

Research Scholar Forum

Department of Electronics and Electrical Engineering

(RSF-EEE 2017-18)

welcomes you to

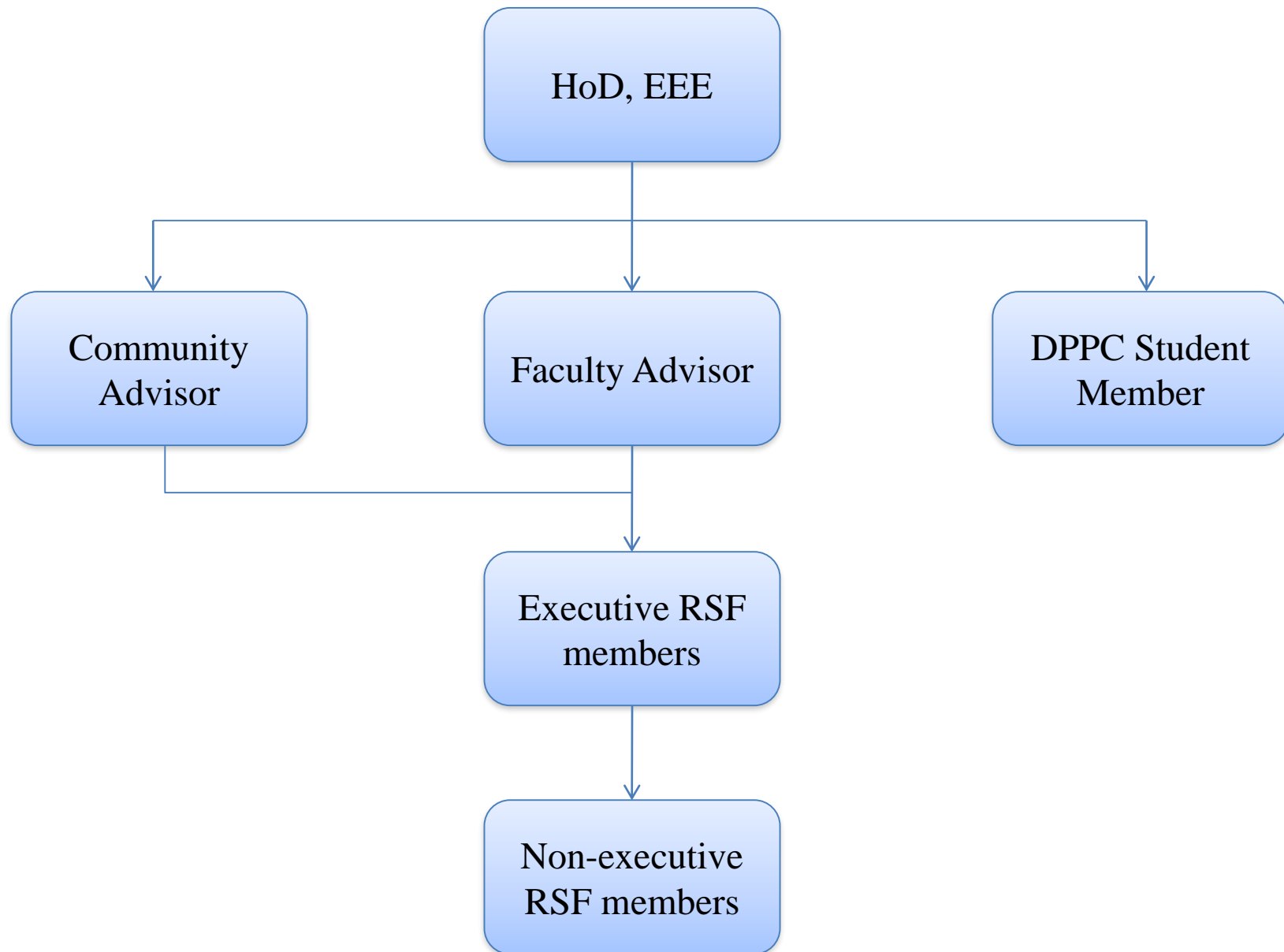
**Ph.D. and DUAL (M.S. + Ph.D.)
FRESHERS**

Department of Electrical and Electronic Engineering,
Indian Institute of Technology, Guwahati-INDIA
1st August 2017

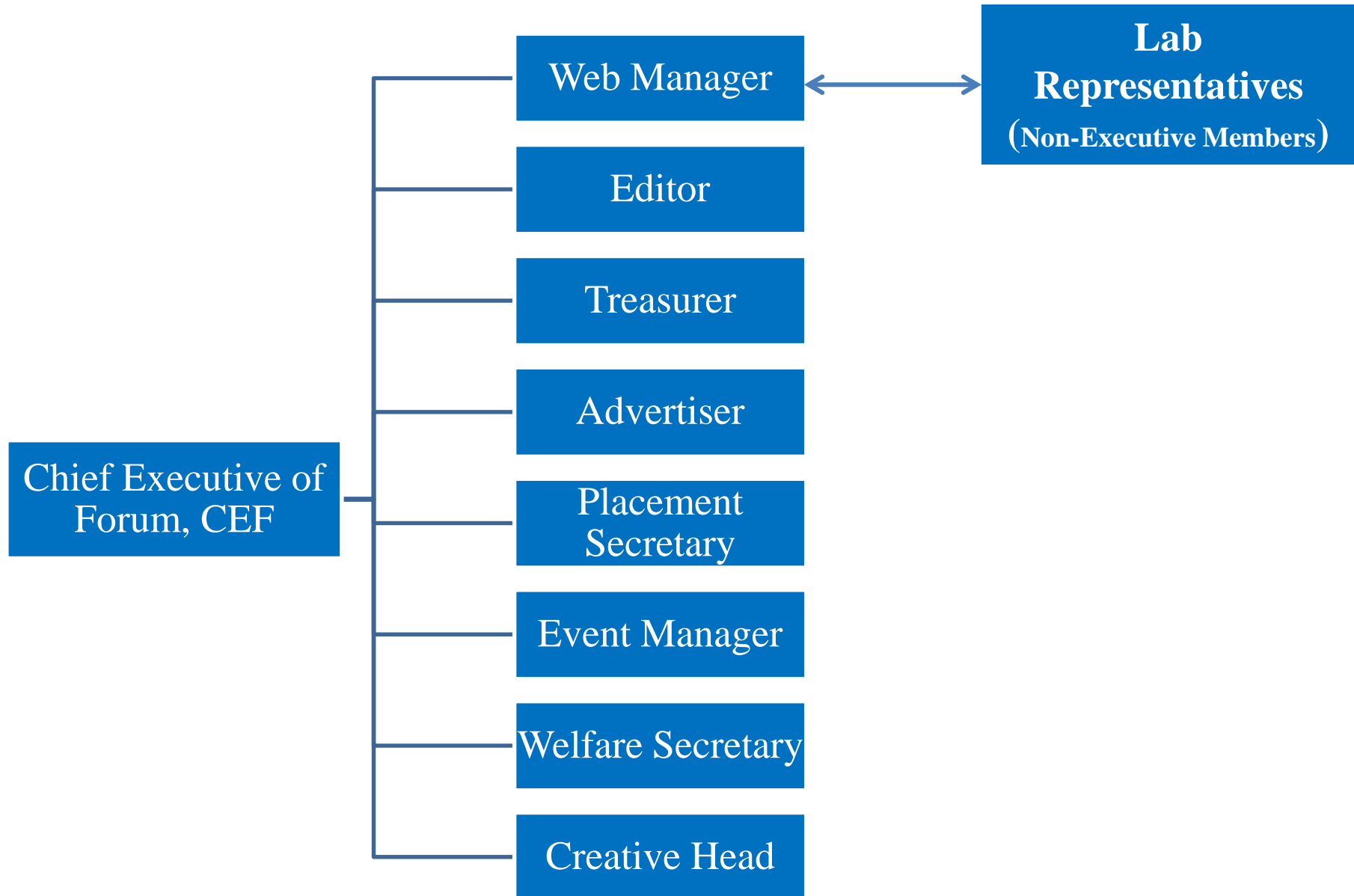
Introduction of RSF-EEE

- Student organization at Department of EEE, IIT Guwahati
- Formed in 2015 by research scholars of EEE, IIT Guwahati
- Core motive: to accomplish the needs of research scholars
- Major Objectives:
 - To develop strong co-ordination among research scholars
 - To showcase research activities of our department
 - To improve the soft-skills of research scholars
 - Reconnecting with the alumni
 - Technical talks & workshops
 - Industry collaboration
 - Conferences/symposiums
 - Newsletter/Magazines
 - Extra-curricular activities

RSF-EEE office organization: Advisory Board



RSF-EEE office organization: Executive Members



Note :- See the webpage “RSF EEE” to know about Team.

Agenda of RSF-EEE 2017-18

- Organizing lecture series in the department (core event).
- Lectures on latest and emerging technologies by renowned professionals.
- Encourage active participation by research scholars in Research Conclave.
- Organizing fresher's and farewells for postgraduate students.
- Debates and panel discussions between research scholars and department faculties.
- Organizing outing and recreational activities to increase student-faculty interaction.

Agenda of RSF-EEE 2017-18

- Organizing Research Scholars' Day to motivate research scholars with the “Best Research Award” for original research and with publication in quality journals.
- Screening of scientific documentaries and movies.
- Interactive session with research scholars who achieved some special attention for his/her research work.
- Organizing technical writing sessions.
- Creating sections for general FAQs on various funding agencies, job openings, institute facilities, etc in RSF, EEE website.

Agenda of RSF-EEE 2017-18

- “Open House Discussion” between research scholars and between research scholars and faculties as a platform to resolve any kind of academic related issues/conflicts.
- Generic lectures like ‘Using LateX’, ‘Using LINUX’, ‘Creating webpages’, ‘Creating PPTs’, etc.
- Creating and maintaining an up-to-date alumni database and organizing annual alumni meeting.
- Monthly newsletter on latest technological advantages and other events.
- Arranging motivation speeches for the benefit of research scholars.
- Special archive containing books by eminent people who have contributed to the field of electrical and electronics, their biographies, etc.

A brief outlook of EEE labs !!!

Signal Processing Lab

Lab Representative : Sandeep Pandey

Main Research Areas

- Image Processing and Face Biometrics (K.Balaji)
- Animal Biometrics (Shoubhik Chakraborty)
- Model Based Signal Processing. (Deepika Gupta)
- Tensor in Signal Processing (Sandeep Pandey)
- Cleft Lip and Palate Speech (C.Vikram, Sisir Kalita, Protima Namon Sudro, Akhilesh Dubey)
- Audio Processing (Mrinmoy Bhattacharjee)
- Speech Processing (Moa and Saswati)

Communication and Networking Lab

Lab Representative : Darpan Mishra

Main Research Areas

- Silicon Photonics
- Communication
- Terahertz sources

Software Tools

- OptiGrating
- OptiSPICE
- Matlab

Facilities

- Virtual Lab
- Dark room
- Optical Table

Communication and Networking Lab

Hardware Facility

- Spectrometer
- He-Ne LASER
- 1310 nm LASER for datacenter application
- 1550 nm LASER for fiber-optic communication
- Fiber splicer tool kit
- OTDR etc.

E -Mobility Lab

Lab rep: Bikas Sah

Main Research Areas

- EV Machine Design
- EV Drives
- Wireless Power Transfer
- Vehicle to Grid Infrastructure

Software

- MATLAB
- ANSYS MAXWELL
- Spark
- Eagle
- LabView

Power System Lab

Lab Representative : Bikash Sah

Main Research Areas

- Synchrophasor
- Microgrid
- Renewable energy
- Smartgrid

Software

- PSCAD
- DigSilent
- PSS/E

Control and Instrumentation Lab

Lab Representative: Bhim Singh

Main Research Areas

- Robust and Adaptive Control Theory
- Relay Control System Theory
- Multi Agent System

Resources

- Twin Rotor MIMO system by Feedback Instruments
- Robotic ARM
- Process Control Simulator
- Fuzzy logic controller
- High energy pulse Receiver
- DC motor control system

Electro Medical and Speech Technology (EMST) Lab

Lab Representative : Tilendra

Main Research Areas

- Speech signal processing including speech enhancement, its classification, pathological speech study, speaker identification and verification, speech recognition.
- Biomedical signal processing including ECG, heart sound and retinal image processing.
- Bio-instrumentation covers designing of electronic acquisition circuitry for bio-signals and speech.

Resources

- MATLAB (software)
- BIOPAQ system
- Optical fundus imaging device
- Optical Coherence Tomography machine.

Multimedia Analytics Lab

Lab Representative : Shikha Baghel

Main Research Areas

- Pattern recognition
- Multimedia processing

Softwares

- Matlab
- C++
- Python
- SQL

VLSI-ADSP & Communications Lab

Lab Representative : Rahul Sharma

Resources

- Vector Network Analyzer (6 GHz)
- Spectrum Analyzer (1.8 GHz)
- Synthesized RF Generators
- Digital Storage Oscilloscopes (150-500 MHz)
- Mixed signal Oscilloscopes (100 MHz)
- Logic Analyzers (16 & 34+ channels)
- Arbitrary Waveform generators (80 MHz)
- Pulse generators (150 MHz)
- Bench-Top DMM (6.5 Digit)
- Timer/ Counters (10 Digits, 5 GHz)
- Programmable Power Supplies
- LCR Meters
- Digital Modulation Signal Generators etc.
- RF Probe Station

Softwares

- Matlab 7.3
- Analog Device's Crosscore Visual DSP++
- Texas Instruments Code Composer Studio
- Hypersignal Graphical DSP development software

Lab Representative : Pralay

Main Research Areas

- High-speed VLSI structures for Signal Processing & Communication
- VLSI Signal Processing
- Biomedical Signal Processing
- VLSI Circuits/System Design
- Circuit Design (Analog & Digital)
- VLSI CAD
- MEMS
- Devices

Software and Resources

- FPGA development kits from Xilinx and Altera Inc.
- Cadence Bundle
- Synopsys Tools Bundle
- Mentor Graphics Tools Bundle
- Xilinx ISE Foundation Software and XUP Spartan - 3E Starter Kits
- TCAD (Sentaurus/2D)

Image Processing and Computer Vision (IPCV) Lab

Lab Representative: Pradipta

Main Research Areas

- Endoscopic image polyp detection
- Blind image forensics
- Continuous Gesture recognition in videos
- Skin Segmentation
- Image Fusion

Softwares

- Matlab
- Deep learning tools

Please visit us on

Website link:

http://www.iitg.ac.in/eee_rsf/

Facebook Group:

[**Research Scholar Forum - EEE - IIT Guwahati**](#)



Thank
you!!