

IEEE SIGHT

Special Interest Group on Humanitarian Technology



DEEP SEA VOYAGE



SEASON-1

IEEE ADSF NEWSLETTER (MARCH-APRIL 2016)

VOYAGE-2



Editor's message:

Welcome to the March- April 2016 issue of the newsletter. I'm happy to report that this term rapid progress has been made in establishing first-aid projects and awareness programs. Hopefully this tentative first step will be the precursor for the continuing humanitarian projects. My hearty congratulations and gratitude to all the members who contributed for IEEE ADSF SIGHT. Their immeasurable help has made IEEE ADSF SIGHT to get off the ground.

Thank you



Geethu Sree
Editor



IEEE SIGHT Office Bearers



Back row (from left to right):

Mario Aleman, Volunteer Management & Engagement Subcommittee Chair, Deepak Mathur - Operations Subcommittee Chair, Kartik Kulkarni - SIGHT Steering Committee Chair, Alfredo Herrera - Humanitarian Initiatives Committee, Ottawa (HIC-Ottawa) SIGHT Group Chair, Tim Lee - Communities of Practice Subcommittee Chair, Anand B - Events Subcommittee Co-Chair, Sampath Veeraraghavan - Projects Subcommittee Chair, Raj Madhavan - Partnerships Subcommittee Chair, Holly Schneider Brown - SIGHT Staff Lead, Glenn McKnight - Toronto Section SIGHT Group Chair

Front row (from left to right):

Dr. AKM Azad - CARG SIGHT Group Chair (Bangladesh), Ajay Poddar - Awards & Recognition Subcommittee Chair, Mohammed Zamshed Ali - Involved with CARG SIGHT work, Niru Prakesh Kumar - Marketing & Branding Subcommittee Chair

Jackie Halliday - SIGHT Staff, Lwanga Herbert - Uganda Subsection SIGHT Group Chair, Jineet Doshi - Events Subcommittee Co-Chair, Dr. M Balakrishnan - IIT Delhi, Smart Cane Initiative, Invited Guest, Dr. Pritpal Singh - Education Subcommittee Chair

Congratulations

*Best Volunteers for the Month of
March 2016
Miss. Divya and Mr.
Dhanasekhar*



*Best Volunteers for the Month of
April 2016
Mr. Tamil Selvan and Mr.
Dhanasekhar*



SIGHT CAMP

Five Days SIGHT Camp-26-30 June 2016, Eraviputhenthurai, Thoothoor, Kanyakumari District, Tamil Nadu, India

Students who register before 16th of June will get an **IEEE SIGHT T-shirt Free**

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Four Members' Consultation

Mr. Vincent Jain, Chair, Er. Angelin Indira, Vice Chair, IEEE ADSF SIGHT, Mr. Mahiban, Boat Builder, and Dr. R. Venkatesan of National Institute of Ocean Technology (NIOT) had met at NIOT on 9th March, 2016 to discuss the follow-up programme of the first consultation on Safe Boat Design and Boat Building to FAO Standards. The following common points came up as recommendations from the consultation:

A model boat making competition may be organized for college students. Seek the support of IEEE Ocean Engineering Society, IEEE Marine Technology Society, IEEE Madras Section. Organize a higher level meeting with experts to discuss the modalities for organizing the proposed events. A plan of action with estimated budget for the event must be presented at the next experts meeting

Experts meeting

A meeting of experts was held at NIOT on 23rd March 2016 to discuss the various modalities for completing the boat model and other associated events. Since the proposed event would come under 'Safe Boat Design and Boat Building to FAO Standards', it was necessary to take several points into consideration to make the program effective. After the Chennai consultation, few fishermen have become aware of the importance of standards in boat building. Fishermen became aware of the inputs provided by a naval architect in boat building. Mr. J.Vincent Jain made a presentation on the competition with a plan and the budget. The following points evolved from the meeting.

1. Since students don't have boat building experience, their participation in this enterprise is not advisable.
2. A competition for the boat builders, boat making institutions etc. would be advisable.
3. A separate competition can be organized for the students to provide inputs on what facilities and features are needed to make a smart boat
4. It was recommended to prepare detailed document on those events.



Miss. Archana (Trinity College of Engineering) are the members of project team. Mr. H.R.Mohan, Vice Chair IEEE Madras Section participated as Chief Guest and distributed the First Aid Kits to the fishermen. He talked about the importance of First Aid when people are far away from shore without any medical support and he also appreciated the project team for bringing out first aid boxes made out of marine plywood. More than 50 delegates including beneficiaries attended the function.

Miss. Divya and Mr. Dhanasekhar formed the project team. The team members were taken to the boat yard of South India Federation of Fishermen Societies (SIFFS) and trained to make boxes. Generally first aid boxes are made out of steel and plastic but our first aid box is made up of marine plywood. The main aim of using marine plywood is to avoid the use of non-biodegradable items. Moreover, marine ply wood is bio-degradable and sea water resistant. Fishing is the most dangerous occupation and fishers often get injured while working in the boat and will certainly require First Aid. We have done this project in order to help fishermen survive serious injuries as we know that we can't create life but we can certainly save it.

Project Evaluation at Annai Vailankanni College of Engineering



Second Training on 'Assembling of Solar Lantern and Solar Panel'

IEEE ADSF SIGHT in association with AD SGAF and St. Joseph College of Engineering organized a one-day training on 'Assembling of Solar Lantern and Solar Panel' at ICSEA-Centre, Chennai on 19th March 2016. It was the second programme in this series. The program was inaugurated by Shri. H. R. Mohan, Vice Chair, IEEE Madras Section and presided over by Prof. Kanagaraj Subramani, Kumaraguru College of Technology. Mr. Dhanasekhar of MGPT College welcomed the participants and other dignitaries. Mr. Carry Humfrey proposed the vote of thanks. Seventy eight people including students and others attended the Training. Mr. Kumanan and Mr. Tamil Selvan. were handled the sessions and assisted by assisted by Mr. Dhanasekhar and Mr. Carry Humfrey .



Dr.Atmanand, Chair, IEEE Madras Section welcomed the participants. Dr.Yadava, Director, BOBP-IGO, chaired the session. Dr.R.Vijayakumar, Dean of Agni College of Technology, Mr. N.Kumanan, Secretary-IEEE ADSF SIGHT, Miss.N.Monica, St. Joseph's College of Engineering were interacted well. Dr.Venkatesan, NIOT, proposed vote of thanks.

First aid project report

"We can't create life but we can save it"

The inaugural function of the First Aid Project to the Artisanal Deep Sea Fishers was organized by IEEE ADSF SIGHT on 30th March 2016 at Jeppiar Fishing Harbour, Muttom, Kanyakumari District. Miss. Pavun, Miss. Abihinayaa, Miss. Nageswari, Miss. Abisheka (Cape Institute of Technology) Mr. Joel Joy Fernandez, Mr. Prakash, Mr. Nirmal Bose and members of project team. Mr. H.R.Mohan, Vice Chair IEEE Madras Section



Annai Vailankanni College of Engineering (AVCE) dedicated Wednesdays 2.45 PM to 3.45 PM for project evaluation. This will guide students and focus them on the right direction. The programme was initiated by J. Vincent Jain, Chair, IEEE ADSF SIGHT. On 30th March, 2016, Mr. H.R. Mohan, Vice Chair, IEEE Madras Section visited AVCE for evaluating the projects. Mr. Maria Victor, the correspondent, Dr.P.Ramasubramanian, Principal, Dr. Chella Kumar Rose, Dean-AVCE gave a warm reception to Mr. H.R. Mohan. He talked about the opportunities and possibilities that students can avail to involve in IEEE

activities. Further, he shared information about Computer Society of India and SIGHT. The following seven projects were evaluated and mementos were distributed to the best project students.

1. Reduction of by-catch in the shark fishery using High Electric Field
2. SAE Car Project
3. E- bike
4. Home Automation Security Based on DTMF
5. Magnetic Levitation based vertical windmill
6. SMART FIR-Android based Alcohol Detector For Indian Traffic COPS
7. E-Toilet

Trainers Training on First Aid

Based on the distribution of First Aid Kits to the Artisanal Deep Sea Fishers on 30th March 2016, a First Aid training for Trainers and conducted on 31st March 2016. The Chief Guest of the program was Mr. H.R. Mohan, Vice Chairman, IEEE Madras Section. The session started by 10.00 am with a welcome address by Mr. J. Vincent Jain, Chairman, IEEE ADSF SIGHT. Mr. Mohan talked about First Aid Kits and how it saves lives. Then Dr. Lal, of St. Joseph Hospital, Thoothoor detailed the use of medicines in the kit, their effects on the human body and the dosage. The session was quiet interactive and the participants asked many questions on the dosage and frequency of use. Dr. Lal made a demonstration of various bandages and asked few volunteers to learn/practice how to tie them. Finally Mr. John Franco, Treasurer, IEEE ADSF SIGHT gave a vote of thanks. Twenty trainers including fishers and students participated and benefited from the training.



First Aid Awareness Programme to School Students

The idea of training school students in administering First Aid will contribute to building a more resilient community. For training them in providing First Aid, a large number of volunteers are needed. Hence students must be encouraged to create groups of volunteers. With the above objective an awareness programme was organized on 31st March 2016 at Pious XI Higher Secondary School, Thoothoor by IEEE ADSF SIGHT. The programme was led by Dr. Lal. Mr. H.R. Mohan, Vice Chair, IEEE Madras Section, Mr. Benadict, Head Master, Pious XI School and others participated with 100 students in the programme. Mr. Mohan distributed gifts to the students who participated actively in the programme.



Technical Talk at MECET by H.R. Mohan

On 31st March, 2016, a team lead by Mr.Dhanasekhar of IEEE ADSF SIGHT visited the Mar Ephrem College of Engineering and Technology responding to the interest shown by Mar Ephrem students in volunteering for IEEE ADSF SIGHT project activities. They were keen on the project, "Technology adoption for reduction of vulnerability in fishing". The event was organized by Asst. Prof Jijila Rose of CSE Dept and Asst.Prof. Aravind of ECE dept. Sixty students attended the meeting. The event started with the welcome speech by Ms. Shilpa Shyam, II ECE. Mr. H.R.Mohan, Chief Resource Person who talked about the opportunities and possibilities available for students to involve in IEEE activities. Further, he shared information about the Computer Society of India and SIGHT. Mr. Vincent Jain, Chairperson IEEE ADSF SIGHT, gave a glimpse of IEEE ADSF SIGHT and the gateway it has provided for engineers to contribute to social change. The event concluded with vote of thanks by Reshma Sara Reji, II ECE.



Solar Powered Tricycle Modification

The modification work of Solar Powered Tricycle has been going on at a slow rate for various reasons. The engagement of few volunteers in the SAE GBU OFF ROAD BATTLE 2016 was among the reasons for the delay. Miss. Amala Deve, Project Director-IEEE ADSF SIGHT instructed the team to speed up the work and complete at the earliest.

The major modifications proposed are:

- A change of 2 batteries from the rear of the vehicle to avoid stability issues. The batteries can be placed in a

pair: two in front and two on the rear side.

- Increase of boot space so it can carry more goods: three baskets can now be placed on the floor of the vehicle.
- Modification of the turning radius of the vehicle's steering system for smooth steering and riding comfort.

Modern Life Buoy with GPS Tracker

Normally a lifebuoy will be in circular form, but the modern life buoy made by a group of students is in cylindrical form. It is made up FRP coated PVC pipe and insulated with Sawdust and Puff. They made two types of life buoys.

1. 5' sawdust-puff-single-double
2. 6' sawdust-puff-single

The PVC pipe is cut into the required length and holes were made at the both end of 5 cm from the each end to tie rope. Next it is being insulated with sawdust/puff. Both end of the pipe is sealed with lid. The sealing process is made with the chemical resin which is the mixture of the following components,

- GP Resin (General purpose resin) - 1kg.
- Accelerator-10%.
- Chalk powder (as required to make a thick paste).
- Catalyst (Methyl ethyl ketone peroxide)-20ml.



Then the mixed paste is also used to cover the entire area of the sealed pipe. Next step is covering of the whole area with biaxial fabric using the GP resin and the accelerator mixture. It required another 30 minutes for setting. The final part is



coloring. Er. Angelin Indira, Mr. Dhanasekharan, Miss. Pon Ahila, Prof. Arivazhakan and team members worked in this project. GPS tracker is another activity to be connected with the Lifebuoy to know the location (latitude and longitude) of the user. The prototype of the tracker is developed by Prof. Arivazhakan, Miss. Divya and Miss. Amala Devi.

Solar Powered Tricycle for Fish Vending women: An improved model



The task of making Solar Powered Tricycle for Fish Vending Women-II was assigned to the students of Annai Vailankanni College of Engineering (AVCE). A meeting was organized on 9th April 2016 with the important volunteers who would involve in this project. The non completion of the modification of the first vehicle was questioned by Mr. Vincent Jain and he insisted the two works must go together without any interruption. To speed up the work and to get perfection, AVCE deputed Mr. Nagendran, a senior mechanic to the project. The participants of the meeting were Mr. Tamil Selvan, Mr. Deepak, Mr. Kumanan, Prof. Manikandan, Prof. Pearlson, Prof. Justin Raj, Mr. Nagendran and Mr. Vincent Jain.

CC CAM Monitoring System

CC CAM Monitoring system is being introduced in fishing boat by IEEE ADSF SIGHT. This project is under progress by a team from Aishwarya College of Engineering and Technology (ACET). This system help to avoid unexpected accidents like boat to boat collision or boat to ships. During night time, the fishermen find difficult to monitor the things that happen around them. If someone falls down from the boat, it sometimes comes to their knowledge after a interval of time.



Even in the harbour they find difficult to berth their boats without any damage. With this system the skipper can monitor the inside activities of the boat. He can also monitor with proof what is happening around the boat. In the case of any damages or attacks or any sort of things, proof for such incident is a must. A team from ACET lead by Mr. A.K. Mano visited Thoothoor and Muttom on 14th April 2016 to understand the real problems and learn more about the various dimensions of the boat.



Biometric Card Project

Fixing a biometric reader in the boat to know the actual crew members, who go for fishing. Thumb impression of the crew members will be used in this project. The boat owner who is at home will get an SMS in his mobile phone. The SMS has the details of the crew members who are in the boat. The boat owner also get the

time and place of departure of the voyage. The project team had a discussion with Mr. John Milton on 18th April 2016 and learn more about the operation of the biometric system. He gave a demonstration on handling of biometric reader, feed information, collection of information etc.

Volunteers for the Project TAVRF

A team of students from Tirunelveli Government College of Engineering visited Jeppiaar Fishing Harbour Muttom, Kanyakumari District visited on 23rd of April, 2016. The purpose of the visit is to get better exposure in the field of fishing and fisheries. They enthusiastically have seen the Artisanal Deep Sea Fishing Boats and their activities at the harbour. They showed interest in become part of the project "Technology Adoption for Reduction of Vulnerability in Fishing" (TAVRF).



Modern Lifebuoy Test at Chotha Vilai Beach



The first part of the work of Lifebuoys have completed on 24th of April 2016. The team brought the buoys to Chotha Vilai Beach at Nagercoil on 25th April 2016 for undertaking various tests like buoyancy, strength, leakage etc. The buoys are tied with rope and put in to the sea. The team members also used the buoys for swimming and crossing the surf. The testing was carried out for two hours. The team members are Mr. N. Kumanan, Mr. Dhanasekhar, Mr. Carry Humfrey, Mr. Tamil Selvan, Mr. Abin, Mr. Bisholin and Mr. Vincent Jain



Third Training on 'Assembling of Solar Lantern and Solar Panel'

'Assembling of Solar Lantern and Solar Panel' training was organized by IEEE ADSF SIGHT in association with AD SGAF and



Trinity College of Engineering (TCT), Thiruvananthapuram on 30th April 2016. It was the third programme in this series. Mr.Ranjit Nair, Chair, IEEE Kerala Section Young Professionals SIGHT inaugurated the programme and presided over by Dr.Metilda Mary Rose, Vice-Principal, TCT. Mr.Ranjit shared his career

experience and his experience in IEEE. Mr.N.Kumanan, Secretary, IEEE



ADSF SIGHT had honoured him. Mr. C.Dhanasekhar, Training lead of IEEE ADSF SIGHT & Joel Joy, 2nd Year Mech, TCT. Thirty Five participants including students and faculty members were attended the training. Sessions were handled by the lead trainers, Mr. Kumanan and Mr. Tamil Selvan. They were assisted by Prof.R.Chandrasekhar of TCT, Mr. Dhanasekhar and Mr. Carry Humfrey, of MGPT College.