**DEPARTMENT OF ELECTRONICS**

### **ANNUAL REPORT 2010– 11**

# INTRODUCTION

The Department of Electronics continued its commitment in the dimensions of technology acquisition, technology development, training as well 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 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 and Post graduate students in 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 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 2010 – 11 : 4 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 : Four

(c) Amount : [Indian rupee](http://en.wikipedia.org/wiki/Indian_rupee) 10000/- ([Indian rupee](http://en.wikipedia.org/wiki/Indian_rupee) 250/- per

students per month for

10 months)

iv) Other Financial Assistance : NIL

1. Short-term Training Programs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **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 | 27.10.10 |
| 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 | 21.12.10 |

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

(a) Organized Department : Dept. of Electronics

(b) Coordinator : Sri. N. Manohar

(c) Theme : Introduction to Matlab

(d) Objectives : To train the participants

on the signal generation and processing tools available in Matlab

(e) Target Audience : Professionals and students

in the area of Speech and Hearing.

(f) No. of Participants : 80 participants

(g) Date : 27th March 2011

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

Faculty and Staff (Other than Seminars and attended the meeting of the

Conferences) committee constituted for revision

revision of ADIP Scheme on 27.04.2010 at Ministry of Social Justice and Empowerment, New Delhi.

**b.** Sri. Ajish K Abraham was the Chief Guest in the inaugural function of “Cascade’10, a departmental fest organized by the Association of Electronics and communication Engineering (AECES) at GSSS Institute of Engineering and Technology for Women, Mysore, on 29.04.2010 and delivered a Keynote address.

**c.** Sri. Ajish K Abraham was the Chief Guest in the inaugural function of “Keralotsavam 2010” a Cultural fest organized by the Regional Institute of Education, Mysore, on 23.08.2010 and delivered a Keynote address.

1. Sri. Ajish K Abraham

attended the meeting of the committee constituted to

assess the performance of ASIC Based Digital Programmable Hearing aid, Developed by CDAC Trivendrum at the Chambers of Director General of Health Services, New Delhi, on 07.02.2011

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

Lecture Delivered

H. 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 | 21.04.2010 |
| 2 | Sri. Ajish K Abraham | J.S.S. Institute of Speech and Hearing, Mysore  Orientation program for Post-graduate students in Speech and Hearing | Calibration of Audiological equipments | 17.07.2010 |

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

1. **RESEARCH ACTIVITIES**
2. Research Projects
3. Projects with Extramural Funding

(a) Title : Design and Development of

Speech Enhancer.

(b) Objectives ; To develop a prototype of Speech

Enhancer and conduct field trials

(c) Department : Electronics

(d) Principal Investigator : Sri. Ajish K Abraham

(e) Funding Agency : Society for Biomedical Technology,

DRDO, Govt. of India

(f) Amount : Two lakhs

(g) Status : Completed

(h) Brief of achievement in 2010-11 : Prototype developed and clinical

trials going on

1. Projects with ARF Funds

(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 : Ongoing

(g) Summary of work done in 2010-11 : Basic modality for computerization has

been finalized, software development in process.

1. Other Research Projects

**Project work of B.Tech. students from Vishweshwaraiah Technological University**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Title | Objectives | Guide & Investigator(s) | Department | Amt. | Status | Summary of work done in 2010-11 |
| Hearing screening device | Design & Development | Ajish K Abraham & Ms. Arpitha H, Ms. Pallavi A, Shalini S, Vineetha Menon | Electronics & Communication Department NIE, Mysore | - | Complete | Prototype developed |
| Speech formants analysis | Design & Development | Ajish K Abraham & Pavan Kumar, Santhosh M.A.,  Sathish kumar S  Sravan Kumar M | Electronics & Communication Department SJCE, Mysore | - | Complete | Prototype developed |
| Word counter for Human speech | Design & Development | Ajish K Abraham & Pavan kumar,  Bhuvangowda,  Nayan Singh,  Manjesh H.S. | Electronics & Communication Department SJCE, Mysore | - | Complete | Prototype developed |
| Voice activated switch | Design & Development | Ajish K Abraham & Archana KV,  Bhavana S,  Deepika B, Shivashankari C | Electronics & Communication Department SJCE, Mysore | - | Complete | Prototype developed |
| Server based curator for museums | Design & Development | Ajish K Abraham & Rahul Salecha,  Ravindra Babu,  Ritesh MS, Sharan K | Electronics & Communication Department SJCE, Mysore | - | Complete | Prototype developed |

1. Research Papers Presented at National/International

Conference/Seminar/Scientific Forums

(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 : Assistive Device for

museum Access to Persons with hearing impairment.

(d) Name of the Conference : National Conference on

“Emerging Medical Instrumentation” (CEMI-2010)

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 : Sri. Ajish K Abraham

Reader in Electronics

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

(c) Title of the paper : Assistive Device for

museum Access to Persons with hearing impairment.

(d) Name of the Conference. : National conference on

“Emerging Medical Instrumentation” (CEMI-2010)

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 – 4624 hearing

aids and Solar battery chargers

b. At camps – 692 hearing aids and solar battery chargers.

c. At outreach centres of Akkihebbal, Hullahalli & Gumbahalli – 122 hearing aids and Solar Battery chargers.

1. AIISH Hearing Aid Dispensing Scheme : 996 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 National Centre of Biological Sciences, Bangalore

b. Reverberation time

measurement at Kalamandira,

Mysore.

c. Electro acoustic evaluation of 66 hearing aids received from the following agencies.

i. DRC, Chengalpet,

ii. State Commissioner for

differently abled, Tamil Nadu.

iii. District Project Officer, SSA,

Malappuram, Kerala

1. Hearing Aid Repairs : Body level hearing aids – 403 Nos.

BTE hearing aids – 116 Nos.

BTE hearing aids serviced free of

cost – 446 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 | 23.04.10 | Tarikere, Chikmagalore Dist. | 192 |
| 2 | 29.09.10 | T. Narasipura, Mysore Dist. | 4 |
| 3 | 30.10.10 | J.S.S. Polytechnic for Physically handicapped, Mysore | 23 |
| 4 | 13.11.10 | J.S.S. Polytechnic for Physically handicapped, Mysore | 32 |
| 5 | 07.12.10 | Periyapatna, Mysore Dist. | 7 |
| 6 | 12.12.10 | Mekedatu, Mysore Dist. | 23 |
| 7 | 20.02.11 | T. Narasipura, Mysore | 13 |
| 8 | 24.02.11 | Hospete, Bellary Dist. | 76 |
| 9 | 02.03.11 | H.D. Kote, Mysore | 169 |
| 10 | 05.03.11 | J.S.S. Polytechnic for Physically handicapped, Mysore | 17 |
| 11 | 17.03.11 | Tarikere, Chikmagalore | 95 |
| 12 | 27.03.11 | Nanjangud, Mysore | 41 |
|  | **TOTAL** | | **692** |

1. Orientation Programs
2. Public Lecture Series : Sri. Ajish K Abraham delivered a

public lecture on “Hearing aids – Care and Maintenance” in the public lecture series organized by AIISH on 25th September 2010.

1. **CENTRAL FACILITIES**
2. Library and Information Services
3. Materials Development
4. **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
7. Information on Personnel
8. Appointments
9. Regular
10. Contract
11. Deputation
12. Project staff
13. Promotion
14. Resignation/Retirement
15. Obituary
16. Major Constructions
17. Particulars of Equipments Purchased

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Name of equipment** | **Purpose** | **Qty.** | **Total cost**  **(in lakhs)** |
| 1 | McAfee Antivirus software with 101 user license | For LAN | 1 No. | 0.66 |
| 2 | CISCO 4500 Series chasis switches with rack assembly | For LAN | 1 set | 14.50 |
| 3 | Siemens analog subscriber board | For upgradation of EPABX | 1 No. | 0.82 |
| 4 | CISCO Firewall system | For LAN | 1 Unit | 6.20 |
| 5 | Epson Deskjet printer | For Department use | 1 No. | 0.05 |
| 6 | Lab training kits | For hearing aid repair lab | 27 Nos. | 1.65 |
| 7 | Network switches | For LAN upgradation | 10 Nos. | 23.21 |
| 8 | Trivector Energy meter | For Gent’s hostel | 1 No. | 0.10 |
| 9 | Pulse distortion analyzer and hearing aid analyzer | For acoustic testing lab | 1 Set | 10.00 |

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

**New AIISH Website launched on 9th August 2010**

[www.aiishmysore.in](http://www.aiishmysore.in), the newly developed website of AIISH launched on 9th August 2010 complies to W3C, the International Standards for websites and also meets all the mandatory requirements of the guidelines for Indian Government Websites adopted by Department of Administrative reforms and Public grievances, Government of India. It also complies to WCAG2.0 standards, which ensures the accessibility of this website to persons with disabilities.

Built up with excellent technical and editorial quality, the new website is an outstanding source of information expanding to 322 web pages, each in 3 languages (English, Hindi & Kannada). The website has got an exclusive subpage which provides access to all public education pamphlets prepared at AIISH for the benefit of persons with communication disorders as well as their caregivers. The public can interact with the institute authorities through the ‘online queries’ section. All important government orders pertaining to the benefits and rights of persons with communication disorders are also available in the website. Multimedia gallery with informative video and audio clips would be an added advantage for all clients. All research and academic activities of the institute are showcased in the website which would be of immense help to the researchers, professionals and students in the field of communication disorders. The website is also enabled with content management system which will facilitate automatic uploading of notifications, tenders etc.

DEPARTMENT OF ELECTRONICS

SH/Ele/AR10-11/2011-12 25.04.2011

Submitted to the Director

Sub: Material for Annual Report for the year 2010-11.

The annual report for the year 2010-11 of Department of Electronics is enclosed herewith in the prescribed format

.

Ajish K Abraham

HOD – Electronics