Plot No.1 (A), CNI Complex, Patia, Bhubaneswar – 751024, Odisha, India.

[AFFILIATED TO BPUT, ODISHA]

www.coeb.ac.in

DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

ADD-ON COURSE : Animal sound processing

[Programme: B.Tech, ETC]

Course Objectives:

To expose the students the fundamental concepts and history of bioacoustic recording and equipment; To impart knowledge to student about software algorithms for automated detection and classification of animal sounds.

SYLLABUS

Total Lecture Hours: 30

MODULE-I:

[10 Hours]

Introduction, recorders, microphones, advances in sound analysis, basic concepts of sound recording, calinration, other gear., Collecting data, ethical research, playback method and control, digital file format, data storage, studies on captive animals

MODULE-II [10 Hours]

Acoustic signal processing, localization and tracking, sound propagation, source path receiver model, classification and detection of animal sound, Noise effects on terrestrial vertebrates, noise effects on fish, noise effects on reptiles, noise effects on mammals

MODULE-III [10 Hours]

Sound Propagation in Terrestrial Environments, The Source-Path-Receiver Model for Animal Acoustic Communication, The Sonar Equation, The Layered Ocean, Propagation Loss, Practical Acoustic Modeling Examples, Software for Analyses

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Course Outcomes: After completion of the course, the students will be able to

CO1: Explain the basic principles of bioacoustics.

CO2: Explain the different statistical method for analyzing bioacoustics data.

CO3: Able to explain the effects of noise on animals

Evaluation Process:

- 1. Attendance for the course is 75%, which is mandatory.
- 2. Minimum qualifying marks percentage for the course is 50.
- 3. Certificate will be issued after successful completion of course and assessment processes.

Learning resources:

Suggested Books:

- 1. Exploring Animal Behavior Through Sound: Volume 1
- 2. Speech and Audio Signal Processing by Jayan A.R

Other Sources:

e-Learning Resources:

- 1. https://www.elephantvoices.org/
- 2. https://www.youtube.com/watch?v=WJI-17MNpdE

Design and Developed by: Prof. Debarchana Jena and Prof. Subrat Kumar Mohanty

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College of Engineering Bhubaneswa;

Dept. of ETC Engg. COEB, Bhubaneswar



DEPARTMENT OF ELECTRONICS & TELECOMMUNICATIONS ENGINEERING COLLEGE OF ENGINEERING BHUBANESWAR

NOTICE

ADD-ON/CERTIFICATE COURSE

Ref No: COEB/ETC/2021/07

It is for the information of all the students of 3rd/5th/7th semester that the classes for the Add-On/Certificate Courses will commence as per the time table given below. The registration process for the course will start from **26/11/2021**. The interested students to enroll themselves for the course are advised to contact the concerned Course Coordinators for the details.

Semester	Course Title	Course Coordinator	Date of Commencement
3rd	Design and Analysis of Oscillator Circuits	Prof. Prasant Sethi	06/12/2021
5th	ECG signal processing using Raspberry Pi	Prof . Asit Kumar Satapathy	06/12/2021
7th	Animal sound processing	Prof. Subrat Kumar Mohanty	06/12/2021

The class timing will be from 5.30 pm to 7.30 pm.

Head of the Department

Dept. of ETC Engg. COEB, Bhubaneswar

Date: 25/11/2021

Copy to:

- 1. Office of the Chairman/ Vice-Chairman for kind information.
- 2. Office of the Executive Director for kind Information.
- 3. Office of the Registrar for kind Information.
- 3. Office of the Principal for kind information.
- 4. Departmental Notice Board.
- 5. Guard File

Head of the Department

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COLLEGE OF ENGINEERING BHUBANESWAR (COEB) ADD-ON COURSE

STUDENT ENROLLMENT SHEET

Student's Declaration/Undertaking

Name of the Department: Electronics and Te	lecommunication Engineering	
Course Title: Animal sound processing		
Semester: 7th	Academic Year: 2021-22	

2.I do hereby, promise to abide by the admissible rules and regulations, connecting discipline, attendance, etc. of the department, and also to follow the code of Conduct prescribed for the students of the institute, as in force from time to time.

SL. NO.	Reg. No./ Enrollment No.	NAME OF THE STUDENT	Signature of the student
1	1801219018	ASHISH KUMAR PARIDA	A. K. Parida
2	1801219021	ASIF KHAN	Asif Khan
3	1801219042	DAVID HANSDAH	Pays'd Handah
4	1801219062	JITU MISTRY	The Mishy
5	1801219065	KALYANI SWAGATIKA DASH	Kalyani Ewagalfika Das
6	1801219079	MANORANJAN SAHOO	Manosonjon Sahoo
7	1801219082	MEGHANTH NAIK	Maghanth Naik
8	1801219091	NUTAN NAYAK	Natan Nayare
9	1801219099	PRASANTA KUMAR THAKUR	Praxinfa Kuman Thakur
10	1801219107	PRIYABRATA KUMURA	Porgabonta Number
11	1801219112	PURNENDU SUNANI	Purnendu Suran.
12	1801219130	SANKAT MOCHAN BISWAL	Jankat Mochan Biswal
13	1801219163	SUSHREE SANGITA	Sushree Songita
14	1801219170	TOKAN BEHERA	Tokan Mehena
15	1801219227	ANANYA SAMAL	Agrany Camal-
16	1801219228	BIJAY KUMAR PADHI	Bijaya ku. Padhi
17	1801219229	BISHNUPRIYA MOHARANA	B. Roharana
18	1801219230	MAHESH PRASAD MISHRA	worker Prouve Mishra.
19	1801219231	NISHI TIRKEY	Nishi Trokey
20	1801219232	SMRUTIREKHA MARANDI	Imputirekha marandi
21	1801219233	SUBHASHREE BIDYASAGAR	Sahashree Bidyasagar

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^{1.}I do hereby undertake to participate in the above mentioned add on course.



COLLEGE OF ENGINEERING BHUBANESWAR (COEB) DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING ADD ON/CERTIFICATE COURSE

STUDENT ATTENDANCE SHEET

Sheet No.

Prog	Programme: B.Tech in Electronics and Telecommunications Name of the Course: Animal sound processing	munications Semester: 7th Academic Year: 2021-22 Course Code (if any):
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Ĺ	1801219233 SUBHASHREE BIDYASAGAR	
	Signature of the Course Coordinator	N. N. Moharta

PRINCIPAL College of Engineering Bhubaneswar



DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

ADD ON/CERTIFICATE COURSE

Sheet No.

STUDENT ATTENDANCE SHEET

Duration: Name of the Course: Animal sound processing **Programme:** B.Tech in Electronics and Telecommunications Reg. No./ Enrollment 1801219231 NISHI TIRKEY 1801219021 1801219233 1801219232 1801219230 1801219229 1801219228 1801219153 180121913C 1801219112 180121910 1801219099 1801219082 1801219079 1801219055 1801219052 1801219042 1801219018 801219227 801219170 801219091 Signature of the Course Coordinator 30 hours SUBHASHREE BIDYASAGAR MAHESH PRASAD MISHRA BISHNUPRIYA MOHARANA BIJAY KUMAR PADHI ANANYA SAMAL SANKAT MOCHAN BISWAL PRASANTA KUMAR THAKUR MANORANIAN SAHOO KALYANI SWAGATIKA DASH DAVID HANSDAH ASHISH KUMAR PARIDA NAME OF THE STUDENT SMRUTIREKHA MARANDI TOKAN BEHERA SUSHREE SANGITA PRIYABRATA KUMURA NUTAN NAYAK MEGHANTH NAIK ASIF KHAN PURNENDU SUNANI JITU MISTRY Date: Biland hu Dadh Santof M. Biswa Prillippresto kumis Presupobanto kumma Kalyani sucyasha Das Kalyani sucyastika Sinnerfreelies increased & mustigelies englande & morganismost englands in a grande & morganismos englands in a grande & Present 4. Wah en Present 4. Thokun Morally leagus IV ろうし、 かんしん loken Beheva Mano Yayan Sahoo Hamoran Jan Lahoo Magnicinath Night Maglicineth Nath HOMMA Samo SUS WERE SOUSI 7125 arrida 202 Course Code (if any): Gentlet M. Wiswal Sterlet M. B is wa M. P. Mishires Semester: 7th XI a bam Nayak Johan Menuna Device Handon Homen Language 0 Sustrie sans CAN CONVINI SAGANI Date & Signature of the Student 12 201 2 Kodycen Lucycusius M.D. MILLED BIJayorin. Tolian Unchara Meghanath Neck Mamo Jam Jan Sahar pargologoto humin Property of Theleur Horanya Kama Academic Year: 2021-22 SUST VER JONG a Lan Nayau Mark. M.p. Misson The righty 5 I central M. Brigura Manoyanjan Saha marght h. s meeting the miner DA NIC Parta Salva Shar No to navou town sharet Sushive e Som Moherana Mungadh Hansdah 30%



COLLEGE OF ENGINEERING BHUBANESWAR (COEB) DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING ADD ON/CERTIFICATE COURSE

STUDENT ATTENDANCE SHEET

Sheet No.

Programme: B.Tech in Electronics and Telecommunications Name of the Course; Animal sound processing Semester: 7th Course Code (if any):

Academic Year: 2021-22

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DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING COLLEGE OF ENGINEERING BHUBANESWAR (COEB

ADD ON/CERTIFICATE COURSE

STUDENT ATTENDANCE SHEET

Name of the Course: Animal sound processing **Programme:** B. Tech in Electronics and Telecommunications

Semester: 7th

Academic Year: 2021-22

Course Code (if any):

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conducted at College of Engineering Bhubaneswar in the academic year_

2021-22

Course-Coordinator

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Principal

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2021-22

Course-Coordinator

Principal

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2021-22

Course-Coordinator

Principal

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2022-23

Course-Coordinator

Principal

PRINCIPAL College of Engineering Bhubaneswar



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conducted at College of Engineering Bhubaneswar in the academic year__

2021-22

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Course-Coordinator

Principal

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