

Editorial

Categorizing papers into disciplines

WHEN WE launched the *International Journal of Applied Engineering Education* in 1985, we thought that the journal would serve as an interdisciplinary platform for engineering educators. This has happened, although there was no real precedent for this type of publication, and we were not sure whether the idea would work. We thought that engineering educators might peek over their shoulders to see what other departments were doing. Moreover, some of the special papers are not really departmentally oriented. Contributions from industrial engineering could be related to mechanical engineering. Control engineering is also interdisciplinary, with specific applications in various departments. Now we are starting—with this issue—to set up our own categories for the classification of papers. This attempt is experimental, and should enable readers to spot more quickly whether the contribution is of interest to them. The rationale behind this new organization of contributions is that interdisciplinary readers will still look over their shoulders, but specific topics are of interest only to specialists in the field. We will organize the papers in order from the more general to the more specialist. This is, of course, influenced by some subjective considerations. Mechanical engineering precedes electrical engineering in our order because historically this was the order of establishment of the disciplines. Yet civil engineering, though chronologically the father of engineering disciplines, will follow electrical engineering because electrical engineering is usually a bigger department in many universities. So, as can be seen, there is some subjectivity in the order. We will slowly build up this disciplinary divide as we go along, creating our own subject division in engineering education.

The first sections will be those of more widespread interest. The first papers in this issue are on engineering policy and education research—which are either of more general interest or cross-disciplinary. I can see some problems with this approach, e.g. what should we do with papers in engineering mechanics? Should they be coming under this heading, or under mechanical engineering? We will ask authors to place their papers in the nearest category out of a list supplied. In addition to helping readers find their own interests quicker, it will aid those looking up for references as they are writing their own papers, a task that is at present somewhat cumbersome. I would appreciate your comments on this approach. In particular I would appreciate receiving your own list of categories for our journal.

New members of the editorial advisory board

I would like to welcome two new members to our advisory board. Professor **Gretchen Kalonji**, Kyocera Professor of Materials Science and Engineering at the University of Washington in Seattle, is our editor for **materials science and engineering**. She is also active and interested in the linking and interface between school education and engineering, and in the innovative projects on engineering education sponsored by the National Science Foundation.

The second new member of the board is Professor **Erik Meyer** of the University of Cape Town. Professor Meyer is involved in education research applied to engineering undergraduates. He will lead the **engineering education research** group for the journal. This group should look at the as-yet small field of education research applied to engineering students and engineering subjects.

Short biographies of our new editors are included in this issue.

Michael S. Wald

Gretchen Kalonji joined the faculty of the University of Washington in 1990, where she holds the Kyocera Chair in the Department of Materials Science and Engineering. Before moving to Seattle, she had served as Assistant and Associate Professor at MIT, from 1982 to 1990. In addition, she has held numerous visiting faculty appointments, at, among others, the University of Paris, Orsay, the Max Planck Institute, and the Institute for Theoretical Physics, at UCSB. Her areas of research include the theory of defects in crystalline solids, atomistic computer simulation techniques, and rapid solidification of ceramics. She received a Presidential Young Investigator Award in 1984, has published approximately 55 papers in refereed journals and has given many invited international talks.

Gretchen Kalonji has a long-term commitment to innovations in science and engineering education, as well as to equity and access to higher education. While at MIT, she served as the Co-Director in the US for the Computer Science and Electronics Program at the Solomon Mahlangu Freedom College, a school run by the African National Congress to serve the needs of the South African exile community. She also serves on the board of the Global Lab Project, of Technical Education Research Centers (TERC) of Cambridge, MA. Within the NSF-sponsored ECSEL coalition of engineering schools, she serves as the Principal Investigator of the project at the University of Washington. Professor Kalonji also serves as the ECSEL Coalition-Wide Co-PI for Academic Culture, Equity and Diversity, and on the Management Committee. She also represents the ECSEL coalition on a committee of four charged with bringing all four of the NSF-sponsored Engineering Education Coalitions together around common projects and themes. Within materials science education, Gretchen Kalonji is the creator of a new introductory course at the University of Washington, a course that offers a major conceptual

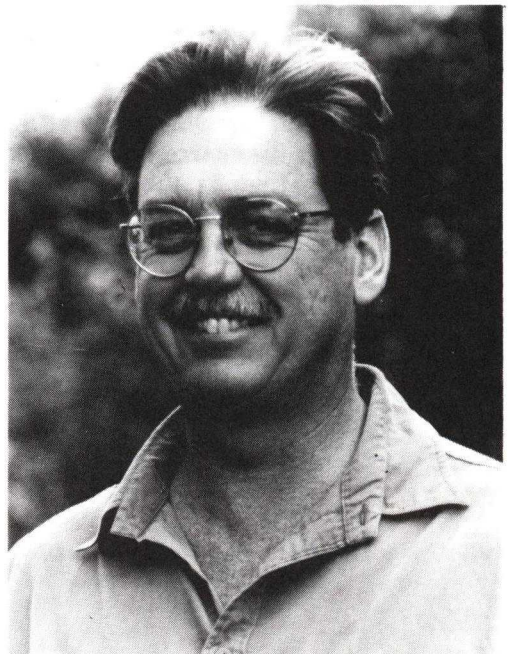


reformulation of the content, and which emphasizes student-directed, project-based learning, as well as novel methods of evaluation, particularly journal-based assessment. Professor Kalonji is also active in collaboration with the K-12 community and has created a program called the Technology Summer Camp, which links under-represented minority secondary school students and their teachers with university faculty and staff in collaborative projects in the broad area of environmental science and engineering.

J. H. F. (Erik) Meyer graduated from the Faculty of Science at the University of the Witwatersrand in 1967 with a B.Sc. degree in pure and applied mathematics. He then went on to obtain a B.Sc. Hons degree (first class) in applied mathematics in 1968, and an M.Sc. in computer science in 1972. He was awarded a Ph.D. in 1972 in the field of higher education.

His academic career began in 1969 when he was appointed as a Junior Lecturer in computer science at his alma mater. He subsequently held the positions of Research Officer and later Assistant Director in the Educational Technology Unit, where he developed an enduring interest in education research. In 1977 he was appointed Full Professor and Foundation Director of the Teaching Methods Unit at the University of Cape Town. More recently, in 1993, he established a Student Learning Research Group of which he is also the Director. Much of his current research work is concerned with the manifestations, and the consequentiality, of individual differences in the manner in which students in higher education engage the context and content of learning. He has published numerous studies carried out in the context of engineering education and, in 1993, whilst an Academic Visitor at Imperial College, extended his work in engineering education further.

He is a Fellow of the South African Association for Research and Development in Higher Education, and holds memberships of the European Association for



Research on Learning and Instruction, the American Educational Research Association and the (British) Society for Research into Higher Education.