

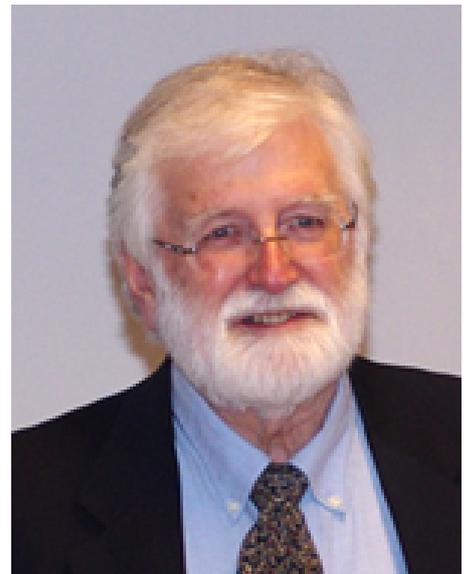
KEYNOTE PRESENTATIONS

BIOGRAPHY

Jim is Professor Emeritus of Electrical & Computer Engineering at Portland State University, Oregon, USA, with B.Sc. and M.Sc. degrees in Physics from the University of Auckland, New Zealand, and a Ph.D. in Electrical Engineering from the University of Saskatchewan, Canada, and was recently awarded an honorary doctorate by the Politehnica University of Bucharest.

He is an IEEE Fellow and an IEEE Distinguished Lecturer for both the Components, Packaging, & Manufacturing (CPMT) Society and the Nanotechnology Council (NTC). He has served CPMT in multiple roles for 25 years, including 20 years on The Board of Governors. He is now equally involved in the NTC, currently as VP for Finance.

His research activities are focused on electrically conductive adhesives, the electrical conduction mechanisms in discontinuous metal nanoparticle thin films, and on nanotechnology education. He has edited or co-authored five books on electronics packaging, (two of which have been published in Chinese,) and two on nanodevices.



A RESEARCH RETROSPECTIVE: SOME LESSONS LEARNED

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The current reality of an engineering career for most recent graduates is that they will change employers multiple times between graduation and retirement. Most often, involuntary changes stem from the perception that the individual's specific expertise is no longer needed as the company moves in a different direction. The best defense against such a situation is the broadest possible technical education, backed up by broad-based continuing education, keeping an eye on where industry is going in the future. The same principles apply to an academic research career.

The presentation will draw on the speaker's diverse areas of research activity over a 50-year career to illustrate some general conclusions that might be useful to those entering the field.

Research examples will be drawn from electron tunneling, thin films, sensors, metal/dielectric composites, switched-mode power supplies, embedded systems, circuit simulation, and nanotechnology. Some future research topics will be proposed.

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