Int. J. Engng Ed. Vol. 22, No. 4, p. 689, 2006
Printed in Great Britain.

0949-149X/91 $3.00+0.00

Editorial

The special section on Trends in Robotics Education in this issue is witness to the bustling activity in this field. It is enlightening to see how close to engineering research related to education some of the contributions are. The subject is interesting due to its interdisciplinarity, as defined in the paper by Nourbakhsh *et al*. 'Robotics brings together learning across mechanism, computation and interaction, using the compelling model of real-time interaction with physically instantiated intelligent drives'. Here we have, as in many robotics applications a personal rover built, evaluated and tested for public and tertiary education purposes. In the paper by Temeltas *et al.* a hardware in the loop concept is applied to an education tool in robotics. Here simulator hardware is able to represent complex robot manipulation and reaction actions for educational purposes. The paper out of Tufts University on Kindergarten robotics is a further example of the pioneering work done at Tufts in education of the young. These and other papers in the section represent as near as technology applications can get to applying research to engineering education. My gratitude is due to the guest editor, Gerard McKee who has painstakingly and thoroughly selected and reviewed the papers for the robotics section.

This brings me to another aspect of the meaning of engineering education research. In the recent ASEE meeting in Chicago, a Socratic panel attempted to deal with the topic. The panel consisted of engineering education researchers, social scientists and a psychology professor. They did not, and possibly could not define what engineering education research is. It is quite apparent that the main journals in engineering education do not publish by and large a commensurate searchable body of papers. IJEE understands engineering education research as encompassing technical innovations applied to engineering education as well as methodology, theory, social and other research related to the application in engineering education. Out of the 4 main journals only one (IEEE Transactions on Education) follows a similar systems approach. The European Journal of Engineering Education and the Journal of Engineering Education follow different philosophies, and they too differ. My main concern here is that unless we are going to achieve a cross referencing system which includes all the papers published by these journals, we cannot deem engineering education to be a legitimate research field. An examination of a recent issue of one of these journals shows a divergence of unrelated resources in the reference lists which proves to me that engineering education has not yet arrived as a true research subject. However, there are signs that it is coming. The centers of engineering education such as at Purdue and The University of Washington are encouraging developments. There are no centers of this type for the applications and evaluation of technology and engineering research developments in engineering education. But, the number of engineering applications developed for education published in IJEE by academic faculty in many departments are an encouraging sign.

Michael Wald