

SSN

Department of

BIOMEDICAL ENGINEERING

SYNERGY

Vol 3

Issue 4

JAN '15 EDITION

FROM THE EDITORIAL DESK

The Editorial team wishes you all a prosperous and a joyous New Year! And here we bring to you the crispy facts and the most expecting future events of the ever illustrious Department of Biomedical Engineering.

This edition covers the events for the months of October, November and December, 2k14. With a right proportion of academics and extracurricular development, the Department strives at excelling in all fields with team effort from students and faculties. And we, the editorial team will bring to you the best of these handpicked news to your sight.

We will be back with the next issue summing up bigger achievements of the department on June, 2015.

Best Wishes

-Editorial Team

INSIDE THIS ISSUE:

FACULTY CORNER	2
STUDENT CORNER	7
UNIVERSITY RANK	10
MERIT SCHOLARHIP	11
ALUMNI CORNER	11
PLACEMENT NEWS	12
INTERNAL FUNDED PROJECTS	13
TECH ARTICLE	14
UPCOMING EVENTS	15

FACULTY CORNER

Publications:

- K.M. Surapaneni, V.V. Priya, J. Mallika, AP (2014) '**Pioglitazone, quercetin and hydroxy citric acid effect on cytochrome P450 2E1 (CYP2E1) enzyme levels in experimentally induced non alcoholic steatohepatitis (NASH)**', *Eur Rev Med Pharmacol Sci*, 8(18), pp. 2736-2741.
- Sivaramakrishnan Rajaraman, AP, Arun Chokkalingam (2014) '**Classification of Denver System of Chromosomes Using Similarity Classifier Guided by OWA Operators**', *Current Bioinformatics*, 9(5), pp. 499-508.
- Sivaramakrishnan Rajaraman, AP, Sona Ganesan, Kavitha Jayapal, Sadhani Kannan (2014) '**Design of a Functional Training Prototype for Neonatal Resuscitation**', *Children*,1(3), pp. 441-456.
- B. Geethanjali, AP, Kanagasabai Adalarasu (2014) '**Assessment of depression, anxiety and stress among female students**', *Int. J. of Biomedical Engineering and Technology*,16(2), pp. 182 - 193.
- Subashini Rajakannu, AP, Pooja Chandrasekaran, Banu saranya Arumugasamy (2014) '**The Role of Buckminster Fullerenes in Preventing Allergy**', *The American Journal of Pharmtech Research*, 4(6), pp.251-254.
- M. Gayathri, Mallika Jainu, AP, presented a paper titled "**Role of alpha-tocopherol against the GI tract caused by diclofenac**" and published in the proceedings of National summit on recent trends in Biosciences, Oct 12-13, 2014 at IITM, Chennai.

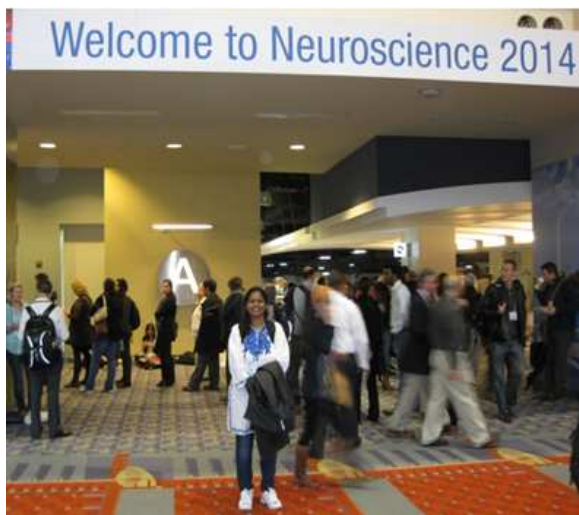
Faculty Activities

- **Mr.R.Sivaramakrishnan, AP** received internal grant of Rs.2.5 lakhs for pursuing research on '**Ocimum sanctum extract coating on biomaterial surfaces to prevent bacterial addition and biofilm growth**' on 9th of Oct, 2014.
- **Dr. A. Kavitha, Asso. Prof and Head**, presented a research initiative talk at the Vice Chancellor's chamber in Sri Ramachandra University during the first collaborative research meeting after signing MoU with SRU on 14th of Oct, 2014.
- **Dr. Mallika Jainu, AP** nominated as a Ph.D examiner by the Board of Faculty of Science , **Cairo University, Giza, Egypt**, Oct 2014.
- **Dr. S. Pravin Kumar, Asso. Prof. and Dr. S. Guruprakash, Asso. Prof.** visited Sri Ramachandra University Hospital for a meeting with Dr. Ganesh Venkatraman, Associate Professor, and Department of Human Genetics regarding submission of research proposal under **BRICS Biomed Cooperation** on 29th of Oct, 2014.
- **Dr. A. Kavitha**, delivered a talk on '**Rigid and Non-Rigid Image Transforms in Recent developments in Medical Image processing**', an ICMR sponsored seminar organized by ECE department at SSNCE on 30th of Oct, 2014.
- **Dr.S.Pravin kumar, Asso.Prof** participated in the Symposium on **Healthcare Instrumentation Present and Future: Clinical & Technology Perspective** organized by National Hub for Healthcare Instrumentation Development (NHHID), Anna University and Apollo Telemedicine Networking Foundation (ATNF) on 11th of Nov,2014.
- **Mr.R.Sivaramakrishnan** attended seminar on the software **Mathematica and its features from Wolfram Research and GT Enterprises**, organized by the Department of CSE, SSNCE on 12th of Nov, 2014.

- **B.Geethanjali, AP** attended the 4th International conference on Neurology and Epidemiology held at Kuala Lumpur from 6.11.14 to 8.11.14 , Malaysia and presented a poster on her research paper.



- **Dr. A. Kavitha** attended the 44th Annual meeting of Society for Neuroscience held at Washington, DC and presented an article on the "**Investigations of EEG coherence on foreign language learning**". She also visited the Biomedical Engineering departments of Princeton and Columbia Universities at New York on 21st November to discuss the possible collaborations.



- **Dr. S. Pravin Kumar** has been recognized as research supervisor (Ref. No. is 2540029) by Centre for Research, Anna University, Chennai.
- **Dr. Mallika Jainu**, attended one day National level workshop on "**Toxicity of Nanoparticle in Brine shrimp** " held at Madurai Kamaraj University.

Faculty Development Program

The FDP on Advanced Digital Signal and Image Processing was held from 5th to 7th Nov 2014 by the Department of Biomedical Engineering, SSN College of Engineering. This Dr.S.Rajendiran, M.D, Professor of Pathology, SRMC, Chennai consented to inaugurate the function at 9.15 am in MBA seminar hall.

The main focus of the program was to enlighten the faculty and students about the recent advancements in the field of digital signal and image processing and also give them an insight into the latest technologies and trends. The program included 9 key note lectures that were delivered by 9 illustrious and distinguished guests from various eminent colleges. The sessions were conducted at Diagnostic and Therapeutic Laboratory (second floor) in the Biomedical department. There were about 25 participants including students, research scholars and faculties of the Biomedical Department. The success of the program has assured many such events to come up and pave the way for intellectual development.



Dr.A.Kavitha handing over memento to **Dr.S.Rajendiran (to the right)** , MD, Professor of Pathology, SRMC

STUDENT ACTIVITIES

- **B.Aarthy, R.Akshya Devi, P. Poongavanam**, final year BME students received funding from Concentric Research Foundation (CRF), Germany for the project titled “[Design of quasi-passive orthotic exoskeleton for lower extremity](#)”. The project was guided by **Ms.R.Nithya AP/BME**.



B.Aarthy R.Akshaya devi P.Poongavanam

- **Vishal** from 2nd year participated in a 15day medical devices training programme conducted by [Cetal and Tamilnadu Biomedical Engineers Association \(TNBMEA\)](#). Duration: 18th Dec ‘14 to 3rd Jan ‘ 15.
- **Lavanya**, 2nd year student took part in the following:
 - Teach A School as part of EDC
 - SSN’s Theatre Club LOP’s production in Crea Shakthi’s CTI.
- **Deepak Dennison** of third year [won third prize](#) in Poster Designing Contest in Intra College Culturals.
- **Deepak Dennison, Loganathan, Mohamman Ikram and Naveen** won the [Best Screenplay Award](#) for their shortfilm in the Intra College Culturals.
- **Aathira Haridas and R.Abirami** of 2nd year attended an internship at Billroth Hospitals for a period of 10days from 8th December to 17th December .



Deepak Dennison

IEEE GLOBAL HUMANITARIAN TECHNOLOGY CONFERENCE 2014

Organized by IEEE, the world's largest technical professional society with over 400,000 members in over 160 countries, IEEE GHTC focuses on advancing technol-



ASWIN RAGHAV
IEEE GHTC '14
SILICON VALLEY, CALIFORNIA , USA

ogy for the benefit of humanity. This 4th annual cross-discipline conference provided the perfect venue for those interested in humanitarian projects to join their peers in Silicon

Valley, a community famed for leading-edge technological innovations, world-class researchers, and technology investors.

The conference attracts a global audience of educators, engineers, scientist, practitioners, philanthropists, corporations, foundations, NGO's and others interested in applying technology to develop effective solutions for the challenges facing the world's underserved populations.

Aswin Raghav, Dheepashri, Divyalakshmi from final year came 4th in the Student Paper Contest 2014 and were selected to present their paper titled “ **Postpartum Hemorrhage Treatment Using MNPs**” in the [IEEE GHTC '14 conference at San Jose University, California](#) that took place from October 10th to 13th 2014.

Despite them not emerging victorious, Aswin describes his experience at the conference to be enriching and very resourceful where he got the opportunity to present his idea in front of an elite gathering.

BEST INDIA 2014

BEST India 2014 conducted by Association of Biotechnology Led Enterprises is the 6th edition of the concept to reality forum.



6th
Edition

Successfully held for the past five years, this much awaited forum is for young B.E./B.Tech, postgraduate and doctoral students of the life sciences to realise their entrepreneurial dreams.

The Shortlisted top 20 teams were given a chance to attend a fully paid for high quality Entrepreneurship Workshop that will familiarize them on matters related to starting a business venture like Business Plans, IP & Patenting Strategies, Raising Finance, Business Strategies, HR Practices and Communication Skills.

Final year students **Aswin Raghav N, Divyalakshmi S, Dheepashri K, Narendran R, and Sudhir Babu** presented a product "**Jectable**" under team name Biospirit. They were shortlisted to attend the Entrepreneurship workshop and present their business plan at ABLE's Flagship conference, BioInvest that brings together on one platform Life Science Companies, Institutional Investors and Investment Bankers to explore opportunities for investment.

"Many people are suffering from a variety of disorders like hormone deficiency & those who undergo regular injective treatments prefer Injection pens. Injection pens cater a wide market for a variety of diseases. However all injection pens till date have single cartridge. If the dosage involves mixing of different medications at different proportions, then those are pre-mixed in injection pens. Manual mixing by the patients/nurses/doctors, might give room for errors. To avoid this, we present the product '**Jectable**'. " — **Aswin Raghav N. IV yr**

UNIVERSITY RANK HOLDER LIST '14

RANK 1



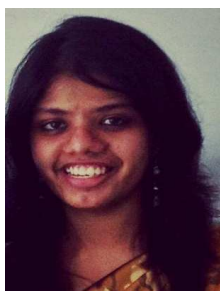
SHAMALA.G

RANK 3



LAVANYA JAGANNATHAN

RANK 4



VAISHALI GUPTA

RANK 5



SONA.G

NAME	CGPA	RANK
SHAMALA.G	9.11	1
VAISHALI GUPTA.A	8.76	3
LAVANYA JAGANNATHAN	8.75	4
SONA.G	8.7	5
ESWARL.R	8.56	8
POOJYA.R	8.56	8
NIJISHA SHAJIL	8.52	9
VAISHNAVI. R	8.47	12
VIBHA.S	8.47	12
KAVITHA.J	8.45	14

MERIT SCHOLARSHIP FOR 2013-2014

FINAL YEAR :

- Bhattaram Sneha Priya - Full Scholarship
- Gayathri.R.S and Aarthi.R— Waiver



Bhattaram Sneha Priya



Nandhini.T

THIRD YEAR :

- Nandhini.T—Full Scholarship
- Archana.S and Sruthi.M—Waiver



Sushmitha

SECOND YEAR :

- Sushmitha - Full Scholarship
- Atul Taneja and Abhirami - Waiver

ALUMNI CORNER

Sivisa. M (2009-2013 batch) is presently doing her masters in **Biomedical Imaging at University of Illinois, Chicago**. Soon after her second semester, she had the opportunity to do her internship at Siemens.

Her thesis work is based on **Shape Analysis of Hippocampus**, in the Neuroimaging Lab. She finds it interesting and enriching to work there and to experience the culture.



PLACEMENT NEWS

Congratulations to **Subash Raja and Siva. A** who were offered a job in Wildbox Technologies through off-campus placements.



Wildbox Technologies is an Indian based IT Services organization focusing on 3 main businesses. It provides innovative, state-of-the-art **E-Learning Solutions** to educational institutions, corporations, industry and nonprofit associations. They also provide a range of other **web-based products and services**.

COMING SOON . . .



SSN ICBSII

Second
International conference
on
Biosignals, Images and Instrumentation

19th – 21st March 2015

Centre for Health Care Technologies
Department of Biomedical Engineering
SSN College of Engineering
Chennai

GEARED UP – INTERNAL FUNDED PROJECTS

- **S. Haritha and M. Sruthi** of 3rd yr, under **Dr. V. Mahesh** (Asso. Prof), for the project titled, **“Osteoarthritis (OA) Analysis Using MEMS Sensor By Assessing Gait Parameters”**, with a budget of Rs. 40,000.
- **M.Muthu Vijay and T.Nandhini** of 3rd yr, under the faculty **Dr. Mallika.J** (AP) for the project titled, **“Quantum dots based Bioconjugates in cancer treatment”**, with a budget of Rs.25,000.
- **A.Banu Saranya, P.J.Ragavi, P.Abinaya** of 3rd yr and **B.Sudhir** of final year under the faculty **Ms.R.Nithya** (AP), for the project titled **“Development Of Prosthetic Hand For Handicapped using Voice and Touch Sensor”**, with a budget of Rs.40,000.
- **S.Saravana Prakash, J.Santhana Krishnan, S.Selva priya** of 3rd yr, under **Dr.L.Suganthi**, for the project titled, **“Communicative Device For Hearing Impaired & Mute People”**, with a budget of Rs.20,500.
- **Durgi Hemalatha** of 3rd yr BME and **D. Nanditha** of 3rd yr Chemical Department, under **Dr.D.Gnanaprakash** (Chemical Engg) and **Mr.R.Sivaramakrishnan** (AP), for the project titled, **“Antibacterial activity of *Moringa Oleifera* protein extract on Biomaterial Implants”**, with a budget of Rs.25,000.
- **G.Srinidhi, R.Vaishali, M.Vaishali** of 4th yr and **M.Shrisha** of 3rd yr, under **Dr.A.Kavitha** (HOD) for the project titled, **“Analysis Of Speech Imagery using EEG and Artificial Speech Synthesis”**, with a budget of Rs.22,000.

NEEDLE FREE DIABETES CARE

Diabetes demands constant blood glucose monitoring, which led to the rise of the glucometer, a portable medical device used for determining the approximate glucose concentration in the blood. The glucometer obtains a small drop of blood by pricking the skin with a lancet. The blood is then placed on a disposable test strip which is inserted into the meter that calculates the blood glucose level. Diabetes self-care is very difficult. It brings the constant need to draw blood for glucose testing, the need for daily insulin shots and the heightened risk of infection.



Echo Therapeutics (Philadelphia, PA) has developed a new technology called **Symphony tGCM System** that replaces the prick with a patch. The company has developed a transdermal biosensor that reads blood analytes through the skin without drawing blood. The technology involves a hand-held electric-toothbrush-like device that removes just enough top-layer skin cells to put the patient's blood chemistry within signal range of a patch-borne biosensor. The sensor collects one reading per minute and sends the data wirelessly to a remote monitor, triggering audible alarms when levels go out of the patient's optimal range and tracks glucose levels over time.

Using over 1,200 Symphony tCGM glucose readings from fifteen study subjects paired with reference blood glucose measurements, the study showed that 98.9% of the readings were clinically accurate and 0.3% were benign errors. There were no adverse events reported from the prelude skin preparation or the Symphony tCGM biosensor. Symphony might help prevent hypo and hyper glycaemic excursions in patients and has the potential to improve patient outcomes in the future.

Source: <http://www.echotx.com/press-detail.php?id=86>

UPCOMING EVENTS

- National Conference on Advances in Engineering Research - NCAER - 2015, IAETSD, Visakhapatnam, Andhra Pradesh, January 28-29 2015

Deadline	Dates	IMPORTANT DATES
Submission Deadline	January 23rd 2015	
Registration Deadline	January 26th 2015	
Conference dates	January 28-29th 2015	

VENUE : LAND MARK HOTEL, #31-29-104,Dolphin Circle, Beside Geet Sangeet Theatre, DABA Garedens, Visakhapatnam, Andhra Pradesh-530004

For more details visit www.iaetsd.in

- International Conference on Evolving Trends in Engineering and Technology, Latha Mathavan Engineering College Madurai, Madurai, Tamil Nadu, February 28 2015

Organised by: [Latha Mathavan Engineering College Madurai](#), [Madurai](#), [Tamil Nadu](#)

Deadlines	Dates	International Conference dates:
Event dates:	February 28th 2015	
Last Dates for Registration:	February 10th 2015	

Registration Fees : Rs.2000/-

For more details visit: <http://www.icetet2015.in>

- International Conference on Emerging and Recent Technology ICERT 2015, Sri Raaja Raajan College of Engineering and Technology, Karikudi, International Conference, Tamil Nadu, January 31 2015

Deadlines	Dates	International Conference dates:
Event dates:	January 31st 2015	
Last Dates for Registration:	January 21st 2015	

Registration Fees :

- 1.Students (UG/PG)Rs.3000/
- 2.Research Scholar (Ph.D.) Rs. 3000/
- 3.College Staff Rs. 3000/
- 4.Industrialist Rs. 4000/

For more details visit: <http://icert2015.in/>

- International Conference on Innovative Research in Engineering ICIRE 2015, VP Muthiahpillai Meenakshi Ammal Engineering College for Women, Srivilliputtur, Tamil Nadu, January 24 2015.

Organised by: [VP Muthiahpillai Meenakshi Ammal Engineering College for Women](#), [Srivilliputtur](#), [Tamil Nadu](#)

International Conference dates:

Deadlines	Dates
Event dates:	January 24th 2015
Last Dates for Registration:	January 12th 2015

Event Website: <http://icire.in/>

- Elastoplaz 2015, Madras Institute of Technology, Chennai, Technical Symposium, Tamil Nadu, January 23-24 2015

Organised by: [Madras Institute of Technology](#), [Chennai](#), [Tamil Nadu](#)

Event dates: 23rd-24th January 2015

Registration Fees :Rs.100/-

Event Website: <http://www.elastoplaz.in>



- Azimo 2015 is a National Level Tech Fest Organized by Karpagam College of Engineering, Coimbatore .
Deadline for submission :30 Jan 2015

End date :07 Feb 2015

Start date : 07 Feb 2015



- VIT Riviera 15, VIT University, Vellore, Cultural & Sports Fest, Tamil Nadu, February 5-8 2015.

Organised by: [VIT University](#), [Vellore](#), [Tamil Nadu](#)

IMPORTANT DATES

Event Website: <https://www.vitriviera.com/>

Deadlines	Dates
Event dates:	February 5-8th 2015
Last Dates for Registration:	January 30th 2015



- Kurukshetra 2015 is the international techno-management fest of College of Engineering, Guindy organized by the CEG Tech Forum.

Start date :28 Jan ,2015

End date :31 Jan 2015



STAFF EDITORS:

Dr.A.Kavitha

Dr.Mallika Jainu

STUDENT EDITORS:

Sanjana.S

Poongavanam.P

Vaishali.R