

Japan – Tokyo Chapter

by Toshifumi ISE, Chapter Vice-Chair

The Industrial Electronics Society Japan Chapter holds meeting 6 or 7 times a year. Five meetings out of these meetings are held under the co-sponsorship of with the Japan Society for Power Electronics, and another one is held under the co-sponsorship of with Semiconductor Power Conversion Technical Committee (SPC) of IEEJ (The Institute of Electrical Engineers of Japan).

A distinguished lecturer meeting was held on May 25, 1998 and Professor J.D. Van Wyk from Rand Afrikaans University (now he has moved to Virginia Polytechnic Institute and State University) was invited as the lecturer. The title of his lecture was “Trends in Power Electronics and its Future in the 21st Century”. The brief summary of the lecture is as follows.

- 1) The increase in frequencies and packaging density has been pushing power converters more in the direction of a “spread out” electromagnetic device than a discrete assembly of decoupled components. The functioning and characteristics of the converter are an important function of how it has been packaged/constructed.
- 2) Converter cost is a sensitive function of packaging/manufacturing methods
- 3) The availability of packaged modules/subassemblies has an important influence on what is manufacturable in industry. Circuit development not taking this into account leads to nothing.
- 4) The packaging of components and subassemblies determines lifetime, maintenance, safety and environmental materials impact. Important advances in converter technology can consequently be expected from R&D in this field, as opposed to working on new improved circuits.

The lecture gave informative suggestions for the future research and development of power electronics to audiences.

The Industrial Electronics Society Japan Chapter, current chair person is Professor Mutsuo Nakaoka from Yamaguchi University, vice chair person is Professor Toshifumi Ise from Osaka University, secretary and treasurer is Professor Noriyuki Kimura from Osaka Institute of Technology, will closely work with the Japan Society for Power Electronics hereinafter for giving good opportunities for information exchange and discussions on state-of-the-art power electronics to members.