IEEE INDUSTRY APPLICATIONS SOCIETY, SBC, AMRITA VISHWA VIDYAPEETHAM, KOLLAM, REGION 10

NEWSLETTER
JAN 2013

IAS Vision: To be a world leader in the advancement of technology and dissemination of technical information to support professionals engaged in the applications of electrical and electronic engineering to industry.

IEEE IAS SBC AVV is glad to introduce our first newsletter. This issue mainly focuses on the events we conducted so far and the upcoming activities. The first meeting of IEEE-IAS was preceded by Mr. Srikanth V, Advisor, IAS chapter, AVV. The main objective was to select the committee members. Currently the chapter is having 16 student members and is still counting. By election the following students are elected as:

- Mr. Murali Krishnan K (Chairman)
- Ms. Aryamol Sudhakaran (Vice Chair)
- Mr. Kiran P (General Secretary)
- Mr. Syam M.S (Treasurer)
- Mr. Balaji K.M (Web Designer)
- Mr. Jidhun K Murali (Student Travel Program Coordinator)
- Mr. Ravikrishnan G (Award Committee Coordinator)

The first event conducted by the chapter was an invited talk by Mr.Jayakumar Nair on 16th October. He is the principal consultant of Sustenergy foundation. The talk is based on "**Integrated Energy Management Methodology**". He has more than eighteen years of experience in major Indian business houses. His field of expertise varies from electrical engineering project management, maintenance, technical training to design and implementation of energy management systems and methodologies for corporate, technical training on energy conservation and management to business analysis, problem solving and manufacturing cost optimization.

IEEE IAS members

Mr. Jayakumar Nair is the founder member – SEEM , executive committee member – SEEM (Society of Energy Engineers & Managers – TN Chapter), recipient of Kerala State Energy Conservation Commendation Certificate 2008 in the category of Certified Energy Managers and recipient of Kerala State Energy Conservation Commendation Certificate 2010 in the category of Research & Innovation.

Mr. Jayakumar Nair

Elaborating on a mathematical tool, Sustenergy Pyramid, he discussed how an integrated energy management methodology could help with energy conservation. Energy audits, reengineering and in-house management, can all be supported through this tool. "Through proper energy management, we can save nearly 25%-30% of energy per day,'' remarked Mr. Jayakumar. Implementing a systematic approach for energy conservation is not just for reduction in cost, but also for deriving the most out of conventional sources of energy, which most people currently use.

The second venture of IAS SBC was an invited talk on "**Safe Switching for Operation and Maintenance"** by Mr. Erling Hesla on 14th November. He is having over five decades of industrial and consulting experience. Before moving into consulting practice he was employed by Canadian General Electric Company, Cobast in Brazil and Scott Paper Company.

Event Brochure

Addressing by Dr.K.Sankaran, Principal,
Amrita School of Engineering

The seminar provides a practical approach specifying details of switching procedures for operating power system and for maintenance. Impact on system reliability due to changes in switching configuration is covered in depth as is the requirement for maintaining power to essential loads. The seminar addresses how to utilize rigorous calculation of system performance with or without computer programmes as well as how to maintain documentation and control of switching procedures.

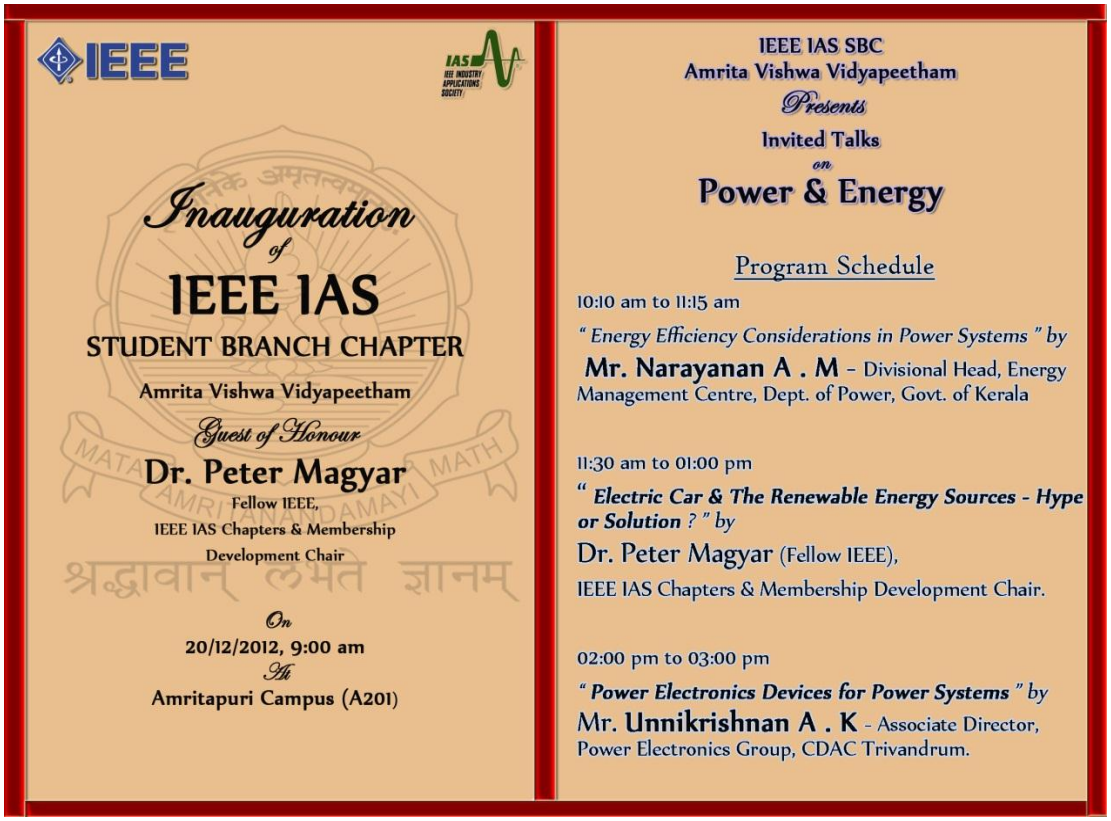
Mr. Erling Hesla during his presentation

Audience

The official inauguration of IEEE IAS SBC AVV was held on 20th December 2012 and the guest of honour was Dr. Peter Magyar, Fellow IEEE, IEEE IAS Chapters and Membership Development Chair. The chapter was inaugurated by Br.Bijukumar, Head Corporate and Industry Relations, Amrita Vishwa Vidyapeetham. Dr.Magyar officially launched the IEEE IAS SBC AVV website. The inauguration is followed by series of technical talks by Mr. Narayanan A.M, Divisional Head, Energy management Centre, Dept. of Power, Govt. of Kerala and by Dr. Magyar. Mr.Unnikrishnan A.K, Associate Director, Power Electronics Group, CDAC Trivandrum was also present during the function. Other invitees include Dr.Balakrishnan Sankar, Associate Dean, Amrita Vishwa Vidyapeetham, Dr.K.Sankaran, Principal, Amrita School of Engineering and Dr.P.S.Chandramohanan Nair, Chairman, Dept. of Electrical and Electronics Engineering, Amrita School of Engineering.

Dr. Magyar during the function

Dr. Magyar has been IEEE volunteer in various positions. In the Germany Section, he was secretary (1998-2000), vice chair (2001-2002) and chair (2003-2004) of the IAS/PELS/IES German Chapter, chapter coordinator (2005-2010) and nominations and appointments officer (2007-2010) of the Section's Executive Committee. In the R8 Committee, he was Division II representative (2007-2008) and chair (2009-2010) of the R8 Chapter Coordination Subcommittee. In the IA-Society, he was IAS chapters area chair R8 East & South (2005-2008), member of the IAS Executive Board as member-at-large (2005) and chair of the Inter Society Cooperation Committee (2006-2008). At IEEE TAB, he was member (2010) of the IEEE TAB Nominations & Appointments Committee. Currently, he is chair 2009-2012 of the IEEE IAS Chapters and Membership Development Department and IAS liaison 2011-2012 of the R8 Chapter Coordination Subcommittee.



Event Brochure

The talk by Dr. Magyar was based on "**The Electric Car and the Renewable Energy Sources - Hype or Solution?"**. Dr.Magyar asked does the electric car really save energy, decrease the carbon dioxide emission and the environmental pollution? What kind of technical, economical, political and customer aspects affect that the recent development does not obtain broad acceptance? Is it possible to change this trend by using renewable energy sources?. The lecture gives an overview about the automotive structure, energy and electricity generation issues and the impact of the increasing use of renewable energy sources in Germany. Attributes of some newly developed electric cars was demonstrated and the political and economical issues of the conventional and renewable energy sources was critically discussed from the point of view of an electrical engineer.

Distinguished Guests

The development of transportation vehicles is one of the greatest achievements of modern technology. Especially the automobile has become an important part of everyday life because of providing individual mobility for the public. However, the large number of automobiles in use has caused serious problems for the society and has been considered responsible for air pollution, global warming and intensive use of the limited oil resources. The interaction of developers, manufacturers, energy authorities, politics, media and customers is increasing the interest and the pressure on the development of new, green solutions, among others electric cars hoping to solve all of the above listed problems by using electrical drive train technologies.

Addressing by Dr.P.S.Chandramohanan Nair,
Chairman, Dept. of EEE, ASE

The talk by Mr. Narayanan is based on "**Energy Efficiency Considerations in Power Systems**". The seminar mainly focuses on improving the energy efficiency in generation, transmission and distribution. As power density in modern data centers increases, more focus has been placed on improving efficiency in the power distribution infrastructure. Dramatic changes, such as switching to 400V or DC distribution systems, have been explored, but there are some practical and affordable options to significantly improve efficiency without making major changes to the existing power delivery infrastructure.

Dr.Magyar with guests and IEEE IAS members

The general committee also decided to start various new programmes in the coming year. It includes:

- **Professor –in- service- programme** (PISP)
- **Member- in- service- programme** (MISP)
- **Fellow- in- service- programme** (FISP)

Our priority will be to start a "**Research Wing**" to bring out new ideas of students and faculty members and helps them to find the right path. The wing consists of senior faculty members. The research wing committee will review the papers prepared by the students. The main objectives of the wing will be:

- To bring out new innovations of students.
- Help students prepare for the conference.
- Helps to prepare the journal paper.

Other activities include:

- Conducting **technical discussions** in the area of electrical engineering.
- **Social events** like visiting higher secondary and high school (Govt. and Aided) and to make them understand the importance of engineering. And to give them a brief idea about various engineering components and various instruments.
- To conduct **workshops** in relevant topics.

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