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

Contents

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^{th} 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^{th} 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^{th} 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.

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 substation	NCB	V S Associates, Karunagappally	2445298.00
	Total				40,14,965.00

4.2 Cancelled Packages

The packages listed in Table 2 in page 7 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 ammount 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 e 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 E 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

9	...I/KL/KL1G18/138	Furniture for Lab and classroom	Shopping	No quotations has been received

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

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

5 Academic Activities

The details of academic activities conducted post the 6^{th} BoG are detailed below.

5.1 In house programmes post the 6^{th} BoG Meeting

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

- 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 coducted 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 Expediture Incurred

The deails 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. Prof. In ECE	Pedagogical Training	IIT Madras	23 to 25 feb 2015	10023
2	Ms.Deepa T R	Asst. Prof. In ECE	Pedagogical Training	IIT Madras	23 to 25 feb 2015	10023
3	Ms.Jyothi R L	Asst. Prof. In CSE	Pedagogical Training	IIT Madras	23 to 25 feb 2015	10023
4	Dr.Ajikumar A	Asso. Prof. In ME	Pedagogical Training	IIT Madras	26 to 28 feb 2015	5175
5	Mr.Revikumarthampi V R	Asst. Prof. In ME	Pedagogical Training	IIT Madras	26 to 28 feb 2015	5175
6	Mr.Raju M	Asst. Prof. In EEE	Pedagogical Training	IIT Madras	26 to 28 feb 2015	5175
7	Mr.Premnath G	Asst. Prof. In ME	Pedagogical Training	IIT Madras	May 21 to 23 2015	5000
8	Mr.Jayadeepkumar J	Asst. Prof. In ME	Pedagogical Training	IIT Madras	May 21 to 23 2015	5000
9	Mr.Reji Thankachan	Asst. Prof. In ECE	Pedagogical Training	IIT Madras	May 21 to 23 2015	5000
10	Ms.Renu K K	Asso. Prof. In Maths	Pedagogical Training	IIT Madras	25 to 27 may 2015	14175

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 Kurushetra	8/6/2015 to 12/6/2015	40050
15	Anuja V Nair,	Asst.Prof .in ECE	Summer School On Image Processing	NIT Kurushetra	8/6/2015 to 12/6/2016	37554
16	Jyothi R L	Asst. Prof. In CSE	Summer School On Image Processing	NIT Kurushetra	8/6/2015 to 12/6/2017	30838
17	Remya R S	Asst. Prof. In CSE	Summer School On Image Processing	NIT Kurushetra	8/6/2015 to 12/6/2018	37554
18	Mr.Anilkumar A	System Analyst	Summer School On Image Processing	NIT Kurushetra	8/6/2015 to 12/6/2019	20085
19	C V Anil Kumar,	Asso. Prof. In ECE	Sttp On Antennas and Microwave Passive Components to Designand Measurements	IIT Kharagpur	22/6/2015 to28/6/2015	44404
20	Dr. C Gopakumar	Asst.Prof .in ECE	Sttp On Antennas and Microwave Passive Components to Designand Measurements	IIT Kharagpur	22/6/2015 to28/6/2015	44404

21	Lijin B	Demonstrator	National Workshop On Koha	Marian College Library Kuttikkanam	17 sept 2015 to 19 sept 2015	3310
22	Sooraj Lal S	Trades Man	National Workshop On Koha	Marian College Library Kuttikkanam	17 sept 2015 to 19 sept 2015	3310
23	Ajmal K	Asst.prof.in EEE	Power Industry to Familiarization at PETARC	PETARC, Moolamattom, Idukki	15 Oct 2015 to 17 Oct 2015 to	11700
24	Raju M	Asst.prof.in EEE	Power Industry to Familiarization at PETARC	PETARC, Moolamattom, Idukki	16 Oct 2015 to 17 Oct 2015 to	12191
25	Libi A	Asst.prof.in EEE	Workshop on Advanced Control Engineering (ACE-2015)	NIT Thiruchirappalli, TN	9 Oct 2015 to 10 Oct 2015	6651
26	Haseena P Y	Asst.prof.in EEE	Workshop on Advanced Control Engineering (ACE-2015)	Thiruchirappalli, TN	9 Oct 2015 to 10 Oct 2015	6511
	Total					387719.00

5.3 Outstation Programmes Attended by Faculty with Bill Settlement Pending

The details of the outstation progreammes, attended by the faculty and staff, whose bill settlement is pending are listed in Table 7 in page 18, 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 Engineering 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.

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, Ciombatore	20/03/15	6330

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(ICCSP 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, Kumaracoil, Kanyakumary	29 Aprl.2015	17750
12	Mr. Anilkumar C V	Asoc. Prof in EC	IEEE TENCON	Macuau, 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, Thiruvananthapuram	8th to 10th Oct
2	Ms.Remya R S	Asst.Prof. In CSE	Hi Impact Leadership Blueprint For Success at Govt.Eng.College, Bartonhill, Thiruvananthapuram	8th to 10th Oct
3	Mr.Baju V	Asst. Prof. In ME	Hi Impact Leadership Blueprint For Success at Govt.Eng.College, Bartonhill, Thiruvananthapuram	8th to 10th Oct
4	Ms.Geetha S	Asst. Prof. In CSE	Hi Impact Leadership Blueprint For Success at Govt.Eng.College, Bartonhill, Thiruvananthapuram	8th to 10th Oct
5	Mr. C V Anilkumar	Asso. Prof. In ECE	Hi Impact Leadership Blueprint For Success at Govt.Eng.College, Bartonhill, Thiruvananthapuram	8th to 10th Oct
6	Ms.Deepa T R	Asst. Prof. In CSE	Hi Impact Leadership Blueprint For Success at Govt.Eng.College, Bartonhill, Thiruvananthapuram	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 yr CS-Batch 1 EC-Batch 2 EE-Batch 3 IT-Batch 4	Aptitude Test training for Final Year students	5	CL Educate, Tvm	6,7,11,12 13 /9/2015
2	First Year CS EC EE	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. Prf.(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 Immnohistochemistry 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 discusssed 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 Zulfiquer 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 Zulfiquer 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 47. 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 finacial assistance from TEQIP-II under ITSS.

5.14.2 **Decision** — The reimbursement of the expenses incurred in the confrenece 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

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.

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

5.17 EAP Sessions

Thge details of remedial classes conducted for 181 hours, as listed in Table 14 in page 33. 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,S7 EC, S7EE, 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

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 Mathews, 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 34 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, Faculty 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 Communication	5	3000
5	S4EE	Power Electronics	8	4800
6	S6EE	Modern Communication Engg	8	4800
7	S6EE	DSP	10	6000
8	S6EE	Control System I	6	3600
9	S6EE	Optimization Technique	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 Instrumentation	8	4800

14	S8EE	Mechatronics	5	3000
15	S2EE	Differential Equations	6	3600
16	S2EE	Engineering Mechanics	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 Communication and Networking	4	2400
25	S2EC	Differential Equations	8	4800
26	S2CS	Differential Equations	8	4800
27	S1CS	Calculus	5	3000
28	S1CS	Basic Electrical Engineering	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 Architecture and Organization	15	9000
34	S6CS	Compiler Construction	15	9000
35	S6CS	Control System	15	9000
36	S6CS	Digital Signal Processing	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 internship	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 Mutimedia 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 Management Cell	EE	01/16	7500
3	Expert Lecture	Electrical Inspectorate	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 Application Development	Seaview Support System Pvt. Ltd. Technopark	CS	2016-01-01	35000
9	.NET Framework	Softtex digital private limited Technopark	CS	2016-01-01	35000
10	Workshop on PCB Design	IHRD	EC	12/15	20000
11	Expert lecture Entrepreneurship	Union Bank	EC	11/15	5000
12	Talk on Communicaion	BSNL	EC	12/15	5000
13	Tutoring PIC	Brain Bitz	EC	01/16	20000
14	Talk on industries	Department of Industries	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 amoount has been paid back by the investigators.

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 Limphotic Lukhemia	1,00,000	98272	1728

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, Thiruvanathapuram for the project "*Automated detection of Acute Limphotic Lukhemia*"

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^{th}, 11^{th} and 12^{th} 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

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 Assistantships for Increased enrolment in existing and new PG Programmes 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 Development and Institutional Consultancy Activities	8,74,130	0	$-8,00,000$	39,370	0	0	5,32,346	6,45,846

4	Faculty and staff devlopment 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

9.3	Operation and Maintence	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

COLLEGE OF ENGINEERING, KARUNAGAPPALLY
(Govt. of Kerala, Managed by IHRD)
Thodiyoor P.O., Kollam Dist., PIN- 690523
Phone O 0476- 2665935, 2666160 Fax : 0476 - 2665935
www.ceknpy.ac.in e-mail : cekarunagappally@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

COLLEGE OF ENGINEERING KARUNAGAPPALLY PIN. 690523 THODIYOOR P.O.

ANNEX-I

PROPOSALFOR

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. 1st to 4th , 2015	

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

Items	:	Remarks	
a) Paper presentation	:	Yes [√]	No [ ]
b) Chairing a Session	:	Yes [ ]	No [ ]
c) Keynote Speaker	:	Yes [ ]	No [ ]
d) Study & network tour	:	Yes [ ]	No [ ]
e) Enhancement of subject knowledge and research competence	:	Yes [√]	No [ ]
f) Collaboration with the organization	:	Yes [ ]	No [ ]

8. **Provide write-up on the following (1 page on each) :**

(i) 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.

- 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.
- 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^{th} edition, its repute 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.
- 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.
- 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.
- 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

(ii) Benefit to the applicant from the International visit and expected outcome from this visit to the institution.

- 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.
- My research paper titled " A printed antenna with circular cut for bandwidth enhancement" accepted for oral presentation in the Antenna & Microwave Theory and Applications track. A chance to orally present my results before an audience will be an encouragement for my future work.
- 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.
- 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.
- 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.
- 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 exhibiters at the conference venue will help me in setting up of best of the class facilities in our lab.

(iii) Visit linkage to the Institutional Development Proposal objectives and to the current training needs assessment.

- 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.
- 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.

	• 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. • 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. • 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.
(iv)	Plan of the applicant for sharing the gained information with fellow faculty members. • 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. • 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. • The new research ideas gained from the discussions with the expert participants in the conference will be shared with my colleagues and students. • 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.

	• 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. • 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.
(v)	Alternative arrangement planned by the applicant about the appropriate continuance of the teaching and research duties during the travel period. • The proposed conference IEEE TENCON 2015 is scheduled on 1st to 4th November 2015. As per university calendar, end semester examinations are chartered during this period. Hence there will not be any regular classes in November. • Examination duties, if any, assigned to me during these days will be arranged with my colleagues. • Requested the Principal to hand over my duties and responsibilities as Head of Department to the senior faculty member in the department

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

10. **Details of Expenditure** :

Items	:	Remarks
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 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>
Date: Mon, Aug 3, 2015 at 5:47 PM
Subject: Re: International travel proposal-reg.
To: princ hari <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> 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

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: secretariat@ieeetencon2015.org phone: + 853 2871 2020 at Yes, Attached
4	**Duration of visit** **(whether Daily Schedule enclosed)**	6 days, 31st October to 5th November 2015 (conference dates 1st to 4th 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

6	**(i) Relevance of the visit/training to the Project Objectives** **(ii) Clear Objective and Outcome of the Visit**	1. Research paper is accepted for oral presentation in the conference 2. Research work was carried out using the software purchased using TEQIP fund 3. Broad area is relevant to the UG and PG courses offered from this institute 4. Useful to understand and explore the new trends in the burgeoning field of engineering and technology 1. Networking with other institutes of international repute 2. Enhancement of teaching and research potential of the applicant and other faculty members Useful to upgrade the research facilities to the state of art.
7	**Amount of expenditure involved in the present proposal** **(whether break-up attached)**	Rs. 200000/- Yes, attached.
8	**Whether approval of Head of the institute and BOG have been obtained and proof thereof attached**	Yes, attached.
9	**Whether an undertaking has been obtained and enclosed on submission of report in due course on the training to be undertaken and experience to be gained to improve the teaching learning process in the institute**	Yes.

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, Kerala State, 691602
(correspondence)		: PRA23A, Krishnasree, Thekkevila PO, Kollam-691016
	(off.)	:Associate Professor in Electronics Engineering, College of Engineering, Karunagappally, Kerala-689121
5. Phone	(res.)	:09605517645
	(off.)	:04762665935
	(mob.)	:919446108491
6.Educational qualification		:M. Tech in Microelectronics and VLSI Design(IIT Madras)
7. Experience		:19 years and 7 months of teaching at UG & PG level
8.Research interest		:Planar microwave components, Applications of Carbon Nanotubes in electronics and VLSI Design

Declaration

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

C. V. Anil Kumar

Paper Manuscript – paste the manuscript in the following box

A Printed Antenna with Circular Cut for Bandwidth Enhancement

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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^3 and fed by a 50Ω 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 14th, 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^3. 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

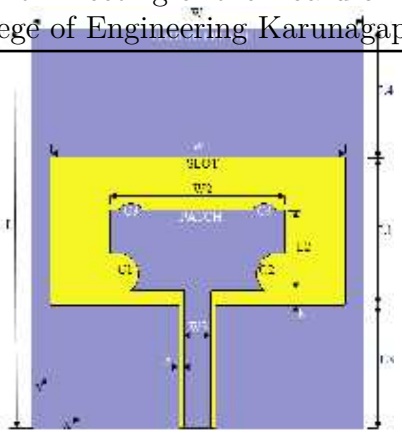

Fig. 1. Structure of the proposed antenna

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	

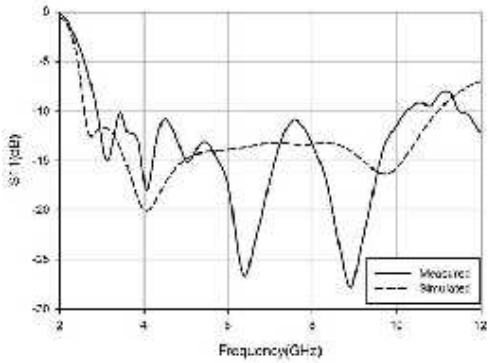

Fig. 2. Measured and simulated return loss

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 hone 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

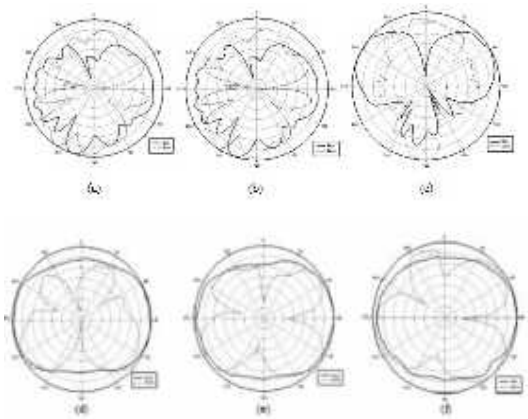

Fig. 3 Measured radiation patterns; (a) to (c) Eco and Ecross and (d) to (f) Hco and Hcross at 4GHz, 6GHz and 8GHz respectively.

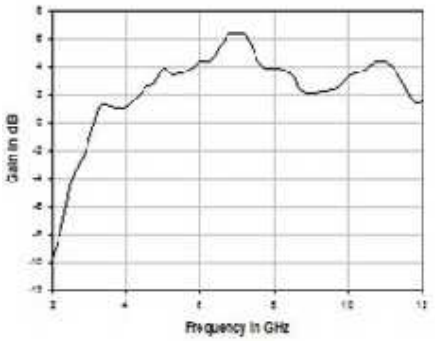

Fig.4 Measured gain of the antenna

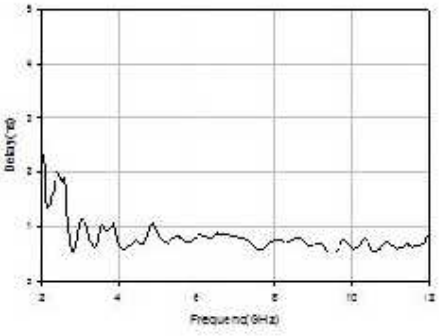

Fig. 5 Delay performance of the antenna

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 1st to 4th 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 1st to 4th 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 exhibiters 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

ANNEX-III

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.