
	<b>Akhil Bharatiya Maratha Shikshan Parishad's Anantrao Pawar College of Engineering &amp; Research</b>		
	<b>Record No.: ACA/D/021 Revision: 00</b>	<b>DoI: 21/01/2019</b>	
<b>EVENT REPORT</b>			

**Name of Event:** COEP Expert Lecture of Radiation and Microwave Technique Subject

**Date of Event:** 30/9/2021

**Time of event:** 11.30 P.M. To 1.30 P.M.

**Name of Event Coordinator:** 1. Prof. Sharad Jagtap – SPOC, COEP  
2. Prof. Vaishali Bhimte – Subject Incharge

**Name of Session Expert:** Dr. Deeplaxmi Niture

Faculty of COEP, Pune



**Brief Introduction of Session Expert:** She has received her B. Tech (2003) and M. Tech (2006) in Electronics and Telecommunication Engineering from Dr. Babasaheb Ambedkar Technological University (Dr. B. A. T. U), Lonere, India. She has pursued Ph.D. in Electronics and Telecommunication Engineering from the Savitribai Phule University of Pune, Maharashtra, India in 2021. Presently she is working as assistant professor in College of Engineering Pune. She has a teaching experience of more than 12 years. She has authored several journal and conference papers. Her research interests include Microstrip patch antenna, Ultra-wideband antenna, reconfigurable antenna etc .

Target Audience with count:

#### **Brief Description of Event:**

- Introduction of Inaugural Function
- Brief Session Description
- Feedback/ Q-A Session/ Valedictory Function
- Vote of Thanks

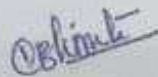
COEP Expert Lecture of Radiation and Microwave Technique Subject organized on 30/09/2021 at 11.30 A.M. on the topic 'Transmission Line-General Solution for TE, TM and TEM waves.' The program was introduced by Prof. Vaishali Bhimte briefly. Head of department E&TC Prof. Shailesh Hajare has warmly welcomed session expert on this occasion. Prof. Vaishali Bhimte, has briefly introduced session expert, Dr. Deeplaxmi Niture. She has welcomed all students and staff. After that, session was handover to Session Expert Dr.

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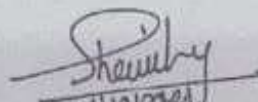
Deeplaxmi Niture. Dr. Deeplaxmi Niture has taken very detailed and interactive session. She has focused Transmission Line-General Solution for TE, TM and TEM waves.

After her session, question answer session was there. Students have asked many questions to her. She answered the questions in very descriptive way. Online Feedback taken from students as session was really helpful and interactive session. Vote of thanks was given by Prof. Vaishali Bhimte. She has given thanks Session Expert Dr. Deeplaxmi Niture for giving such a nice session to our students and taken out time out of her busy schedule. Also, thanks given to our Management and Principal for giving permission to organize such session. Thanks, given to organizing committee at last. The programme was concluded.

Date: 22/10/2021



Prof. Vaishali Bhimte  
Event Coordinator

  
22/10/2021

Prof. Shailesh Hajare  
Head of Department



Principal  
APCOER





Webex



## General Approach to Waveguide Analysis

Using vector triple product identity we can simplify eq. (9)

$$\bullet A \times B \times C \equiv (A \cdot C)B - (A \cdot B)C$$

$$\bullet \frac{\partial}{\partial z} \hat{z} \times \frac{\partial}{\partial z} \hat{z} \times \vec{E}_\perp = \frac{\partial}{\partial z} \left( \frac{\partial}{\partial z} \hat{z} \cdot \vec{E}_\perp \right) \hat{z} - \left( \frac{\partial}{\partial z} \hat{z} \cdot \frac{\partial}{\partial z} \hat{z} \right) \vec{E}_\perp = 0 - \frac{\partial^2}{\partial z^2} \vec{E}_\perp$$

$$\bullet \left( \frac{\partial}{\partial z} \hat{z} \right) \times \nabla_\perp \times (E_z \hat{z}) = \nabla_\perp \cdot \left( \frac{\partial}{\partial z} \hat{z} \cdot E_z \hat{z} \right) - \left( \frac{\partial}{\partial z} \hat{z} \cdot \nabla_\perp \right) E_z \hat{z} = \nabla_\perp \cdot \left( \frac{\partial E_z}{\partial z} \right) \hat{z} = 0$$

Finally eq. (9) will become

$$\bullet \left\{ \omega^2 \mu \epsilon \vec{E}_\perp + \frac{\partial^2}{\partial z^2} \vec{E}_\perp \right\} = -j\omega \mu \nabla_\perp \times (H_z \hat{z}) + \nabla_\perp \cdot \left( \frac{\partial H_z}{\partial z} \right) \hat{z} \quad \dots (10)$$

Substituting  $\frac{\partial}{\partial z} \hat{z} \equiv -\gamma$  and  $\frac{\partial^2}{\partial z^2} \equiv \gamma^2$  in eq. (10)

$$\bullet \left\{ \omega^2 \mu \epsilon + \gamma^2 \right\} \vec{E}_\perp = -j\omega \mu \nabla_\perp \times (H_z \hat{z}) - \gamma \nabla_\perp E_z \quad \dots (11)$$

Let us define

$$\bullet \omega^2 \mu \epsilon + \gamma^2 = h^2$$

Dr. Sangeeta V. Nair, Dept. of E &amp; TC, COE







vaishali bhimte &lt;vaishali.bhimte@abmspcoerpune.org&gt;

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## Invitation for expert Lecture of Radiation and microwave technique subject as session speaker

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vaishali bhimte &lt;vaishali.bhimte@abmspcoerpune.org&gt;

Wed, Sep 29, 2021 at 12:40 PM

To: dvn.extc@coep.ac.in

Cc: hod.extc@coep.ac.in, Shailesh Hajare &lt;shailesh.hajare@abmspcoerpune.org&gt;, sharad.jagtap@abmspcoerpune.org

**Respected Madam,**

We E&TC Department, Anantrao pawar college of engineering and research,Pune invite you for **expert Lecture of Radiation and microwave technique** subject on 30/09/2021 as **Session Speaker** at 11.30 A.M.

**Following are the details-****Date-30/09/2021****Time-11.30 A.M.****Online Mode-Webex****Topic-Transmission Line-General Solution for TE,TM and TEM waves.**

Kindly find the attached invitation letter.

**Thanks and Regards,**  
**Prof. Vaishali Bhimte**  
**E&TC Department**  
**APCOER,Pune-09**



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