



Ref: AIET/2017-18/IPR/ECE/02

Date: 02/03/2018

To

The Principal

Alva's Institute of Engineering and Technology

Mijar Moodbidri 574225

Respected Sir

Sub: Requisition to conduct a talk on Optical Communication Networks and Patenting Rights.

With reference to the above subject I request you to permit me to conduct a talk on "Optical Communication Networks and Patenting Rights" by Dr. Muralidhar Kulkarni, Professor, Dept. of ECE, NITK Suratkal, in order to inculcate the research and patenting knowledge among the students on 3rd March 2018. Kindly oblige and do the needful.

Thanking you

HOD

Dr. D V Manjunatha

H. O. D.

Dept. Of Electronics & Communication
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225

PRINCIPAL

Institute of Engg. & Technology,
Mijar, MOODBIDRI - 574 225, D.K



Alva's Institute of Engineering & Technology

Shobhavana Campus, Mijar, Moodbidri, D.K – 574225

Phone: 08258-262725, Fax: 08258-262726

DEPT. OF ELECTRONICS & COMMUNICATION ENGINEERING

Date: 02/03/2018

To,

Dr. Muralidhar Kulkarni,

Professor, Dept. of ECE,

NITK Suratkal,

Dear Sir,

Sub: Invitation for a talk on “**Optical Communication Networks and Patenting Rights**”.

I am pleased to have the honour of inviting you for a talk on “**Optical Communication Networks and Patenting Rights**” for our institute technical activity. We have arranged your lecture at our institution on **03rd March 2018**. Kindly accept our request as a guest speaker.

Thanking You

With warm regards

Principal
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225, D.K.



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Ref: AIER / 2017-18 / IPR / ECE / 02

Date: 2/3/2018

Circular

It is hereby informed all the A & B semester students to that there will be a talk on "Optical Communication Networks and Patenting Rights" by **Dr. Muralidhara Kulkarni** Professor, Dept. of ECE, NITK Surthkal on **3rd March 2018** in Engineering Seminar Hall Main Block by 11 AM. So all must present attendance will be monitored.


Mr. Sudhakara H M & Mr. Aneesh Jain

Technical Coordinator



Dr. D V Manjunatha

H.O.D.

**ALVA'S INSTITUTE OF ENGINEERING AND
TECHNOLOGY**

**Dept. of Electronics and
Communication Engineering**



**“OPTICAL COMMUNICATION
NETWORKS AND PATENTING
RIGHTS”**

To,



We cordially invite you to the

Technical Talk on

**"OPTICAL COMMUNICATION NETWORKS
AND PATENTING RIGHTS"**

by

Dr. Muralidhara Kulkarni

Professor, Dept. of ECE,
NITK Surthkal

- PROGRAMME SCHEDULE**
- Invocation
 - Welcome Speech
 - Introduction of Chief Guest
 - Technical talk
 - Honoring the chief guest
 - Vote of thanks

Venue: Engg. Seminar Hall

Date: 3rd March 2018 by 11 AM

Mr. Sudhakara H M

Mr. Aneesh Jain

Technical Coordinator

Dr. D V Manjunatha

H.O.D.

Staff & Students
Department of E & C Engineering



Optical Communication Networks and Patenting Rights

The third technical talk by the Dept. of ECE for this even semester was conducted on 3rd March 2018 by **Dr. Muralidhar Kulkarni, Professor, Dept. of ECE, NITK Suratkal** on the topic “**Optical Communication Networks and Patenting Rights**” for the students of sixth semester. The formal inaugural function was graced by the presence of Head of the Dept. Dr.D V Manjunatha and Dr. Richard Pinto, Professor, Dept. of ECE. Dr. Kulkarni has served in various capacities in industry and teaching for the last 35 years.



Welcoming resource person for the talk



Inauguration Ceremony of Talk

He has held the positions of Scientist in Instrumentation Division at the Central Power research Institute, Bangalore, Aeronautical Engineer in Avionics group of Design and Development team of Advanced Light Helicopter (ALH) project at Helicopter Design Bureau at Hindustan Aeronautics Limited (HAL), Bangalore, Assistant Professor at the Electrical Engineering Department of UVCE, Bangalore and as an Associate Professor in ECE Department at the Delhi College of Engineering (DCE), Delhi. He also established the IIIT, Dharwad to take forward IIIT as an institute of



excellence in 2015 as its OSD Presently he is Prof Incharge of Training and Placements at NITK.



Resource person delivering talk to the gathering

The talk begun with briefing the evolution in information systems, fundamentals of Optical Fiber Communication. He stressed on the need for optical communication to satisfy the exploding demand for bandwidth in multiservice network which includes remote access outsourcing, wireless voice/data services, business extranet service, e-commerce, banking and entertainment are few amongst numerous applications. The talk continued by discussing the technology behind OFC like WDM, Bit Error Rate, Dispersion in Fiber Optics and challenges faced in this field. The talk proceeded by highlighting the advances in OFC which SONET, Fiber Distributed Data Interface, Dual Queue



QA Session in the talk

Distributed Bus and more advanced systems like Trans Atlantic Telecommunications. The expert made the students to realize the growing demand of OFC and necessity to



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understand this niche area being a electronics and communication engineer. The students were encouraged to pursue Their final year academic projects in the area of Fiber optics and patenting rights. The talk concluded by discussing few ongoing research in NITK and also the interested students were invited to the campus to make use of the available resources.

Outcome: Students enlighten about Optical Communication Networks and Patenting Rights, which helps them to take up further project, placements and in higher studies.


Coordinator



Head of the Department

Dr. D V Manjunatha

A. O. D.
Dept. of Electronics & Communication
NITK - Institute of Engg. & Technology
Moodbidri - 574 225



Dr. Muralidhar Kulkarni

Designation: Professor (HAG)

Date of Joining at NITK:

Monday, March 17, 2008

Professional Experience:

Total Experience: \approx 40 years

Teaching & Research : \approx 34 years

Industry: \approx 6 years

- i) Professor (HAG), Dept. of ECE, NITK, Surathkal- (since October 2018)
- ii) Member, BOG (Board of Governors) NITK, Surathkal (10th Nov.2018 - 9th Nov.2020).
- ii) Professor, Dept. of ECE., NITK, Surathkal - (since March 2008).
- iii) Professor In-charge :Training and Placement, NITK - (June, 2016-April 2018).
- iv) Officer on Special Duty (OSD), Indian Institute of Information Technology, Dharwad (On deputation) - (Aug.2015 - Feb.2016).
- v) Head, Dept. of ECE, NITK, Surathkal (April, 2011-March 2014).
- vi) Coordinator, Center of Excellence(CoE) in Wireless Sensor Networks - (Dec. 2010 - Till date)
- vii) Faculty Incharge - Internal Telephone Exchange & BSNL Centrex Facility, NITK, Surathkal - (May 2008- Apr.2014).
- viii) Assoc. Prof., Dept. of ECE./ Head of IT Dept./Head, Computer Center, DTU (DCE), Delhi - (1994 - 2008).
- ix) Asst. Professor, Dept. of Electronics Engg., University Visvesvaraya College of Engineering(UVCE),Bangalore - (1988 - 1994).
- x) Aeronautical Engineer, Avionics, ALH Project, Helicopter Design Bureau, HAL, Bangalore - (1984 - 1988).
- xi) Scientist III, Instrumentation Division, Central Power Research Institute, Bangalore - (1981-1982).



Personal Website:

<https://ece.nitk.ac.in/faculty/muralidhar-kulkarni>

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[Hide Faculty \(author\) Identifiers](#)

ORCID iD:

[Muralidhar Kulkarni](#)

Scopus Author ID:

[Muralidhar Kulkarni](#)

WoS/publon Researcher ID:

[Web of Science ResearcherID AAJ-1318-2020](#)

[Hide Academic Background](#)

PhD (ECE): JMI Central University, New Delhi, M.Tech (Satellite Communication & Remote Sensing): IIT, Kharagpur, BE (Electronics Engg.), University Visvesvaraya College of Engg., Bangalore, Membership of Professional Societies: 1. Senior Member, IEEE. 2. Fellow, IETE. 3. Life Member ISTE. 4. Life Member CSI

[Hide Areas of Interest](#)

Digital Communications and Networks (OFDM, WSN, SDN, Congestion Control, 5G Networks, IOT)

Optical Communications & Networks (FSO), Microwave and Antenna Systems.

[Hide Significant Projects](#)

COMPLETED PROJECTS:

- 1. “Secure, Turbulence Resistant, Free Space Optical (FSO) Links for Broadband Wireless Access Networks”** at NITK, Surathkal sponsored by Ministry of Information and Communication Technology, New Delhi, India, 2010- 2013. (Rs. 130.5 lakhs) Investigator. (Successfully Completed).
- 2. “Feasibility study and implementation of a pilot project of Broadband over Power Lines (BPL) for Rural Information Centers”**, at Delhi College of Engineering (DCE), Delhi sponsored by MIT, New Delhi, India, 2007-2008 (Rs.100 lakhs), Investigator. (Successfully Completed).
- 3. MISSION REACH - Center Of Relevance and Excellence (CORE) on Optical Communications and Networks** of Dept. of Science and Technology Govt. of India at



Department of Electronics and Communication Engineering

Delhi College of Engineering (DCE), 2004-2007 (Rs.250 lakhs), Coordinator.

(Successfully Completed).

Current Projects:

1. **ISRO RESPOND Project "Programmable photonic microwave signal generation using on-chip spectral shaper for satellite communication"** has been recommended for funding support of Rs.22,51,203/-, Sept.2021, PI: Dr. Mandeep Singh, Co-PI: Prof. Muralidhar Kulkarni.

2. **DST-FIST Project - Advanced Research Lab in RF Communications and Networks** - 2016-2020 (Rs. 118 Lakhs) [DST, Govt. of India]. (Was submitted as a Departmental Project).

Projects Applied for funding:

1. "Home of Nurturing and Healthcare At Rural areas (HONHAR)" (under Cyber Physical System area) project proposal submitted to MeITY (Ministry of Information and Communication Technology), Project Proposals for R&D in CC & BT and Strategic Electronics for Financial Year 2020-2021, Govt. of India.

2. "Design, Development and Characterization of Massive MIMO systems for next generation (5G and beyond) Wireless Communication Systems" project proposal submitted to MeITY (Ministry of Information and Communication Technology), Project Proposals for R&D in CC & BT and Strategic Electronics for Financial Year 2020-2021, Govt. of India.

HideSupervision of Ph.D

Total PhDs - 13 (Thirteen)

PhDs Awarded - 08 (Eight)

PhDs submitted Waiting for Reports: 02(Two)

On-going - 03(Three)

PhDs Awarded:

8. Ms. Deepa Puneeth: Thesis Title: Data Aggregation and Secured Routing in Wireless Sensor Networks(2021).

7. Kharat Prashant Krishna Rao : Title: Modified QUIC Protocol with Congestion Control for Improved Network Performance(2019).

6. Mr. Jaspal Kumar, Title: "Novel Routing Techniques for Ad-hoc Networks" University of Delhi, Delhi (2016).



5. Dr. K S Shivaprakash , Thesis Title: “Energy Efficient Data Communication over Resource Constrained Wireless Sensor Networks”.NITK, Surathkal (2015)
4. Dr. Geetha Prakash, Thesis Title: “Rateless Codes For Transmission Over Free Space Optics Using Stochastic Models Based On Scintillation Theory And Their Application To Wireless Sensor Networks”. NITK, Surathkal (2014)
3. Dr. Lwaa Faisal Abdulameer, Thesis Title: “Analysis and Design of chaotic sequences for enhancement of security of FSO and RF wireless communication links”.NITK,Surathkal(2014)
2. Dr. Savitha H M , PhD Thesis entitled “Energy Efficient Error Control Techniques For OFDM Systems With Their Applicability To Power Line And Wireless Communication Channels”. NITK, Surathkal (2013)
1. Dr. Om Prakash Verma, PhD Thesis entitled “Image Processing using soft computing and evolutionary algorithms”, University of Delhi, Delhi. (2011).

PhD Thesis Submitted:

1. Mr. Naveen Jacob, Area of Research: "Metamaterial Inspired Reconfigurable Antenna for Cognitive Radio Applications". Co-Guide: Dr. Krishnamoorthy, Asst. Professor,
- 2.Mr. Geriki Polaiah, Area of Research: "An Efficient Low-Power Rectifier Integrated Antennas for RF Energy Harvesting and Autonomous Frequency Reconfiguration” Co-Guide: Dr. Krishnamoorthy, Asst. Professor.

PhD Under Progress:

1. Ms. Asha H Area of Research: "Efficient and dynamic scheduling strategies in time sensitive networks for real time applications" (External Registration) Co-Guide: Dr.Hariram Satheesh, M/s. ABB, Bangalore.
2. Ms.Deeksha, Area of Research: “Congestion Control and Message Dissemination in Vehicular Ad-hoc Networks”
3. Mr. Bodempudi Nagasivaprasad, Area of Research: "Modeling and Analysis of Reconfigurable Intelligent Surfaces for Indoor and Outdoor Applications in Future Wireless Networks". Co-Guide: Prof. Asvini Chaturvedi, Dept. of ECE.



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Technical Talk Attendance

8TH SEM EC (A - SECTION)

Sl. No	USN	NAME OF THE STUDENT	12/2/18 TALK-1	3/3/18 TALK-2	11/4/18 TALK-3	20/4/18 TALK-4
1	4AL13EC032	Kiran	P	P	P	P
2	4AL13EC067	Rohan Sonal Dsouza	P	P	P	P
3	4AL13EC092	Sooraj	P	P	P	P
4	4AL14EC001	A Shabaz Khan	P	P	P	P
5	4AL14EC002	Aishwarya	P	A	P	P
6	4AL14EC003	Akash O	P	P	P	A
7	4AL14EC004	Akshatha A	P	P	P	P
8	4AL14EC006	Anjana N katwe	P	P	P	P
9	4AL14EC007	Anusha A Poojary	P	P	P	P
10	4AL14EC008	Anushree Shettigar	P	P	P	P
11	4AL14EC010	Apoorva D	P	P	P	P
12	4AL14EC011	Arun Kumar K V	P	P	A	P
13	4AL14EC012	Ashik	P	P	P	P
14	4AL14EC013	Ashika H A	P	P	P	P
15	4AL14EC014	Ashok Singh Raj	P	A	P	P
16	4AL14EC016	Avinash A P	P	P	P	P
17	4AL14EC018	Nishma Bhandary	P	P	P	P
18	4AL14EC020	Bindushree K	P	P	P	P
19	4AL14EC021	Chaithra	P	P	P	P
20	4AL14EC022	ChaitraTungal	P	P	A	P
21	4AL14EC023	Chethak	P	P	P	P
22	4AL14EC024	Chethan M N	P	P	P	P
23	4AL14EC025	Chongtam Rakesh singh	P	P	P	P
24	4AL14EC027	Deepika	P	P	P	A
25	4AL14EC028	Dheeraj A Shetty	P	A	P	P
26	4AL14EC029	Divya Konati	P	P	P	P
27	4AL14EC030	Divyashree M S	P	P	P	P
28	4AL14EC031	Gagana G D	P	P	P	P
29	4AL14EC032	Gangadhar Somanna	P	P	P	P
30	4AL14EC033	Gayathry T S	P	P	P	P
31	4AL14EC034	Govindrao M	P	P	P	P
32	4AL14EC035	Hamsa P C	P	P	P	P
33	4AL14EC037	Hariprasad	P	P	P	P
34	4AL14EC038	Harshith Somanna P B	A	P	P	P
35	4AL14EC040	Harshitha S	P	A	P	P
36	4AL14EC041	JagadishVenkatraman	P	P	P	P
37	4AL14EC042	Jyothi	P	P	P	P



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38	4AL14EC043	Karthik A R	P	P	P	P
39	4AL14EC044	Kavyashree K L	P	P	A	P
40	4AL14EC045	Keerthana K N	P	P	P	P
41	4AL14EC046	KeerthiVadeyar	P	P	P	P
42	4AL14EC047	Kotian Sarvesh Umanath	P	P	P	P
43	4AL14EC048	Kshithija	P	P	P	A
44	4AL14EC049	Mahesh Biradar	P	P	P	P
45	4AL14EC050	Malika N	P	P	P	P
46	4AL14EC052	Manohara	P	P	P	P
47	4AL14EC055	Nidhi Subhash Manjrekar	P	P	P	P
48	4AL14EC058	Nisha A C	P	P	P	A
49	4AL14EC060	Pallavi C	P	A	P	P
50	4AL14EC420	Vijaykumar B M	P	P	P	P
51	4AL15EC419	Prashantha Pateela	P	P	P	P
52	4AL15EC422	Rohith A	P	P	A	P
53	4AL15EC425	Shashikumar Magadum	P	P	P	P
54	4AL15EC432	Vinay N	P	P	P	P
55	4AL15EC433	Yashashwi S	P	P	P	P

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Technical Talk Coordinator



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Technical Talk Attendance

8th SEM EC (B - SECTION)

Sl. No	USN	NAME OF THE STUDENT	12/2/18 TALK-1	03/03/18 TALK-2	11/4/18 TALK-3	20/4/18 TALK-4
1	4AL13EC068	Rohit Pawar	P	P	P	P
2	4AL13EC113	Sandeep B N	P	P	P	P
3	4AL14EC054	Nagesha Gowda	P	P	P	P
4	4AL14EC056	Nikkil Aarya M	P	P	P	P
5	4AL14EC061	Pooja Arekal	P	P	P	P
6	4AL14EC062	Pooja D Patkar	P	P	P	P
7	4AL14EC063	Pooja S K	P	P	P	P
8	4AL14EC064	Prabhakara	P	P	P	P
9	4AL14EC068	Raina Benita Lobo	P	P	P	P
10	4AL14EC069	Ranjan Shetty	P	P	P	P
11	4AL14EC070	Rashmitha K	P	P	P	P
12	4AL14EC071	Renuka Ratkal	P	P	P	P
13	4AL14EC072	Sachin K V	P	P	P	P
14	4AL14EC075	Satish Nayak	P	P	P	P
15	4AL14EC076	Sevanthika H V	P	P	P	P
16	4AL14EC077	Sheethal M Nayak	P	P	P	P
17	4AL14EC079	Shilpashree N	P	P	P	P
18	4AL14EC080	Shivakumar	P	P	P	P
19	4AL14EC082	Soujanya H.N	P	P	P	P
20	4AL14EC083	Soumya R K	P	P	P	P
21	4AL14EC084	Soundarya P	P	P	P	P
22	4AL14EC085	Soundarya shree N	P	P	P	P
23	4AL14EC086	Subramani M	P	P	P	P
24	4AL14EC087	Sumanshekar. A	P	P	P	P
25	4AL14EC088	Sumiya Sultana R. A	P	P	P	P
26	4AL14EC089	Supriya A M	P	P	P	P
27	4AL14EC091	T Hithaishi Mohan	P	P	P	P
28	4AL14EC092	Uppara Sangeetha	P	P	P	P
29	4AL14EC094	Vandana Shree.J.S	P	P	P	P
30	4AL14EC096	Varsha K	P	P	P	P
31	4AL14EC097	Varshitha C R	P	P	P	P
32	4AL14EC100	Vithoba Narayanapur	P	P	P	P
33	4AL14EC101	Yadappa	P	P	P	P



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		Hawaladar	P	P	P	
34	4AL14EC102	Yashodha A Bommahalli	P	P	A	P
35	4AL14EC402	Ashmitha	P	P	P	P
36	4AL15EC401	Abhilash Gowda	P	P	P	P
37	4AL15EC403	Amrutha J.N	P	P	P	A
38	4AL15EC411	Manasa K.M	P	P	P	P
39	4AL15EC412	Manjunath B A	P	P	P	P
40	4AL15EC415	Poornesh KR	P	P	P	P
41	4AL15EC416	Prakash K S	P	P	P	P
42	4AL15EC417	Pranavprakash Latti	P	P	P	P
43	4AL15EC420	Prashantha Kumar H G	P	P	P	P
44	4AL15EC423	Roopa Bagade	P	P	P	P
45	4AL15EC426	Shilpa H	P	P	P	P
46	4AL15EC428	Shweta Hangaragi	P	P	P	P
47	4AL15EC429	Shwetha T M	P	P	P	A
48	4AL15EC430	Sujaya L	P	P	P	P
49	4AL15EC431	Vanishri N	P	P	P	P

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Technical Talk Coordinator



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Date 03.03.18

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Dept. of ECE, AIET
H.O.D.
A.O.Prepared by
Principal
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225

Authorised by

Receiver's / Remitter's Signature