

## AP/EDS/MTT Penang Report: January 2007 through December 2007

The Penang Joint chapter AP/EDS/MTT is a new Joint Chapter in Penang whose members are mainly from the High Tech. companies in and around Penang. This is a summary covering the activities from January 2007 through December 2007.

The Joint Chapter had three excellent talks at the beginning of the year. The first was by Dr. Hong Shi, from the Packaging Technology Department of Altera Corporation. His talk was titled 'Signal Integrity in FPGA Devices and applications'. It was held at the Penang Skills Development Center in Bayan Lepas on December 28th. Dr. Hong Shi gave a very well received talk on the problems associated with Noise on advanced FPGA devices.



Dr. Hong Shi presenting his paper 'Signal Integrity in FPGA Devices and applications'

The Chapter was then visited on January 13th 2007, by Dr. Steve C. Cripps, a DL and independent design consultant. His talk was titled 'A New Perspective on PA Efficiency Enhancement Techniques'. This was Dr. Cripps 2nd presentation to our chapter, having also presented in 2006.

Ng Aik Chun presented his talk on 'MMIC Design for Manufacturing Saves Time and Money'

Mr. Ng's talk focused on the Design for Manufacturing functions that exist within agilent ADS software for RF and MMIC design. He is a member of Agilent's EEs of EDA Division. Mr. Ng described the 4 aspects to the DFM functions of the ADS software.



Mr. Ng Aik Chun presenting his talk on ‘MMIC Design for Manufacturing Saves Time and Money’

We were fortunate to have 3 excellent presentations during the 2nd quarter.

The first talk was on April 25<sup>th</sup> -"Integrated Circuit Polysilicon Resistors" by Albert V. Kordesch, and "Novel Physical-Based SPICE Model to capture CMOS Hook Shaped Drive Current behavior in Nanotechnology" by Philip BY Tan Silterra Sdn. Bhd. Kulim, Malaysia.



Richard Keating presenting a certificate of appreciation to Al Kordesch for his talk on Integrated Resistors.



Philip Tan accepting the Chapter's certificate for his talk on his new model for CMOS transistors.

The second talk was on May 14<sup>th</sup> - "Characterizing transient active device behavior using pulse I-V technique" by Yuegang Zhao, Keithley Instruments Inc.

And the final talk of the quarter was on June 12th - "Trends and challenges in antenna technologies for personal devices" by Dr. Soo Liam Ooi, Motorola Laboratories, Plantation, Florida, USA.

The Chapter was fortunate to have 2 excellent presentations over the 3rd quarter. On July 10th Prof. Boon S. Ooi presented "Photonic integrated circuits and ultra-broadband semiconductor quantum-dot lasers". Professor Ooi is an excellent presenter and his paper was very well received. Professor Ooi is from the Electrical and Computer Engineering Department, Lehigh University, Bethlehem, PA.



Professor Boon S. Ooi presenting his research on Quantum-dot Lasers

On July 19<sup>th</sup> Prof. Ken-ya Hashimoto, a EDS DL from the Graduate School of Engineering, Dept. Electrical and Electronic Engineering Chiba University, Japan presented “Acoustical Wave Devices”. Professor Ken-ya gave an excellent overview of the technical and the economic status of SAW devices, particularly for the Cell phone industry.



Professor Ken-ya Hashimoto in Penang

On October 31, 2007 the chapter had two speakers on RF design: "Nonlinearity of CMOS Active Inductor-Based Oscillators", by Mr. Ler Chun Lee, University Technology of Malaysia / Silterra Malaysia, and

"Two Stage Integrated Class-F RF Power Amplifier", by Mr. Huang Min Zhe, University Technology of Malaysia / Silterra Malaysia.

*Both were very well received and showed again how much engineering talent exists in the industries of Penang and Kulim.*

#### Seminar on RF Transceiver Technology

*On December 7<sup>th</sup> we had our final presentations for the year, which was a half day seminar featuring two very experienced researchers in the field of RF communication.*

The first was delivered by Mr. Prakash Chacko, Distinguished Member of the Technical Staff of Motorola on “Software-Defined Radio” – the holy grail of RF hardware.

The second was delivered by Prof Georg Boeck, Head of Microwave Engineering Lab, TU Berlin, and IEEE Distinguished Microwave Lecturer. Prof Boeck spoke on the “Design of RF-CMOS Integrated Circuits for Wireless Communications”.



Mr. Prakash Chacko on the right is being presented with our chapter's token of appreciation. Richard Keating, Chapter Chairman is on the left.



Prof Georg Boeck presenting to a full auditorium in the Penang Skills Development Corporation.

I would personally like to thank our Chapter Ex-Com Boon Eu, Chow Yut Hoong, Bernard Hiew, and Brian Hoe for their contribution. The Chapter would also like to thank PSDC and Motorola for their continued support of our Chapter.

