**DEPARTMENT OF ELECTRONICS**

### **ANNUAL REPORT 2011– 12**

# INTRODUCTION

 The Department of Electronics continued its commitment in the dimensions of technology acquisition, technology development, training as well as development and maintenance of technical infrastructure. The objective of the department is to provide technical support to the academic, clinical and research activities of the institute and thus improve quality and effectiveness of the services provided at the institute.

The department manages all information and communication Technology services at the institute. It is equipped with excellent infrastructure for electronic, acoustic and electroacoustic testing and other technological services. The department of electronics also provides technical services to hearing aid users, various speech and hearing institutes, industries and the public.

During the report year the department continued to pursue its objectives of :

(a) Training Diploma, Graduate, PG Diploma and Post graduate students in Speech Signal Processing Electronics, Acoustics, Bio-medical instrumentation and Computer Applications.

(b) Management & maintenance of electrical systems, computer systems and network, biomedical instruments and Video conference systems at AIISH and its 11 remote centres.

(c) Managing, issue & electro acoustic evaluation of hearing aids under

 ADIP scheme, Ministry of Social Justice & Empowerment, Govt. of

 India and hearing aid dispensing scheme of the institute.

(d) Repair, servicing and electro acoustic evaluation of Body worn and

 BTE hearing aids.

(e) Industrial and community noise auditing, acoustic measurements etc.,

(f) Development of assistive devices and alternative and augmentative

 communication devices for people with communication disorders.

g) Providing technical support for conducting DHLS classes through Video conference at AIISH and its ten remote centres.

h) Maintenance of all electrical installation, software system, computer systems and computer network.

1. Providing technical support for tele-rehabilitation services of CREDM Department.

j) Providing technical support for village out reach program of POCD department.

k) Managing and maintaining AIISH website and digital library portal

1. **ACADEMIC ACTIVITIES**
2. Long Term Academic Programs/Courses

 i) Ongoing Programs

1. Name of the Program : Diploma in Hearing aid and

 (UG/PG/Diploma/PhD) Ear mould Technology

 (b) No. of Seats available : 25 seats

1. No. of Intake for each course during : 25 seats

the Reporting Year (Gender wise

 and State wise)

1. No. of Students Currently Studying for

each course (Semester/Year Wise)

 Year 2011 – 12 : 3 students

1. No. of Part-Time Scholars currently : - NA -

working (In case of PhD)

1. No. of Full-Time Scholars currently : - NA -

working (In case of Ph.D)

1. No. of Students Awarded Degree : - NA -

(course-wise) & Grade Secured

ii) New Academic Programs : NIL

iii) Stipend / Fellowship

 (a) Name of the Course : Diploma in hearing aid and

 Ear mould Technology

 (b) No. of students received stipend : Three

 (c) Amount :  7500/- ( 250/- per

 students per month for

 10 months)

 iv) Other Financial Assistance : NIL

1. Short-term Training Programs
2. Ms. Surya D, M. Tech (Biomedical Engg.) student from MIT, Manipal is attending nine months internship program.

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| --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Name / Topic of the program** | **Objectives** | **Department** | **Targeted Audience** | **No. of partici-pants** | **Date** |
| 1 | Acoustic measurements and calibration of audiological equipment | To give hands on training in measurements and calibration | Electronics | PG students from KIMS, Hubli | 2 | 18.08.11 |
| 2 | Acoustic measurements and calibration of audiological equipment | To give hands on training in measureme-nts and calibration | Electronics | PG students from KIMS, Hubli | 1 | 20.09.11 |
| 3 | Acoustic measurements and calibration of audiological equipment | To give hands on training in measureme-nts and calibration | Electronics | PG students from KIMS, Hubli | 2 | 19.10.11 |
| 4 | Acoustic measurements and calibration of audiological equipment | To give hands on training in measureme-nts and calibration | Electronics | PG students from MMC, Mysore | 1 | 20.12.11 |
| 5 | Acoustic measurements and calibration of audiological equipment | To give hands on training in measureme-nts and calibration | Electronics | PG students from KIMS, Hubli | 3 | 23.12.11 |

1. In-house Training Programs : Nil
2. Seminars/Conferences/Workshops Conducted

 (a) Organized Department : Dept. of Electronics

 (b) Coordinator : Sri. Ajish K Abraham

 (c) Theme : Introduction to Computers

& IT

 (d) Objectives : To train the participants

on basics of computers , networking and internet engineering

(e) Target Audience : Staffs and Students in the

area of Speech and Hearing.

 (f) No. of Participants : 65 participants

 (g) Date : 23rd July 2011

1. Academic Programs and Meetings Attended by : **a.** Sri. Ajish K Abraham

Faculty and Staff (Other than Seminars and Attended the 3rd meeting of

And conferences) Audio working group for preparing standards for BTE hearing aids at Beaurau of Indian standards, New Delhi on 5th May 2011.

b. Sri. Ajish K Abraham

Participated as a Resource Person in the special nature camp for the children with hearing impairment at Bannerghatta national Park, Bangalore, Organized by Regional Museum of Natural History Mysore, from 04.06.2011 to 06.06.2011.

1. Visits abroad : NIL
2. Details of Guest Faculty visited the Institute and : NIL

 Lecture Delivered

I. Details of Guest Lectures Delivered by Faculty and Staff outside the Institute

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Name of the faculty****(a)** | **Organization and event of presentation****(b)** | **Topic****(c)** | **Date****(d)** |
| 1 | Sri. Ajish K Abraham | SJCE, Mysore Orientation program for M.Tech, Biomedical Engineering  | Digital Signal processing in Hearing aids and Cochlear implants | 07.04.2011 |
| 2 | Sri. Ajish K Abraham | J.S.S. Polytechnic for women, orientation program for final year students of Electronic Instrumentation and Control Engg. | Audiometer | 14.09.2011 |

1. Research Papers Published
2. Papers Published in National /International Journals
3. Name , Designation, Department of Faculty :
4. Co-author(s) if any :
5. Title of the paper :
6. Journal Name, Vol & Issue :
7. Papers Published in National/International Conference/Seminar Proceedings

 (a) Name, Designation, Department of Faculty : Mrs. Kalai Selvi V.T, JTO

 (b) Co-author(s) if any : Ms. Lakshmi, CIIL,

 (c) Title of the paper : “Concept set modeling: An

 Approach for developing

 multilingual digital dictionary”

 (d) Name of the Conference. : New perspectives in Applied

 Linguistics, 2011 (Page 112- 116),

 Annamalai University.

 (II)

 (a) Name, Designation, Department of Faculty : Ajish K Abraham

 (b) Co-author(s) if any : Nil

 (c) Title of the paper : “Cepstral Co-efficients and Mel

 Frequency Cepstral Co-efficients.

 (d) Name of the Conference. : New perspectives in Applied

 Proceedings of National workshop

 on ”Forensic speaker identification,

 AIISH, Mysore 2011 (Pg. 54-64).

 I. Additional Academic Responsibilities of the Faculty and Staff

 (a) Sri. Ajish K Abraham - 1. Technical Coordinator – DHLS program.

2. Warden – Bodhi Gent’s hostel

3. Vehicle I/c

4. I/c AIISH Website

5. Member, BOE – University of Mysore, Mysore

6. Member –Acoustics standards committee -

 Bureau of Indian standards, New Delhi.

7. EC member – AIISH Gymkhana

(b) Sri. N. Manohar - 1. Member – Library Committee

2. Member – Committee for editing website contents.

3. Member – Committee for AAC Speciality Clinic

4. I/c AIISH Digital Library Portal

5. Nodal officer - Youth red cross unit

**2. RESEARCH ACTIVITIES**

1. Research Projects
2. Projects with Extramural Funding : Nil

ii) Projects with ARF Funds

 I

(a) Title : Computerized Screening test for

acquisition of syntax in Hindi (STASH) : An Adaption of STASK.

(b) Objectives : To computerize the screening

test for acquisition of syntax in

Hindi.

(c) Department : Electronics

(d) Principal Investigator : Sri. Ajish K Abraham

 & Co-investigators : Dr. S.P Goswamy, Sri. Brijesh Priyadarshi.

e) Amount ; 5.8 lakhs

(f) Status : Completed

(g) Summary of work done in 2011-12 : Basic modality for computerization has

been finalized, prototype of the software developed.

 II

(a) Title : Design & Development or

Assistive device for Museum Access to Persons with Hearing impairment..

(b) Objectives : To develop the prototype of an

Assistive Device for Museum Access.

(c) Department : Electronics

(d) Principal Investigator : Sri. Ajish K Abraham

 & Co-investigators : N. Manohar

e) Amount ; 5.68 lakhs

(f) Status : Sanctioned, work to be started

(g) Summary of work done in 2011-12 : Recruitment of project staff in process.

1. Research Papers Presented at National/International

 Conference/Seminar/Scientific Forums

 I

 (a) Name, Designation, Department of Faculty : Sri. Ajish K Abraham

Reader in Electronics.

 (b) Co-author(s) if any : Nil

 (c) Title of the paper : Ceptral coefficient

 and mel frequency

 Cepstral Co efficient.

(d) Name of the Workshop. : National workshop on

“Forensic speaker identification” (AIISH, Mysore), 11-14, April 2011

 II

 (a) Name, Designation, Department of Faculty : Sri. Ajish K Abraham

Reader in Electronics.

 (b) Co-author(s) if any : Nil

 (c) Title of the paper : Protocol for Noise measurement.

(d) Name of the Workshop. : National workshop on

“”Noise measurement and Conservation of Hearing in Industrial workers”. (ISH, Bangalore), 1st to 3rd December 2011.

1. Books/Book Chapters Published : NIL
2. Books/ Conference Proceedings Edited : NIL

F) Peer-review for Journals : NIL

 G) Doctoral Program : NIL

1. **CLINICAL SERVICES**
2. General Clinical Services and Statistics of

Various Departments

1. Speech and Language Assessment : Nil
2. Speech and Language Rehabilitation : Nil
3. Hearing Evaluation : Nil
4. Hearing Aid Trial : Nil
5. Hearing Aid Dispensing : Nil
6. Psychological Evaluation : Nil
7. Counseling and Guidance : Nil
8. Ear Moulds : Nil
9. Hearing Aid Issue and Electro-Acoustic Evaluation

(ADIP Scheme, Ministry of Social justice) : a. At AIISH – 1625 hearing

aids and Solar battery chargers

b. At camps – 21 hearing aids and solar battery chargers.

c. At outreach centres of Akkihebbal, Hullahalli & Gumbahalli – 56 hearing aids and Solar Battery chargers.

1. AIISH Hearing Aid Dispensing Scheme : 1300 hearing aids
2. Infant Screening : NIL
3. School Screening : NIL

 B) Specialized Clinical Services of Departments : NIL

1. **TECHNOLOGICAL CONSULTANCY SERVICES**
2. Acoustic Measurements : a. Ambient noise and

Reverberation time measurements at Sathya Sai Hospital, Bangalore.

b. Calibration of BERA unit, M/s. MNE Technologies, Bangalore

c. Electro acoustic evaluation of 113 hearing aids and 8 SBC received from the following agencies.

i. DRC, Chengalpet,Nagerkoil,

 Tirupur

ii. State Commissioner for

 differently abled, Tamil Nadu.

iii. District Project Officer, SSA,

 Malappuram, Kerala

iv. Sarva Shiksha Abhiyan,

 Kasargod

1. Hearing Aid Repairs : Body level hearing aids – 453 Nos.

BTE hearing aids – 120 Nos.

BTE hearing aids serviced free of

cost – 404 Nos.

1. **EXTENSION ACTIVITIES**
2. Rehabilitation & Education through Distance Mode : Providing technical support for

tele-rehabilitation services of CREDM Department.

1. Prevention of communication Disorders : Providing technical support for

village out reach program of POCD Department.

1. Publicity and Information
2. Camps

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl. No.** | **Date** | **Venue of camp** | **No. of hearing aids distributed** |
| 1 | 28.04.11 | Hosadurga, Shimoga Dt | 104 |
| 2 | 09.03.12 | Mandya | 21 |
|  | **TOTAL** | **125** |

1. Orientation Programs : Nil
2. Public Lecture Series : Nil
3. **CENTRAL FACILITIES**
4. Library and Information Services
5. Materials Development
6. **AWARDS AND HONORS RECEIVED BY :** NIL

**FACULTY AND STAFF**

1. **EXTRA CURRICULAR ACTIVITIES**
2. NSS
3. AIISH GYMKHANA
4. Others
5. **ADMINISTRATIVE ACTIVITIES**
6. Official language Implementation : Managing the contents of AIISH website

 ([www.aiishmysore.in](http://www.aiishmysore.in)) in English

1. Information on Personnel
2. Appointments
3. Regular : Mr. Ravi Shankar M.S appointed as JTO with

 effect from 13.02.2012.

1. Contract
2. Deputation
3. Project staff
4. Promotion : Mrs. B. R. Chudamani promoted as Electronics

 Engineer

1. Resignation/Retirement : Mr. M.K. Seetharam, Electronics Engineer

retired on 30.06.2011.

1. Obituary
2. Major Constructions
3. Particulars of Equipments Purchased

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Name of equipment** | **Purpose** | **Qty.** | **Total cost** **(in lakhs)** |
| 1 | Trend Micro Antivirus software with 251 user license  | For LAN | 1 No. | 2.08 |
| 2 | CISCO SRW-208-K9.G5 switch | For LAN | 12 Nos. | 1.95 |
| 3 | Finger print attendance system | For attendance system | 2 Nos. | 0.54 |
| 4 | Remote controlled VGA splitter | For Seminar Hall  | 1 No. | 0.91 |
| 5 | Cannon DR 2010C Scanner | For Entrance Exam | 1 No. | 0.32 |
| 6 | Cordless lapel Mic with rec | For PA System | 2 Nos. | 0.50 |
| 7 | Konica Minolto Basic digital copier | For Dept. use | 1 No. | 0.34 |
| 8 | Mobile Jammer | For Entrance Exam | 2 Nos. | 0.69 |

1. Financial Statements : Nil
2. Others : Nil
3. **EMINENT VISITORS** : Nil
4. **ANY OTHER** : Nil

DEPARTMENT OF ELECTRONICS

SH/Ele/AR10-11/2011-12 23.04.2012

Submitted to the Director

Sub: Material for Annual Report for the year 2011-12.

The annual report for the year 2011-12 of Department of Electronics is enclosed herewith in the prescribed format

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 HOD – Electronics