KSCSTE and all the members unanimously convinced with the proposal and suggested as excellent one.

4. Smitha P: Proposal amount is for 38.49 lakhs to DBT and all the committee members had the opinion to add overhead amount. Rajkumar choudry sir found some minor correction in the way of presentation of the proposal and suggested some changes in the sentences.

5. Jyothi R L: Both the proposals (Grandha Script of 11.07 lakhs to TDIL and Malayalam Script of 11.07 Lakhs to SERB) of this principal investigator are submitted to the funding agency and all the committee members had common opinion to wait for the comments.

6. Remya R S: Both the proposals (Automated video forgery detection of 13.57 lakhs to SERB and Automated detection of Acute Lymphocytic Leukemia of 16.31 lakhs to KSCSTE) of this principal investigator are in the submission process towards the funding agency and all the committee members had common opinion to wait for the comments.

The committee ratified all the proposals with minor suggestions in proposals. All the members are satisfied with the R & D activity happening in this college and extended their help in any regard of this process.

#### **1.4 Item No 1.3 / RGC 4: Ratifying the extension period based on the Extension request reports**

Extension reports of the principal investigators are submitted to chairman for his approval and got permission for the same. These requests are presented before the committee for ratification. The committee studied the requests and approved the requests upto 30th October 2015.

#### **1.5 Item No 1.4 / RGC 4: Ratification of decision to conduct the International Conference on July 8th to 10th 2016.**

The details regarding the conduct of International Conference on Computing Communication and Signal Processing from July 8th and 9th, 2016 were discussed.

The committee discussed about the formation of committees and its budget preparation as given below. The committee met on 13/11/2015 and prepared the budget.

Venue :	4,50,000/-
Printing of Brochures and Posters :	50,000/-
TA for resource persons :	4,50,000/-
Remuneration to resource persons :	1,00,000/-
Publication of Conference Proceedings :	2,50,000
Printing of Certificates :	5,000/-
Conference Kit :	70,000/-
Accommodation :	90,000/-
Publicity :	40,000/-
Transportation :	50,000/-
Other Miscellaneous expenses :	70,000/-
Total Amount :	Rs. 16,25,000/-

The committee ratified the budget. The committee also considered the venue selection as there is lacks facility to host an International Conference of this magnitude, at College of Engineering Karunagappally and ratified the venu selection as "The Quilon Beach Hotel" in view of the proximity to the Trivandrum Air Port, National High Way, Railway Station.

The committee discussed about the current status of the conference and satisfied with the same. And suggested speed up the process and utilize the short duration. All the members extended their helping hands in all aspects. Shajahan sir and Rajkumar Choudary sir is also a part of conducting a international conference in VSSC Trivandrum of this year and are ready to help at any time.

The committee ended at 4. PM

**D Request from Mr. C V Anilkumaar, Asso. Prof. in EC**

**SUBMITTED**

I had presented my research paper titled "A Printed Antenna with Circular Cut for Bandwidth Enhancement" at the international conference - IEEE TENCON 2015, organized by IEEE Asia Pacific region (Region 10) from 1<sup>st</sup> to 4<sup>th</sup> November 2015 at Macau, China. I had attended the conference with prior permission from Govt. of Kerala, IHRD and BoG of this institute and submitted a detailed proposal for financial support under ITSS of TEQIP-II well in advance. But SPFU/NPIU has not yet approved the proposal and hence my travel, boarding /lodging expenses and registration fee has not granted. So kindly take necessary steps to get approval from TEQIP authorities and release the fund as early as possible.

28.03.2016

CEK



C V Anil Kumar

Asso. Prof . in EC

**E Extract from the Revised PIP - Industrial Visits**

### **GUIDELINES ON INDUSTRY-INSTITUTION-INTERACTION CELL (I-I-I-C)**

**1. Objective:**

To explore and identify common avenues of interaction with Industry as per the requirements of the institution.

**2. Scope:**

All the institutions covered under the Project will form Industry-Institution-Interaction Cell (I-I-I-C) to establish purposeful interaction between Industry and institution.

For the Cell to function smoothly and to meet its objectives effectively, I-I-I-C must have some core staff. The core staff should include a Coordinator (not less than an Assistant Professor) from the institution who will be assisted by a Project Assistant and an Office Assistant. The Cell should meet at least twice per semester. The proposed composition of the Cell is as following:

- |   |   |          |
|---|---|----------|
| a) Director/ Principal of the institution                 | - | Chairman |
| b) HOD and one faculty from each department               | - | Member   |
| c) Two Members from Industry/ Entrepreneurs of the region | - | Member   |
| d) Training and Placement Officer                         | - | Member   |
| e) Coordinator of the Cell                                | - | Convener |

**3. Strategy :**

IIIC will be responsible for designing the roadmap for interaction with Industry recognising the inherent strengths as well as the weaknesses of the institution. The Government organizations in the region also can participate in the Industry-Institution-Interaction-Cell.

**4. Suggested Activities under IIIC :**

- To identify and facilitate Guest Lectures, Interactive workshops, conferences, seminars, Brain Storming Sessions, Technical Discussions etc. with Members of the Industry, outside Experts, eminent personalities at regular interval.
- To conduct Industrial Training, Orientation Courses, Industrial Visits etc for faculty and students at regular intervals.
- To facilitate joint research work, consultancy involving faculty and students.
- To conduct industrial exhibitions to highlight research facilities and expertise available with the institution.
- To facilitate professionals from Industry to work as visiting faculty in institutions and short or long periods deployment of faculty from institutions to Industry for gaining industrial experience and/or work on projects in Industry.
- To seek and associate Experts from Industry in Curriculum Development and review.
- To identify Continuing Education opportunities, short-term programmes and training needs of the Industry, which the institution can provide.
- To promote revenue generating activities for the institution like Lab Testing, Calibration, consultancy and R&D etc.
- To assess periodically the scientific and technological scenario/ happenings in India and abroad in order to translate it into action for taking up future R&D work.

**F Extract from the Revised PIP - Internship**

Minutes of the Eighth Meeting of the Board of Governors  
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		<p>course fee and local travel expenses as per applicable norms and rules when training is attended in-station but at an institution / organization other than the parent institution</p> <ul style="list-style-type: none"> <li>• Training of technical support staff: (applicable for staff of engineering disciplines and supporting departments) <ul style="list-style-type: none"> <li>o Course fee; travel expenses; boarding, lodging, and sundry expenses/allowances as per applicable norms and rules when the technical support staff is deputed outstation to another Institution/ Organization within India</li> <li>o Course fee and local travel expenses as per applicable norms and rules when training is attended in-station but at an Institution other than the parent Institution</li> </ul> </li> <li>• Training of administrative and general support staff in functional areas: <ul style="list-style-type: none"> <li>o Course fee; travel expenses; boarding, lodging, and sundry expenses/allowances as per applicable norms and rules when the technical support staff is deputed outstation to another Institution/Organization</li> <li>o Course fee and local travel expenses as per applicable norms and rules when training is attended in-station but at an Institution other than the parent Institution</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the staff for attending the training programme.</li> <li>• Any other payment to the staff for attending the training programme</li> </ul>
5. Enhanced interaction with Industry		<ul style="list-style-type: none"> <li>• Travel cost, hospitality and honorarium to industry personnel for participation in curriculum development / revision / restructuring, student assessment and Institutional bodies, and for delivering expert lectures</li> <li>• Expenditure for increasing I-I-I through PSAG.</li> <li>• Expenditure towards inviting industry (excluding travel cost and lodging boarding) for campus interviews and hospitality during campus interviews.</li> <li>• Arranging tutoring by industry experts to prepare students for on- and off-campus job interviews.</li> <li>• Organizing short term training programme in collaboration with Industry</li> <li>• Student attending internship in industry <ul style="list-style-type: none"> <li>o Travel expenses, boarding, lodging and sundry expenses / allowances as per norms approved by BoG</li> </ul> </li> </ul>	
6. Institutional Management Capacity Enhancement		<ul style="list-style-type: none"> <li>• Management development training of Institution's senior officials and senior faculty: <ul style="list-style-type: none"> <li>o Course fee; travel expenses, boarding and lodging, and sundry expenses/allowances as per applicable norms and rules when deputed out-station [as per Guidelines on International Travel (Annex-VII)] to another Institution (within India or abroad) for the duration of the Course, travel time and the time permitted by the BoG for visits to Institutions/Organizations of interest and relevance to the faculty in the vicinity of the location of training.</li> <li>o Study Tours; travel expenses, boarding and lodging, and sundry expenses / allowances as per applicable norms and rules when deputed for study tour within India or abroad [as per Guidelines on International Travel (Annex-VII)].</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the officials and senior faculty for attending the Course</li> </ul>

**G Report of Progress of Work in the International Conference**



# ICCCSP-2016

INTERNATIONAL CONFERENCE ON  
COMPUTING, COMMUNICATION  
AND SIGNAL PROCESSING  
[www.icccsp2016.org](http://www.icccsp2016.org)



## 8, 9 July 2016

Venue



In Technical Collaborations with



College of Engineering Karunagappally, Kollam, Kerala, India  
Managed by IHRD, A Government of Kerala Undertaking



The International Conference on Computing, Communication and Signal Processing (**ICCCSP-2016**) is organized by the following departments of College of Engineering Karunagappally, Kerala on 8<sup>th</sup> and 9<sup>th</sup> July 2016.

- Department of Computer Science and Engineering
- Department of Electronics and Communication Engineering

## Conference Objectives

ICCCSP-2016 provides an international platform for the presentation of original research findings as well as the exchange and dissemination of innovative, practical development experiences in the field of computing, communication and signal processing. Original unpublished papers from all view points, including theory, practice and experimentation and reviews highlighting the specific research domains for the presentation in the technical sessions of the conference are invited from researchers, academicians and professionals throughout the globe.

The scientific programme of ICCSP-2016 will consist of regular track sessions with technical contributions, reviewed and selected by an international programme committee, as well as keynote talks given by leading experts in the respective fields.

It is a major multidisciplinary conference organized with the objective of bringing together researchers, developers and practitioners from academia and industry.

## Program Overview

The conference is planned for July 8–9, 2016. The technical programme will include plenary sessions with keynote speakers, and multiple technical sessions with panels, presentations, and contributed papers under three parallel tracks. A poster session with displays of high profile projects and best practices will be held through- out the course of the event.

## Publication of Proceedings

- Conference proceedings of the ICCSP-2016 will be published by McGraw Hill Education with Unique ISBN Number. One hard copy of the proceeding will be given to the registered paper.
- Selected papers will be published in an appropriate International Journal after suitable modifications by the author. The additional cost involved will have to be borne by the author.



## Important Dates

Paper Submission Deadline	:	10 <sup>th</sup> March 2016
Paper Acceptance/Rejection Notification	:	30 <sup>th</sup> April 2016
Registration	:	05 <sup>th</sup> May 2016
Camera Ready Submission	:	15 <sup>th</sup> May 2016
Date of Conference	:	8 <sup>th</sup> , 9 <sup>th</sup> July 2016

## Conference Themes

You are invited to propose papers in any of the following areas:-

Total 03 tracks will be executed in parallel

### T1. Computing • T2. Communication • T3. Signal Processing

Original unpublished papers from the prospective authors are invited in the following areas, but not limited to:

#### Track 1: Computing

Algorithms  
Automated Software Engineering  
Bio-informatics  
Compilers and Interpreters  
Computational Intelligence  
Computer Animation  
Computer Graphics & Virtual Reality  
Computer Graphics and Multimedia  
Computer Networks and Data Communication  
Computer Security  
Data Mining  
Database Systems  
Data Encryption  
Video compression & Streaming  
Computer Vision & VR  
Multimedia & Human-computer Interaction  
Statistic Learning & Pattern Recognition  
AI & Neural Networks  
Biometrics & Authentication  
SP for Bio-medical & Cognitive Science  
Computer Vision, Computational Intelligence

#### Track 2: Communication

Future Internet/Future Networks.  
Crowd sourcing.  
Green Networking.  
Optical Networks.  
Wireless networks.  
Mobile networks.  
Ubiquitous Networks and Internet.  
Ad-hoc and Sensor Networks.  
Coding and Information Theory, Wireless.  
UWB.  
Ultrasonic Communications.  
Satellite Communications.  
Radio-over-Fiber.  
Free Space and Fiber-Optic  
Software Defined Radio.  
Cognitive Radio.  
Secured Communication Systems  
Multi-antenna Communication Systems  
Wideband, Multiband Antennas,  
Smart Antennas,  
Digital Beam Forming  
Free Space and Fiber-Optic  
Cooperative Communications.  
Network communication for  
smart grid power generation

#### Track 3: Signal Processing

Signal Processing Algorithms and Architecture  
Signal Separation and Identification  
Adaptive and Array Signal Processing  
Underwater Communications and Signal Processing  
VLSI for Communication and Signal Processing  
Nonlinear and Biomedical Signal Processing  
Spoken Language Processing  
Detection and Estimation Techniques  
Audio, Speech, Image and Video Signal  
Speech Synthesis & Recognition  
Hardware Implementation for Signal Processing  
Medical Image Processing  
Array Signal Processing  
Spectrum Estimation & Modeling  
Higher Order Spectral Analysis  
Image acquisition & Medical Image processing  
Pattern recognition and analysis  
Image coding and compression  
Face Recognition & Super-resolution imaging  
3-D and Surface Reconstruction  
3D and Stereo Imaging  
SP for Internet and Wireless Communications  
Analog and Mixed Signal Processing  
Applications (Biomedical, Bioinformatics,  
Genomic, Seismic, Radar, Sonar,  
Remote Sensing, Positioning, etc.)

## Keynote Speakers



#### Dr. Prof. V. LAKSHMI NARASIMHAN

B.Sc., B.E., M.E., Ph.D., GCM, CELD, P.E., SrMACM,  
MAAEE, SrMIEEE, Fellow ACS, Fellow IEAUST, Fellow IEE (IET)  
Vice-President (Research)  
Srikar & Associates Intl. Inc.  
109 Fairmount Way, NC 28562, USA (also at India & Australia)  
Email: vlnsimhan60@gmail.com



#### DR. ZORAN BOJKOVIC

FULL PROFESSOR, Senior Member IEEE  
UNIVERSITY OF BELGRADE  
Studentski Trg 1, 11 000 Belgrade; Serbia  
ENGINEERING ACADEMY OF SERBIA  
Kneza Milosa 9/IV, 11 000 Belgrade, Serbia



#### DR. LEE CHING KWANG

Associate Professor, Director of Graduate  
Institute of Engineering  
Faculty of Engineering, Multimedia University,  
Cyberjaya, Malaysia  
E-mail: cklee@mmu.edu.my  
Website: <http://foe.mmu.edu.my>



#### DR. SUNDARARAJAN N.

Professor, (Retired), Fellow, IEEE; Fellow, IES; Asso. Fellow AIA,  
School of Computer Engineering,  
Nanyang Technological University, Singapore.  
Email: [ensundara@ntu.edu.sg](mailto:ensundara@ntu.edu.sg)  
Personal WebSite: <http://www.ntu.edu.sg/home/ensundara/>



#### DR. R. KRISHNAMOORTHY

M.Tech (I.I.T - K.), Ph.D (I.I.T - Kgp.),  
Professor, Department of CSE & IT,  
Bharadhidasan Institute of Technology Campus,  
Anna University-Tiruchirappalli, India - 600 024.  
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#### DR. SAMAN S. ABEYSEKERA

Associate Professor,  
School of Electrical & Electronic Engineering,  
Nanyang Technological University,  
Singapore.  
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#### CHIEF PATRONS

Dr. J. Letha  
Vice Chancellor, CUSAT  
Dr. V. P. N. Namboothiri  
Emeritus Professor,  
International School of Photonics, CUSAT.

#### PATRONS

Dr. V. Gopakumar  
Director SPFU, TEQIP Phase II  
Dr. K. Vijayakumar  
Director, IHRD, Kerala.  
Dr. K. P. Sudheer  
Professor, IIT Madras

#### CONFERENCE CHAIRS

Dr. E. Gopinathan  
Former Director, NIT Calicut  
Dr. Elizabeth Alias  
Prof., NIT, CALICUT  
Dr. R. Sethunath  
Scientist, ISRO

#### ORGANIZING CHAIR

Dr. Hari V. S.  
Principal, College of Engineering  
Karunagappally.

#### ORGANIZING SECRETARY

Dr. Gopakumar C.  
Asst. Prof., College of Engineering  
Karunagappally.

### ADVISORY COMMITTEE

#### Dr. SAMEH ALANSARY

Director, Arabic Computational Linguistics Centre,  
Alexandria, Egypt

#### Dr. VINOD A. L.

Intersil Corporation,  
Cambridge, UK.

#### Dr. KOWLA L. CHANG

Prof., Electromagnetics and Microwave,  
Qingdao Technological University, China.

#### Dr. ZORAN BOJKOVIC

Full Professor, Senior Member IEEE  
University of Belgrade  
Studentski Trg 1, 11000, Belgrade, Serbia.

#### Prof. REYER ZWIGGELAAR

Department of Computer Science  
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Aberystwyth SY23 3DB, UK.

#### Dr. NARASIMHAN SUNDARARAJAN.

Professor, Nan yang Technological University,  
Singapore.

#### Dr. LEE CHING KWANG

Director of Graduate Institute of Engineering,  
Multimedia University  
Cyberjaya, Malaysia.

#### Dr. S. D. JOSHY

Prof. Dept. of Electrical Engineering, IIT Delhi

#### Mr. SHAJAHAN M

Scientist/Engineer, SPL, VSSC, Trivandrum

#### Mr. RAJKUMAR CHOUDHARY

Scientist, Space Physics Laboratory,  
VSSC, Trivandrum, India.

#### Prof. SARAT KUMAR PATRA

Professor, NIT, Rourkela, India.

#### Dr. P. MOHANAN

Prof., Dept. of Electronics, CUDAT,  
Cochin, Kerala.

#### Dr. K.T. MATHEW

Former Professor., CUSAT. Former Principal,  
VCET, MOOVATTUPUZHA.

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#### Dr. ACHUTHSANKAR S. NAIR

HoD., Department of Computational

Biology & Bioinformatics,

University of Kerala.

#### Dr. JAMES KURIAN

Professor, CUSAT, Cochin, Kerala

#### Dr. AJITH PRABHU

Joint Director, Kerala State Council for  
Science Technology and Environment (KSCSTE)

#### Mr. HARIKUMAR RAMADAS

Head - Education, Training,  
Research & Development Division,  
Energy Management Centre (EMC), Kerala.

#### Dr. RAJASREE M.S.

Director and Professor, Indian Institute of  
Information Technology and Management  
Kerala (IIITM-K)

#### Dr. LILLIKUTTY JACOB

Professor, NIT Calicut, Kerala

#### Dr. GOPIKAKUMARI

Prof., School of Engineering, CUSAT, Cochin, Kerala

#### Dr. S. MRIDULA

Asso. Prof., School of Engineering, Cochin, Kerala

#### Dr. V. P. DEVASSIA

Principal, Model Engineering College,  
Cochin, Kerala

#### Dr. BINU PAUL

Asso. Prof., SOE, CUSAT, Cochin, Kerala

#### Dr. VINU THOMAS

Asso. Prof., Model Engineering College, Cochin, Kerala.

#### Dr. M. GOPEEKRISHNAN

Asst. Prof., Maharajas College, Ernakulam, Kerala.

## Registration

Registration for the conference entitles the delegates to conference publications, attendance of sessions, lunch and refreshments on both days of the conference, cultural events and banquet dinner. Failure to pay the registration fees will exclude the paper from the conference proceedings. The registration doesn't cover accommodation, transportation etc. Registration fees once paid will not be refunded under any circumstances.

## Payment Procedure:

Payment can be made in the form of DD/online.

## Accommodation: Contact Details for Accommodation

Accommodation for participants can be arranged on payment basis in the venue or nearby hotels.

Conference special tariff will be announced through website.

## About Kerala

Kerala, historically known as Keralam, is a state in South India on the Malabar coast. It was formed on 1 November 1956. Kerala is divided into 14 districts with the capital being Thiruvananthapuram. Malayalam is the most widely spoken and the official language of the state. Kerala has nearly 600km of Arabian Sea shoreline. It's known for its palm-lined beaches and its backwaters, a network of canals popular for cruises. Its many upscale seaside resorts include specialists in Ayurvedic treatments. Inland are the Western Ghats, a mountain range whose slopes support tea, coffee and spice plantations as well as abundant native wildlife.



## CONTACT US



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## About the College

College of Engineering Karunagappally is a premier institute of engineering that has carved a niche for itself in the field of technical education in a very short span of time. Since its inception in 2000, under the aegis of IHRD, the college has made its presence felt in the technical horizon of the state. It has been approved by All India Council for Technical Education (AICTE) and recognized by the Cochin University of Science And Technology (CUSAT). The college offers B.Tech.Degree in Computer Science and Engineering, Electronics and Communication Engineering, Electrical and Electronics Engineering and Information Technology. The Masters Degree Programmes offered by the college are M Tech (Computer Science) with specialization in Image Processing and M Tech (Electronics) with specialization in Signal Processing. Being located in Karunagappally, Kollam district, the college has got access to all means of transport, communication and lodging facilities.

## **Report on the Progress of International Conference on Computing, Communication and Signal Processing (ICCCSP-2016)**

As per the, notice issued by Principal, College of Engg., Karunagappally, on 21/08/2015 the preliminary committee comprising 4 members such as 1) Dr. Gopakumar C., Asst. Professor, ECE, 2) Prof. Binu V. P., HoD, CSE, 3) Mr. Raju M. Asst. Prof., EEE and 4) Mr. Premnath G., Asst. Prof. ME met on 05/10/2015 to study the feasibility of conducting an International Conference, to decide a tentative area and date for the conference and to constitute an Executive committee for the same. As the two post graduate programmes in the college are being conducted in the areas of Signal Processing and image processing, and the current research works in the Department of Electronics and Communication Engineering and the Department of Computer Science are also being done in the same fields, it was decided to conduct the international Conference in the area of 'Computing, Communication and Signal Processing'. A convenient date was also decided as 8<sup>th</sup> and 9<sup>th</sup> of July 2015. Committee decided to request for the permission to meet the expenses for the conference under TEQIP phase II project on account of both the departments as there is provision for the same as per Table 18-a, page No. 107, Item No. 12, of the project implementation plan (PIP) of TEQIP II. The committee has also selected the following faculty members to the Executive committee for the smooth conduct of the same.

1. Dr. Gopakumar C., Asst. Prof. (ECE)
2. Dr. Ajilkumar A., Asso. Prof. (ME), (TEQIP Coordinator)
3. Mr. Binu V. P., HOD (CS)
4. Mr. Anilkumar C. V., HOD (ECE)
5. Mrs. Libi A., HOD (EEE)
6. Mr. Premnath G., Asst. Prof. (ME)
7. Mr. Raju M., Asst. Prof. (EEE)
8. Mrs. Deepa T. R., Asst. Prof. (EC)
9. Mr. Anilkumar A., System Analyst (CS)
10. Mrs. Remya R. S., Asst. Prof. (CS)

Principal has issued order to constitute the executive committee as suggested by the preliminary committee. (No. T/194/14/CEK/2015, dtd. 11/11/2015).

## 1. Budget of International Conference

Executive committee was directed to (Proceeding No. T/194/14/CEK/2015 Dated Nov 11, 2015) prepare and submit the Budget of ICCSP-2016 and identify suitable venue for the conference. Hence the committee met on 13/11/2015 and prepared the budget as detailed below.

Venue	:4,50,000/-
Printing of Brochures and Posters	:50,000/-
TA for resource persons	:4,50,000/-
Remuneration to resource persons	:1,00,000/-
Publication of Conference Proceedings	:2,50,000
Printing of Certificates	:5,000/-
Conference Kit	:70,000/-
Accommodation	:90,000/-
Publicity	:40,000/-
Transportation	:50,000/-
Other Miscellaneous expenses	:70,000/-
Total Amount	:Rs. 16,25,000/-

The committee approved this budget and forwarded to Academic Committee and Finance Committee for approval.

Later the Academic Committee and Finance Committee have approved the budget.

As conference Executive committee was directed to identify suitable venue for the conference, the committee discussed about the venue of ICCSP-2016 in detail and have taken the following decisions.

As the college lacks facility to host an International Conference of this magnitude, it was recommended that the conference may be held at a suitable venue in Kollam, which should be easily accessible from the Air port, National High way and Railway station and also reasonably close to the College of Engineering Karunagappally. It was felt that this would attract quality communications and also would result in greater visibility for the institution. The committee

opines that in view of the anticipated number of papers to be received under various categories, the venue should have

1. Three fully furnished A/C halls having seating capacity of at least 50, in class room style,
2. One Big fully furnished A/C hall with 300 seating capacity,
3. Food and provision for serving it (non-veg. lunch + two mid-session tea/coffee and snacks for 250 members for the first day and 150 members in the second day + mineral water),
4. A welcome dinner in the evening of the first day for 200 members,
5. Stationary (writing pads with pen/pencil),
6. Stage setting, Screen, LCD projectors, Sound System: Cordless, Collar and Podium Mikes in three halls etc.

In view of the above, several possible locations were discussed. Many venues were inspected by the committee. The committee recommends that The Quilon Beach Hotel be selected as the venue in view of the proximity to the Trivandrum Air Port, National High Way, Railway Station and College of Engineering Karunagappally and also meeting the specifications as above. It is located on the beach offering panoramic view of the Arabian Sea from every room till its horizon and well designed and managed to offer international standard amenities and services. The committee authorizes Dr. Gopakumar C, Asst. Prof. ECE and Mr. Anilkumar C. V., HoD, ECE, to enquire and report about the process for reserving The Quilon Beach Hotel, Kollam, for the dates of conference, ie, July 8<sup>th</sup> and 9<sup>th</sup>, 2016.

The committee recommended that The Quilon Beach Hotel, Kollam be selected as the venue, and approved the specifications of the venue as above.

The same was put as an agenda of the 7<sup>th</sup> BOG meeting of TEQIP II. The budget and Venue was approved by BOG.

## 2. List of experts to be invited:

Totally three Tracks were identified for the technical sessions for the ICCSP-2016. They are

1. Computing
2. Communication
3. Signal Processing

To deliver keynote addresses the committee proposed that the following list of experts in and outside of the country be invited. (20/12/2016).

Sl. No.	Name and Affiliation	Area of Specialization
1	<b>Dr. Prof. V. Lakshmi Narasimhan</b> Vice-President (Research), Srikar & Associates Intl. Inc. 109 Fairmount Way, NC 28562, USA	Various aspects of the theory and practice of information systems design, management and exploitation.
2	<b>Dr. Zoran Boljkovic</b> Full Professor, University of Belgrade, Studentski Trg 1, 11000 Belgrade: SERBIA	Digital signal and image processing. Data compression by various techniques for digital transmission or storage audio and video at reduced rates. Wire/wireless multimedia communications and networks.
3	<b>Dr. Lee Ching Kwang</b> Associate Professor, Director of Graduate Institute of Engineering, Faculty of Engineering, Multimedia University, Cyberjaya, MALAYSIA.	Frequency selective surfaces, Microstrip Antennas, Electromagnetic Modeling.
4	<b>Dr. Narasimhan Sundararajan</b> Professor (Retired), School of Computer Engineering, Nan yang Technological University, Singapore.	Neural Network Algorithms, Minimal Resource Allocation Network, Adaptive Flight Control
5	<b>Dr. R. Krishnamoorthy</b> Professor, Department of CSE & IT, Bharadhidasan Institute of Technology Campus, Anna University-Tiruchirappalli, INDIA .	Biometrics, Computer Vision and Image Processing, Software Testing, Networks, Data and Web Mining
6	<b>Dr. Saman S. Abeysekera</b> Associate Professor, School of Electrical & Electronic Engineering, Nan yang Trchnological University, SINGAPORE.	Frequency estimation, Time frequency domain analysis of audio and electrocardiographic signals, Signal processing for communications, Applications of sigma delta modulators and radar/sonar signal processing.

Totally 6 number of Keynote Speakers from in and outside country was also decided to be invited and they were invited officially.

### 3. Conference Sub Committees

It was decided by the executive committee to constitute sub committees for the smooth functioning of the International Conference. Principal issued orders (Proceedings No. C/42/16/CEK dtd. 07/01/2016) in this regard.

<b>Sl. No.</b>	<b>Item</b>	<b>Convener</b>	<b>Committee members</b>
1	Venue	Mr. Anilkumar C. V.	Dr. Gopakumar C.
2	Conference & College Website Design and	Mr. Binu V. P.	Dr. Gopakumar C.
3	Printing of Brochures and Posters	Mrs. Remya R. S.	Mrs. Sree S. Bhagya Mr. Jayakrishnan A.
4	Publication of Conference Proceedings	Dr. Gopakumar C.	Mr. Binu V. P. Mr. Anilkumar C. V.
5	Finance	Mr. Premnath G.	Mr. Shajy L. Mr. Abdul Jaleel E. Mr. Vincent V.
6	Publicity	Mr. Kuriachan T. D.	Mr. Sunil P. C Mr. Reji Thankachan Mr. Abinlal P. Mr. Ansar B.
7	Communication and correspondence	Mrs. Shani Raj	Mrs. Renjini S. Ms. Preema R. Chandran Ms. Resmi Ramachandran pillai
8	Plagiarism check & Paper Review	Mrs. Geetha S.	Mrs. Shiny C. Mrs. Deepa T.R. Mrs. Jissi Raju

			Ms. Aryachandran S.
9	Travel & Accommodation (National & International)	Mr. Raju M.	Mr. Ajmal K. Mr. Anilkumar A. Mr. Praveesh
10	Conference Kit	Dr. Ajilkumar A.	Mr. Ganesh R. Mrs. Deepa V. S.
11	Printing of Certificates and Badges	Mrs. Deepa T.R.	Mrs. Deepa A. K. Mr. Jayakrishnan A. Ms. Aswathy S. S.
12	Poster Presentation Arrangements	Mr. Revikumarthampi V. R.	Mr. Ganesh R. Mrs. Shani Raj
13	Web site Management	Mr. Anilkumar A.	Mrs. Sreepriya S. Mr. Abinlal D.
14	Local Transportation	Mrs. Libi A.	Mr. Premnath G. Mr. Ansar B. Mr. Praveesh
15	Session Management	Mrs. Smitha P.	Mrs. Aneesha Muhammed Mrs. Haseena P. Y. Mrs. Renu K. K.
16	Hospitality	Mr. Binu V. P.	Mr. Anilkumar C. V. Dr. Gopakumar C.
17	Inaugural Ceremony - Program Co-ordination	Mr. Shajy L.	Mrs. Remya R. S. Mrs. Shiny C. Mrs. Preema R. Chandran
18	Registration of Participants	Mrs. Premakumari K. R.	Mrs. Sheela R. Mrs. Geetha S. Mrs. Retheekumari S.
19	Documentation	Mrs. Jyothi R. L.	Mrs. Sandhya Murali P. Mrs. Subeena H.

#### 4. Technical Collaborators:

Executive committee has decided to invite three important Technical Institutions in Kerala viz. KSCSTE, EMC Kerala and IIITMK as Technical Collaborators of the conference. They have agreed to cooperate with us.

#### 5. Official Inauguration of Conference Website:

The Executive committee discussed about the possible date of inaugurating the conference website. 13/01/2016 is proposed as the date of official inauguration, as Dr. N. Sundararajan, Prof., Nan yang Technological University, Singapore was arriving in the campus in connection with a short term Training Program on the same day. The committee proposed Dr. N. Sundararajan to be invited for the official launching of the website. The Website for the Conference was launched on the same day.

#### 6. Mode of transferring money as per the approved budget from TEQIP fund:

A discussion on the mode of receiving money from the TQUIP fund for the purpose of organizing conference was carried out. The executive committee suggested requesting sufficient amount of advance money with an estimate, from TEQIP fund, as and when required, each time for different items, for the organization of the conference. (20/12/2016).

#### 7. Printing Brochures and Posters for ICCSP-2016:

The committee recommended that the Brochures and Posters with the following specifications may be designed and printed for the publicity of ICCSP-2016. A total number of 600 Brochures and 400 posters were decided to be designed and printed with a given specification. (05/01/2016).

#### 8. Selection of a suitable publisher for the proceedings of the conference:

A discussion on selecting a good publisher for the conference proceedings was carried out. Authors are generally looking for good publishers when they are about to send their papers to a conference. So, to accept good papers for the conference, reputed publishers will have to

publish the proceedings. If the papers are indexed by good indexing services, more good papers from researchers can be attracted to the conference. Much effort was taken to get one of the major and reputed online publishers like Elsevier and Springer. As per their suggestions the Conference Website was modified several times. The Advisory committee and list of Reviewers (TPC) were revised by including more experts with good profiles. But, as there is no proof for the past experience in conducting big events like this in our college, the service of these publishers was not able to obtain. Out of the major reputed print media publishers, generally preferred by authors for the conference proceedings is McGraw-Hill Education. So the executive committee decided and suggested seeking service of McGraw Hill Education as the publishers of proceedings with the following specifications. The proceedings shall be in Crown Quarto (trim size: 7¼" x 9 ½"). To use 70 GSM white paper for the text. The work shall be in soft cover binding with the book cover printed in four colours. The Executive committee entrusted the publication committee to enquire the details about this. (20/12/2016).

This may be ratified by the BoG.

9. Sending a request for Clearance from The ministry of External Affairs for Conducting the International Conference: (20/12/2016)

It is mandatory to get clearance from the Ministry of External Affairs for Conducting the International Conference. So the Executive Committee discussed the need of doing this in the appropriate time. A letter by Principal in a prescribed format containing all the information of the conference including the details of Foreign Keynote speakers has been forwarded through the Director IHRD and the Dept. of Higher Education to the Ministry of External affairs.

10. Revisiting venue for suggestive modification of facilities:

Some of the executive committee members was expressed their interest to visit the venue for a final verification of facilities available at the venue. Dr. Hari V. S., Principal, Dr. Ajilkumar A., TEQIP Coordinator, Mrs. Libi A., HoD (EEE) (also, Convenor, Local Transport Sub-Committee), Mr. Premnath G. (also, Convenor, Finance Sub-committee), Mr. Kuriachan T. D. (Convenor, Sub-Publicity Committee) and Dr. Gopakumar C., Convenor, Executive committee, visited the Venue,

Quilon Beach hotel and Convention Centre on 17/12/2016 and ensured the facilities available there and suggested necessary modifications . All are satisfied with regards to the available facilities. The committee members suggested getting an invoice from the venue with the required specifications already approved by the executive committee.

#### 11. Contract award for venue including food for ICCSP-2016:

As per the decision taken by executive committee on 19/11/2016 and the following approval by Academic committee and the 7<sup>th</sup> BoG meeting held on 16/11/2015, a request from Principal College of Engineering, Karunagappally, was sent to 'The Quilon Beach Hotel' for issuing an Invoice in this regard. The invoice submitted on 03/01/2016 of Rs. 4,49,525/- was put under discussion in the executive committee and a decision was arrived to proceed with this by issuing the token advance of Rs. 50,000/-.

#### 12. Selection of Reviewers:

Around 85 reviewers were invited from different Technical Institutions and Universities within and outside Kerala for the blind reviews of the received papers.

#### 13. Signing Agreement with McGraw Hill Education:

In response to our request, McGraw Hill Education had sent a quotation for publishing the proceedings with the following specifications. .

##### **Specifications of the conference proceedings:**

- **Book Size: Crown Quarto (trim size: 7¼" x 9 ½"; print area: 6" x 8")**
- **Pages: 400**
- **Book Cover: 4-Colour**
- **Paper: 70 GSM (White) Text Paper with Text printing in 1-colour**
- **Book Binding: Softcover**
- **Print-ready PDFs: we will receive camera ready copy (high resolution PDFs for printing) of the book for printing**

**Based on the above specifications, the fresh quotes by McGraw Hill Education was:**

- **120 copies in Paperback @ INR 895/- per copy**

• **150 copies in Paperback @ INR 815/- per copy**

**Total Amount = Rs. 1,07,400/-**

As they insisted to sign an agreement with them the draft copy of the agreement was read by the committee members and had a discussion about this. It was decided to sign the agreement. (05/01/2016).

#### 14. Contract award for printing Conference Brochure and Posters:

Three firms submitted quotations before the stipulated time. The quotations were tabulated by Mrs. Remya R. S., Asst. Prof., Dept. of Computer Science and Engg.

The tabulation statement is recommended by Dr. Gopakumar C., Convener of the conference ICCSP-2016. The lowest quote is by Paprika, Kuttivattom, Karunagappally, Kollam, for Rs. 34,600/- which is lower than the budgeted amount approved by executive committee on 13/11/2016 which was ratified by the academic committee and the 7<sup>th</sup> BoG meeting held on 16/11/2015.

#### 15. Extension of deadline of paper submission to ICCSP-2016 : (07/03/2016)

As there are several International Conferences scheduled by other nearby Institutions close to the dates of our conference ICCSP-2016, it is quite natural that manuscripts from authors in the relevant areas will be distributed. A decision had to be taken whether to extend the deadline of paper submission to the conference because of the following reasons. 1) Sufficient number of papers that we expected was not arrived yet. 2) Constant requests from prospective authors to extend the deadline for paper submission.

Discussion was carried out on this issue and finally came into a consensus that the deadline date can be extended to 28<sup>th</sup> March 2016.

#### 16. Choosing an online journal for publishing selected papers :

As many prospective authors were frequently enquiring whether there is any tie up with an online journal, discussion was carried out for the possibility of the same. It was decided to select a set of papers based on technical content and original contribution for publishing in a

SCOPUS indexed journal 'International Journal of Engineering and Technology' (IJET) (with e-ISSN: 0975-4024) after sufficient modification of the paper by the author. The additional cost involved will have to be borne by the author. It was also decided to give this information in the Conference Website.

### 17. Stage settings and decorations (Event management):

The Stage settings and decorations in the venue (Event management) which may contain the following items was missed inadvertently to include in the Conference Budget.

Stage settings and decorations: Stage setting, Back drop Flex Design, Printing and Mounting, Screen, LCD projectors, Sound System: Cordless, Collar and Podium Mikes in three halls, Round Arch, Pole branding, Branding on podiums, Welcome board, Program board, Setting Stalls, Setting arrangement of poster presentation etc.

The executive committee met on 07/03/2016 has decided to recommend that an approximate amount of Rs. 1,50,000/- may be included in the budget towards the Stage settings and decorations in the venue and it was further approved by the Conference finance committee for the approval of BoG.

The unanticipated item Stage settings and decorations with estimated expenditure of Rs. 150, 000/- is to be included in the original estimate of conference, approved in the seventh BoG. The revised estimate now becomes Rs. 17, 75000/-

The BoG is requested to include the item Stage settings and decorations in the estimate of conference and to sanction the revised estimate of Rs. 17, 75000/-


### Things to be ratified by BoG:

- 1) Selection of publisher for the proceedings of the conference

### Things to be approved by the BoG:

- 1) Approval for Inclusion of an additional item 'Stage settings and decorations' in the conference Budget.
- 2) Approval of contract award for venue including food for the conference.

**H Invoice from Quilon Beach Hotel**

 <b>THE QUILON BEACH HOTEL</b>	Beach, Kollam 691 006, Kerala, S.India <b>Phone</b> : +91 474 2769999, <b>Fax</b> : +91 474 2749009 <b>Mobile</b> : +91 9446004243, +91 9447783714 <b>Email</b> : banquets@qresorts.in <b>Web</b> : www.qresorts.in				
<b>PROFORMA INVOICE</b>					
Date: 03 January 2016					
The Principal College of Engineering Karunagappally Kollam, Kerala.					
Sl #	Particulars	Number of Pax / Quantity	Rate	Total	
1	8th July 2016 : AC Banquet Hall for meeting followed by Lunch buffet	225	747.00	168,075.00	
2	8th July 2016 : AC Banquet Hall for meeting followed by dinner buffet	200	847.00	169,400.00	
3	9th July 2016 : AC Banquet Hall for meeting followed by Lunch buffet	150	747.00	112,050.00	
<b>Grand Total</b>		<b>449,525.00</b>	<b>449,525.00</b>		
<b>Balance to Pay</b>				<b>449,525.00</b>	
<b>Bank Details</b>					
BANK	NAME	ACCOUNT NO	BRANCH	IFSC CODE	SWIFT CODE
HDFC BANK	QUILON HOTELS AND RESORTS PRIVATE LTD	0203 200 000 5637	KOLLAM	HDFC0000203	HDFCINBB
<b>NB:</b> Per person rate is inclusive of AC Banquet Hall & food If the number of conference attendess is greater than the guaranteed number, then the billing will be done based on that number. {LCD Projector+Screen (Complimentary) , Stage decoration will be extra, Please pay the token advance for the confirmation of your function}					



*Russel*  
28/2/16