Special Talk

Title: **Recent Advances in Polymer and Silicon Nanophotonics**

By: **Professor Ray Chen, University of Texas at Austin**

Venue: Room **E409 Faculty of Engineering, Mahanakorn University of Technology, Nong Chok**

Date: **Thursday 7 January, 2010**

Time: **10.00 – 12.00 hrs.**

Organized by: **Department of Telecommunication Engineering, Mahanakorn U of Tech Incorporation with IEEE-Photonics & OSA Thailand Chapter**

Content Outlines: Introduction (competing materials for integrated photonics), Silicon based Micro- and Nano-photonic Devices, Polymer-based Micro- and Nano- photonic Devices, Integration: Monolithic and Hybrid Approaches, Further Applications (such as in FTTH), Conclusion

Speaker Biography

Ray Chen holds the Cullen Trust for Higher Education Endowed Professorship at UT Austin and the director of nanophotonics and optical interconnects research lab within the microelectronics research center. He is also the director of a newly formed AFOSR MURI-Center for Silicon Nanomembrane involving faculty from Stanford, UIUC, Rutgers and UT Austin. He received his BS degree in Physics from National Tsing-Hua University in 1980 in Taiwan and his MS degree in physics in 1983 and his PhD degree in Electrical Engineering in 1988, both from the University of California. He joined UT Austin as a faculty to start optical interconnect research program in the ECE Department in 1992. Prior to his UT's professorship, Chen was working as a research scientist, manager and director of the Department of Electrooptic Engineering in Physical Optics Corporation in Torrance, California from 1988 to 1992.

Chen also served as the CTO/founder and chairman of the board of Radiant Research from 2000 to 2001 where he raised 18 million dollars A-Round funding to commercialize polymer-based photonic devices. He also serves as the founder and Chairman of the board of Omega Optics Inc. since its initiation in 2001. Over 5 million dollars of research funds were raised for Omega Optics. His research work has been awarded with 99 research grants and contracts from such sponsors as DOD, NSF, DOE, NASA, the State of Texas, and private industry. The research topics are focused on three main subjects: 1. Nano-photonic passive and active devices for optical interconnect applications, 2.Polymer-based guided-wave optical interconnection and packaging, and 3. True time delay (TTD) wide band phased array antenna (PAA). Experiences garnered through these programs in polymeric material processing and device integration are pivotal elements for the research work conducted by Chen's group.

Chen's group at UT Austin has reported its research findings in more than 540 published articles including over 80 invited papers. He holds 18 issued patents. He has chaired or been a program-committee member for more than 90 domestic and international conferences organized by IEEE, SPIE (The International Society of Optical Engineering), OSA, and PSC. He has served as an editor, co-editor or coauthor for 22 books. Chen has also served as a consultant for various federal agencies and private companies and delivered numerous invited talks to professional societies. Dr. Chen is a Fellow of IEEE, OSA and SPIE. He was the recipient 1987 UC Regent's dissertation fellowship and of 1999 UT Engineering Foundation Faculty Award for his contributions in research, teaching and services. He received IEEE Teaching Award in 2008. Back to his undergraduate years in National Tsing-Hua University, he led a university debate team in 1979 which received the national championship of national debate contest in Taiwan.

There are 33 students received the EE PhD degree in Chen's research group at UT Austin.

Free of charge!

All Welcome!