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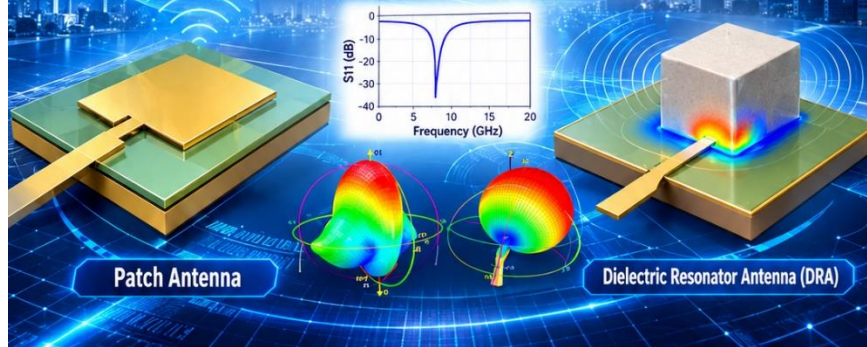


3-Day Workshop
ON
**Advanced Antenna
Design and Simulation**
Using **HFSS** and **CST**

3rd -5th
October
2026

**HYBRID
MODE**

Organised by
**Department of ECE & EEE,
School of Engineering and Technology,
Centurion University of Technology and Management,
Paralakhemundi, Odisha**





**CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT,
ODISHA**

SCHOOL OF ENGINEERING TECHNOLOGY, PARALAKHEMUNDI CAMPUS

**Department of Electronics and Communication Engineering (ECE) and Electrical
and Electronics Engineering (EEE)**

**Report on 3- Day Workshop on Advanced Antenna Design and
Simulation Using HFSS and CST**

Event Date: 3rd-5th October 2026

Time: 10.30 AM to 1.30 PM ; 3.30 PM- 5.30 PM

Resource Persons Dr. Priya Ranjan Meher, Dr. Abinash Gaya, Dr. Prachi Gupta and Dr. Ribhu Abhusan Panda

Coordinator- Dr. Ribhu Abhusan Panda, Assistant Professor, Department of ECE-EEE, CUTM-Paralakhemundi Campus, Odisha.

Venue: Seminar Hall, CUTM- Paralakhemundi Campus, Odisha. (Hybrid mode; Online Participants joined through Zoom Link)

Organizer: Electronics and Communication Engineering (ECE) and Electrical and Electronics Engineering (EEE),

Participants:

Introduction

The Departments of Electronics and Communication Engineering (ECE) and Electrical and Electronics Engineering (EEE), School of Engineering and Technology, Centurion University of Technology and Management, Odisha, organized a **3- Day Workshop on Advanced Antenna Design and Simulation Using HFSS and CST** on from 3rd to 5th

October 2026. The workshop aimed at providing practical exposure to antenna design and simulation using CST and ANSYS HFSS, two of the most powerful tools for electromagnetic analysis and antenna design. Students from the departments ECE, EEE and CSEAIML have participated in this workshop.

Objectives of the Workshop

To familiarize participants with antenna design methodologies.

To provide hands-on training in CST and HFSS for antenna design and simulation.

To encourage students to take part in research projects and international conferences.

To motivate participants towards professional development through internships and memberships.

Event Overview:

DAY 1: 3rd October 2026

{Offline For Centurion University (PKD) Students and Online for Other Participants}

Time	Event
10 AM-10.05 AM	Inauguration of the workshop
10.05 AM-10.10 AM	Welcome Address by Dr. Prabhat Kumar Patnaik, Head of the Department, ECE-EEE
10.10 AM-10.15 AM	Address by Dr. Abinash Gaya, RC-Coordinator, Center for Communication Technologies
10.15 AM-10.20 AM	Address by Dr. Priya Ranjan Meher, Tech Lead, VVDN Technologies, Bhubaneswar, Odisha
10.20 MA-10.25 AM	Vote of thanks by Dr. Ribhu Abhusan Panda, Coordinator of the Workshop
10.30 AM-1.30 PM	Session 1: Practical Antenna Design & Simulation using CST Resource Person: Dr. Priya Ranjan Meher
1.30 PM-3.30PM	Lunch Break

3.30 PM-5.30 PM	Session 2: Millimeter Wave Antennas for 5G Communications Resource Person: Dr. Abinash Gaya
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DAY 2: 4th October 2026

(Online for all participants)

Time	Event
4 PM-5.30 PM	Session 3: 2.4 GHz Antenna Design: From theory to CST Simulation Resource Person: Dr. Prachi Gupta

DAY 3: 5th October 2026

{Offline For Centurion University (PKD) Students and Online for Other Participants}

Time	Event
3.30 PM-5 PM	Session 4: Microstrip Patch Antenna Design Using HFSS and The Role of AI in Antenna Design Resource Person: Dr. Ribhu Abhusan Panda
5 PM- 6.30 PM	Quiz Test (online) and Feedback

The inaugural session commenced with the **inauguration of the workshop**, followed by a welcome address by **Dr. Prabhat Kumar Patnaik, Head of the Department, ECE–EEE. Dr. Abinash Gaya, RC Coordinator, Centre for Communication Technologies**, addressed the participants and highlighted the importance of simulation-based learning and advanced antenna technologies in contemporary communication systems.

The inaugural session also featured an address by **Dr. Priya Ranjan Meher, Tech Lead, VVDN Technologies, Bhubaneswar, Odisha**, who shared insights into the relevance of antenna design and electromagnetic simulation in industry and practical engineering applications. The inaugural programme concluded with a **vote of thanks delivered by Dr.**

Ribhu Abhusan Panda, Coordinator of the Workshop, who expressed gratitude to the university authorities, resource persons, faculty members, and participants for their support and participation.

The workshop is designed to provide participants with hands-on experience in **antenna design and simulation**. The Department of ECE & EEE continues to promote industry-oriented and research-driven technical learning through such hands-on training programmes, providing participants with opportunities to connect theoretical knowledge with practical engineering applications.

Key Outcomes of the Workshop:

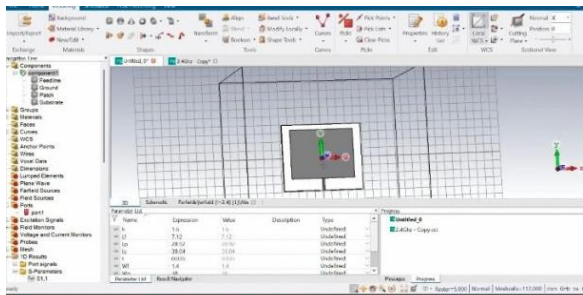
- Enhanced knowledge of antenna design and analysis using CST and HFSS
- Increased confidence in using simulation tools for research.
- Opportunities for internships and conference presentations.
- Motivation towards professional memberships and networking

Snap of the event:





Hands-on Practice on Antenna Design using CST and HFS



L- Band	1-2GHz
S-Band	2-4 GHz
C-Band	4-8 GHz
X-Band	8-12 GHz
Ku-Band	12-18 GHz
K-Band	18-26 GHz
Ka-Band	26-40 GHz
U-Band	40-60 GHz

Dr. Prachi Gupta

FEB020 Amina Begum

Why Design a 2.4 GHz Antenna?

Why Design a 2.4 GHz Antenna?

2.4 GHz is used by many short-range wireless systems.

Compact Physical Size

At 2.4 GHz, the free-space wavelength is 125 mm, making practical low-profile antennas possible.

$$\lambda = c / f_0 = (3 \times 10^8) / (2.4 \times 10^9) = 0.125 \text{ m} = 125 \text{ mm}$$

"A 125 mm wavelength does not mean the patch must be 125 mm long."

Microstrip Antenna

- It consists of radiating patch on one side of a dielectric substrate and a ground plane on the other side.
- Radiating patch is made up of conducting material such as gold or copper.

Lets have a 3D and 2D Model

Technical Session (Online)

Dr. Prachi Gupta

FEB020 Amina Begum

AMINA BEGUM

Frequency Bands Designation

L- Band	1-2GHz
S-Band	2-4 GHz
C-Band	4-8 GHz
X-Band	8-12 GHz
Ku-Band	12-18 GHz
K-Band	18-26 GHz
Ka-Band	26-40 GHz
U-Band	40-60 GHz

Conclusion:

The 3-Day Workshop on Advanced Antenna Design and Simulation Using HFSS and CST was highly successful and met its objectives. It provided participants with valuable technical insights and hands-on experience, bridging the gap between classroom learning and real-world applications. The Departments of ECE and EEE reaffirm their commitment to organizing such skill-enhancement workshops in the future, thereby fostering a culture of innovation, research, and professional growth. This workshop aligned with the goals of SDG-4 (Quality Education) fostering employability and skill enhancement.

Attendance

5 days Workshop on
Advanced Antenna Design Using HFSS & CST

Sl.No	Name	Roll Number	Signature
1	P. Sital	240101130001	P. Sital
2	Bodala Meghana	240101130002	B. Meghana
3	K. Hareesh	240101130030	K. Hareesh
4	G. CHANDU	240101130009	G. Chandu
5	G. Haripriya	240101130025	G. Haripriya
6	V. Sravanthi	240101130052	V. Sravanthi
7	G. Srinithya	240101130061	G. Srinithya
8	M. Divitha	240101130073	M. Divitha
9	N. Anurag Rao	240101130049	N. Anurag Rao
10	Santosh Dalai	240101130021	Santosh Dalai
11	Nitish Kumar	240101130039	Nitish Kumar
12	Premesh Kumar	240101130092	Premesh Kumar
13	Chiranj Kumar	240101130010	Chiranj Kumar
14	RUDRAKSHI RPHIT	240101130053	R. RPHIT
15	Yennagula Arithya	240101130045	Arithya
16	K. Kishith	230101130045	K. Kishith
17	G. Govardhan	240101130083	G. Govardhan
18	P. Santhosh Kumar	240101130090	P. Santhosh Kumar
19	V. Yashitha	240101130033	Yashitha
20	K Mounika	240101130050	K Mounika
21	H. Bhavana	240101130034	H. Bhavana
22	R. Venu	240101130035	R. Venu

Dr. Ribhu Abhusan Panda

Coordinator: Dr. Ribhu Abhusan Panda

ଉନ୍ନତ ଆଶ୍ୱେନା ଡିଜାଇନ୍ ଓ ସିମ୍ବଲେସନ୍ ଉପରେ କର୍ମଶାଳା



ପାରଳାଖେମୁଣ୍ଡି, ୩।୧୦ (ସମ୍ବାଦ) : ଇଲେକ୍ଟ୍ରୋନିକ୍ସ ଆଣ୍ଡ କମ୍ୟୁନିକେସନ୍ ଇଞ୍ଜିନିୟରିଂ ଏବଂ ଇଲେକ୍ଟ୍ରିକାଲ୍ ଆଣ୍ଡ ଇଲେକ୍ଟ୍ରୋନିକ୍ସ ଇଞ୍ଜିନିୟରିଂ ବିଭାଗ, ସ୍କୁଲ୍ ଅଫ୍ ଇଞ୍ଜିନିୟରିଂ ଆଣ୍ଡ ଟେକ୍ନୋଲୋଜି, ସେଣ୍ଟ୍ରାଲ୍ ଇଞ୍ଜିନିୟରିଂ ଅଫ୍ ଟେକ୍ନୋଲୋଜି ଆଣ୍ଡ ମ୍ୟାନେଜମେଣ୍ଟ ପକ୍ଷରୁ “ଆଡଭାନ୍ସଡ୍ ଆଷ୍ଟେନା ଡିଜାଇନ୍ ଆଣ୍ଡ ସିମ୍ବଲେସନ୍ ଯୁକ୍ତି ଏବଂ ଏପ୍‌ଏସ୍‌ଏସ୍ ଆଣ୍ଡ ସିଏସ୍‌ଟି” ଶୀର୍ଷକ ତିନିଦିନିଆ କର୍ମଶାଳାର ଶୁଭାରମ୍ଭ ହୋଇଛି । ଏହି କର୍ମଶାଳା ଫିଡବ୍ୟାକ୍ ପ୍ରଦାନ ଆୟୋଜିତ ହେବ । ଉଦ୍‌ଘାଟନା ଅଧିବେଶନରେ କର୍ମଶାଳାର ଶୁଭାରମ୍ଭ ପରେ ବିଭାଗୀୟ ମୁଖ୍ୟ ଡ. ପ୍ରଭାତ କୁମାର ପଟ୍ଟନାୟକ

ସ୍ୱାଗତ ଅଭିଭାଷଣ ପ୍ରଦାନ କରିଥିଲେ । ସେଣ୍ଟ୍ରାଲ୍ ଇଞ୍ଜିନିୟରିଂ ଅଫ୍ ଟେକ୍ନୋଲୋଜିର ଆରସି କୋର୍ଡିନେଟର୍ ଡ. ଅବିନାଶ ଗନ୍ଧା ଅଂଶଗ୍ରହଣକାରୀମାନଙ୍କୁ ସମ୍ବୋଧିତ କରିଥିଲେ । ଉଦ୍‌ଘାଟନା ଅଧିବେଶନରେ ଭିଡିଓ ଏବଂ ଟେକ୍ନୋଲୋଜିର ଉପଯୋଗ ଓ ପ୍ରୟୋଗରେ ଆଷ୍ଟେନା ଡିଜାଇନ୍ ଓ ଇଲେକ୍ଟ୍ରୋନିକ୍ସ ସିମ୍ବଲେସନ୍ର ଗୁରୁତ୍ୱ ସମ୍ପର୍କରେ ନିଜର ଅନୁଭବ ଓ ମତାମତ ରଖିଥିଲେ । ଉଦ୍‌ଘାଟନା କାର୍ଯ୍ୟକ୍ରମର ଶେଷରେ କର୍ମଶାଳାର ସଂଯୋଜକ ଡ. ରିତୁ ଆଶ୍ୱିନୀ ପଣ୍ଡା ଧନ୍ୟବାଦ ଅର୍ପଣ କରିଥିଲେ ।

సెంచూరియన్‌లో వర్క్‌షాప్



వర్క్‌షాపులో పాల్గొన్న ప్రాధాపాత్రులు, విద్యార్థులు

పల్నాటిమిడి: సెంచూరియన్ వర్సిటీ క్యాంపస్‌లో శనివారం ఎలక్ట్రికల్ ఇంజనీరింగ్, ఎలక్ట్రానిక్స్, కమ్యూనికేషన్ విభాగం ఆధ్వర్యంలో అడ్వాన్స్డ్ యాంటెన్నా డిజైన్, సిమ్యులేషన్ వాడకంతో హెచ్ ఎఫ్ఎస్ఎస్ అండ్ సీఎస్టీ మూడు రోజుల వర్క్ షాపును డా.ప్రభాత్ కుమార్ పట్నాయక్ ప్రారంభించారు. సెంటర్ ఫర్ కమ్యూనికేషన్ టెక్నాలజీ ఆర్‌సీ కో-ఆర్డినేటర్ డా.అభినాష్ గయా పాల్గొని

మాట్లాడారు. అధునాతన కమ్యూనికేషన్ వ్యవస్థలో సిమ్యులేషన్ ఆధారిత అభ్యాసం, అధునాతన యాంటెన్నా టెక్నాలజీల ప్రాముఖ్యతను ఆయన వివరించారు. వర్క్‌షాపులో వీవీడిఎస్ టెక్నాలజీస్ (భువనేశ్వర్)కు చెందిన టెక్ లీడ్ డా.ప్రియా రంజన్ మెహరా కూడా మాట్లాడారు. వర్క్‌షాపు ముగింపులో కో-ఆర్డినేటరు డా.రిభూ అభిషన్ పండా అతిథులకు ధన్యవాదాలు తెలిపారు.

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सीयूटीएम में उन्नत एंटीना डिजाइन पर तीन दिवसीय कार्यशाला शुरू

पारलाखेमुंडी। सेंचूरियन यूनिवर्सिटी ऑफ टेक्नोलॉजी एंड मैनेजमेंट (सीयूटीएम), ओडिशा में शनिवार को एडवांस्ड एंटीना डिजाइन एंड सिमुलेशन यूजिंग एचएफएसएस एंड सीएसटी विषय पर तीन दिवसीय कार्यशाला का शुभारंभ हुआ। कार्यशाला का उद्देश्य प्रतिभागियों को एंटीना डिजाइन, विद्युतचुंबकीय सिमुलेशन तथा उभरती वायरलेस संचार तकनीकों का व्यावहारिक प्रशिक्षण प्रदान करना है। इलेक्ट्रॉनिक्स एंड कम्युनिकेशन इंजीनियरिंग (ईसीई) तथा इलेक्ट्रिकल एंड इलेक्ट्रॉनिक्स इंजीनियरिंग (ईईई) विभाग की संयुक्त पहल पर आयोजित यह कार्यशाला 5 अक्टूबर तक चलेगी।

कार्यक्रम में ईसीई-ईईई के प्रमुख डॉ. प्रभात कुमार पटनायक ने

प्रतिभागियों का स्वागत किया। सेंटर फॉर कम्युनिकेशन टेक्नोलॉजीज के आरसी समन्वयक डॉ. अविनाश गया ने आधुनिक संचार प्रणालियों में सिमुलेशन आधारित प्रशिक्षण के महत्व पर प्रकाश डाला। वहीं भुवनेश्वर स्थित वीडिएन टेक्नोलॉजीज के टेक लीड डॉ. प्रिया रंजन मेहर ने एंटीना डिजाइन और विद्युतचुंबकीय सिमुलेशन के औद्योगिक उपयोगों के बारे में जानकारी दी।

कार्यशाला के समन्वयक डॉ. रिभु अभूषण पंडा ने धन्यवाद ज्ञापित किया। कार्यशाला में व्यावहारिक प्रशिक्षण पर विशेष जोर दिया जा रहा है। इसका उद्देश्य विद्यार्थियों के सैद्धांतिक ज्ञान को उद्योग-केंद्रित इंजीनियरिंग अनुप्रयोगों से जोड़ना है।

CUTM HOSTS ADVANCED ANTENNA WORKSHOP



Paralakhemundi, Oct. 3 (Tarini Prasad Panda): A three-day workshop on Advanced Antenna Design and Simulation Using HFSS and CST was inaugurated at Centurion University of Technology and Management (CUTM), Odisha, on Saturday, aiming to provide participants with hands-on exposure to antenna design, electromagnetic simulation and emerging wireless communication technologies. “Organised jointly by the Departments of Electronics and Communication Engineering (ECE) and Electrical and Electronics Engineering (EEE), the workshop will continue till October 5.” Dr Prabhat Kumar Patnaik, Head of ECE–EEE, welcomed the participants, while Dr Abinash Gaya, RC Coordinator, Centre for Communication Technologies, stressed the importance of simulation-based learning in modern communication systems. Dr Priya Ranjan Meher, Tech Lead, VVDN Technologies, Bhubaneswar, spoke on industry applications of antenna design and electromagnetic simulation. “Dr Ribhu Abhusan Panda, Workshop Coordinator, proposed the vote of thanks. The workshop focuses on practical training and aims to bridge theoretical knowledge with industry-oriented engineering applications.