

FOREWORD

The general mission of the UNESCO International Centre for Engineering Education (UICEE), the world's first and only UNESCO centre of its kind, was developed in accordance with the principle of global solidarity. The establishment of the Centre is widely regarded as a most significant undertaking in the globalisation of engineering education. The key objectives in the Centre's operation are the sharing of knowledge and expertise on engineering education through its role as an information broker. The Centre has persistently carried out a wide range of activities in engineering and technology education in order to assist developing countries and countries in social, political and economic transition to improve and advance their education systems. As an advocate and facilitator of the sharing of knowledge, the UICEE espouses the solidarity of humankind and aspires through its work to the achievement of genuine and lasting peace, a dream that seeks a foothold in reality.

Momentum for the establishment of the UICEE found impetus in the discussions of two international symposia, sponsored by UNESCO, for Engineering Deans and Industry Leaders in 1989, and again in 1991. The prime concern of the symposia was the fostering of technological advancement in developing countries through the improvement of engineering education in these countries with the assistance of institutions in developed nations. In order to realise this agenda, UNESCO established a Steering Committee, which proposed that the then Dr Zenon J. Pudlowski, a member of the Committee, should prepare a submission to UNESCO for the establishment of an International Centre for Engineering Education to carry out and supervise this project. The Centre was to be established in a leading tertiary education institution.

A final submission for a UNESCO Centre in the Faculty of Engineering at Monash University was prepared and presented by Prof. Peter LePoer Darvall (then Dean of Engineering at Monash University) and Dr Pudlowski (then a senior lecturer in the School of Electrical Engineering at the University of Sydney) at the second meeting of the Steering Committee in Paris, June 1993. UNESCO endorsed the submission and announced the establishment of the first *UNESCO Supported International Centre for Engineering Education* (USICEE). In 1997, after four years of productive operation, the Centre received the status of a fully-fledged UNESCO Centre. This was facilitated by the Australian National Commission for UNESCO.

Mission

In its focus on engineering education, the Centre endeavours to realise UNESCO's *raison d'être*:

... to contribute to peace and security by promoting collaboration among nations through education, science and culture in order to further universal respect for justice, for the rule of law and for the human rights and fundamental freedoms which are affirmed for the peoples of the world, without distinction of race, sex, language or religion, by the Charter of the United Nations.

The general mission of the UICEE is to facilitate the transfer of information, expertise and research on engineering education. In particular, it is to act as a clearinghouse for the transfer of teaching material utilised in engineering education from developed to developing countries. The Centre operates under its motto of *Serving the International Engineering Community* by carrying out research and development activities, and by providing expertise in, and improving the quality of, engineering education (curricula and teaching methodologies) to better meet the needs of industry.

It should be emphasised that Monash University saw the establishment of this UNESCO Centre as a major coup to facilitate its international exposure. However, there were two fundamental problems, which the UICEE Director was not aware of at the time of bringing this venture to Monash University. First was that a significant section of the Faculty of Engineering was in strong opposition to this Centre for no apparent reason and, second, the wrong perception on the part of the Faculty management that the Centre would become a money-spinner for the Faculty and, indeed, for the University.

Through its considerable global network of academic institutions, the UICEE plays a critical role in helping universities to develop a culture of cooperation and dialogue. Since its inception, it has carried out research, development, education and promotional activities. It has arranged 35 international conferences in almost all corners of the world plus over 20 international conferences organised by its partner and collaborating institutions, published 37 books and conference proceedings, edited and published two highly acclaimed international journals (*Global Journal of Engineering Education* and *World Transactions on Engineering & Technology Education*) and carried out numerous research projects.

The UICEE has had several postgraduate research students, who either have completed their work or are about to complete it. Staff and students of the UICEE have published numerous DEST-accepted publications, including 59 works as Editors, 10 book chapters, 88 refereed journal articles, 201 refereed conference papers, and has established an ongoing virtual link between like-minded engineering educators in close to 200 countries worldwide (please see: www.eng.monash.edu.au/uicee).

Through its achievements, the UICEE has placed Australia, and Monash University in particular, on the world's map of engineering and technology education. Other international academic institutions seek partnership with the UICEE in order to participate in its international activities, and to be able to establish the so-called UICEE satellite centres in their institutions. It should be emphasised that collaborative links of the UICEE involve such renowned academic establishments as Massachusetts Institute of Technology (MIT), Boston, USA, and its Management Team of the *Conceive – Design – Implement – Operate* (CDIO) Initiative, for whom the UICEE produced a Special Edition of the *World Transactions on Engineering & Technology Education*, Vol.5, No.2, in 2006, consisting of a selection of articles (27) presented at the two annual conferences of the CDIO network.

It is due to the ingenuity of the Director and the support of his loyal and dedicated staff that since the Centre's inception, he has generated close to \$4 million of external funding for the Centre, with small financial support coming from the host Faculty. This has permitted the UICEE to carry out its research, development and education activities; employ staff; award postgraduate research scholarships; sponsor international conferences and publications; support other international academic activities, etc.

This book is a collection of all the issues of the UICEE Newsletter produced under my editorship. It may be that a full set has only been in my possession. A limited number of copies of this book have been prepared, with a copy to be provided to the National Library of Australia and another copy to UNESCO, so that future readers may find this material informative, historical and, perhaps, educational, and that the comprehensive information about the efforts in building this Centre that has been crippled by the confiscation of its substantial funds accumulated over the life of the Centre by the management of the host Faculty in April 2007, is preserved for the next generations.

I would like to express my sincere gratitude to all those colleagues, members of the *UICEE Global Family of Engineering Educators*, who have collaborated with me in my work as the UICEE Director for almost 15 years. Special thanks are directed to Prof. Em. Peter LeP. Darvall, formerly Dean of the Faculty of Engineering, Deputy Vice-Chancellor and Vice-Chancellor of Monash University, for his unequivocal support and magnificent service to the UICEE and, in particular, for his role as the Foundation Chairman of the UICEE Academic Advisory Committee (UICEE-AAC) since the establishment of the Centre until March 2006. My warm thanks also go to Prof. Em. Colin U. Chisholm of Glasgow Caledonian University, Glasgow, Scotland, and Prof. Harold P. Sjursen of Polytechnic University, Brooklyn, New York, USA, for their service to the UICEE as the two subsequent Chairmen of the UICEE-AAC.

Zenon Jan Pudlowski
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