

# Editorial

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It is with nostalgic pleasure that I am welcoming the special issue on Nanotechnologies. Over 40 years ago as materials science and physical metallurgy were young terms, I was doing research on sub-nano atomic scale structures of materials. In those days the scale was measured in Angstrom (one tenth of a Nanometer). The investigations involved Field Ion Microscopy, Radiation Damage in metals, and models of grain boundaries. Computer simulations of sub-nano atomic structure models of grain boundaries were made in the nineteen sixties using the most powerful computers then available (ILIAC at the university of Illinois). It was already clear in those days that interdisciplinary knowledge was vital to carry on this stream of research, and materials scientists felt that they were the most interdisciplinary scientists qualified to work in this area. It is good to see that Nanotechnologies now involves many more categories of researchers coming from many disciplines—chemists, physicists, materials scientists, biologists, Electronic engineers and computer scientists—in fact the whole gamut of science and engineering disciplines. It is fitting for our journal which represents engineering education from all areas to publish a truly interdisciplinary array of papers. That this is a trend is exemplified by Nanotechnologies and other areas such as Mechatronics and Manufacturing—also forthcoming special issues of *IJEE*.

I am particularly grateful to Jane Chang of the University of California, Los Angeles who is responsible for the selection of papers for this issue. Jane, is a young professor of chemical engineering who has pioneered a new undergraduate semiconductor manufacturing option at UCLA (see *IJEE* V.18, 3, pp. 369–378, 2002).

I am also grateful to Russ Jones for contributing his engineering newsletter to our home page as a regular feature. The letter is a compilation of news items related to engineering education, and is eagerly read by home page readers from all over the world. See [www.ijee.dit.ie](http://www.ijee.dit.ie). The newsletter is published every three weeks under 'Engineering Education World' on our website.

We are looking forward to a number of coming special issues—in addition to manufacturing and mechatronics—coming special issues will be published on Distance Controlled Laboratories (Editor Nesimi Ertugrul) and Problem Based Learning (Editors Erik de Graaf, Annete Kolmos and Renate Fruchter). Please consult our website for details.

Michael Wald