2005 AGM Michell Medal - Prof Alex Churches

On the 18th March, the College Board presented Prof Alex Churches with the 2005 AGM Michell Medal for his contribution to the Mechanical Engineering Profession. More than 70 friends, family and colleagues joined the Board in congratulating Alex on his achievement at the Award function. Prof Churches was nominated for the Award by the Sydney Mechanical Branch chaired by Mr Jim Vickery.

Col (Rtd) Michael Ford, the College Chairman (left) presents the Award to Prof Churches

CITATION:

Alex Churches has throughout his career in Mechanical Engineering displayed a rare combination of the practical and the academic in his approach, having achieved trade, diploma, bachelor and PhD qualifications. He has held positions from workshop foreman through to professional engineer in industry and from lecturer to Adjunct Associate Professor in academia. He is currently a leading forensic analyst.

Alex has a passion for teaching engineering design, a task he has done tirelessly for over 30 years. Alex has made an enormous contribution to teaching design to undergraduates, displayed in his creation, development and continued organisation of the annual Warman Design-and-Build Competition. The Competition began in 1987 and continues to be a successful and highly regarded event by the participating students and universities. Twenty Universities including two from New Zealand, and increasingly, participants from the off-shore Australian University campuses in Malaysia and Singapore, compete each year for the Warman Trophy. The Competition has focused attention on the importance of good design in engineering and fostered innovation and creativity in all participants.
Alex has also contributed strongly to the advancement of the profession through his service to the Institution of Engineers Australia (now known as Engineers Australia). He has been active in a number of Committees, retiring in 2002 as the Chair of the Sydney Division Mechanical Branch. He continues as the Chairman of the National Committee on Engineering Design.

The Mechanical College awards the 2005 AGM Michell Medal to Alex Churches with no hesitation and in awe and appreciation of his service to the Institution and the Profession and for his dedication to teaching and promoting Engineering Design.

**Biographical Information:**

In the mid 1950s, Alex was workshop foreman at Barry Gurdon's dealership for BMC motor vehicles at Bathurst. Barry and his friend Bill Abbott, then Chief Product Engineer at BMC, were keen motor enthusiasts and Barry used to race a supercharged Austin A90. After a practice session at Mt Panorama on a particular Friday, Bill and Barry decided the supercharger needed to run faster. Alex offered to provide a new pulley for the compressor and made a simple pattern which he then used to form a cavity in the dirt of the workshop floor. An aluminium casting was promptly made - it is said by melting down a saucepan - and about 30 minutes later the new pulley was ready to be fitted. Much impressed, Bill offered Alex a job at BMC "any time you want".

1958 - Alex left Bathurst to seek work at BMC and to start studying part time at Sydney Technical College for his ASTC Diploma of Mechanical Engineering. With no suitable job immediately available, Alex worked as an inspector at the J M Kirby lawn mower engine plant next door to BMC in Zetland.

1960 - 1962 He joined BMC Australia in the Experimental Department as a Technician and progressed to Technical Officer and then Senior Technical Officer in the Australian Experimental Department.

1963 - Having completed his Diploma and won a scholarship, he studied full time for his Bachelor of Mechanical Engineering Degree at the University of NSW.

1964 - He returned to spend a year as an engineer conducting laboratory rig tests, again in the Experimental Department.

1965 to 1969 - Alex was appointed a Teaching Fellow in the Mechanical Engineering School at the University of NSW and progressed to Temporary Lecturer.

1970 - Having been awarded a Churchill Fellowship he spent a year at the Imperial College, London studying bioengineering. He was awarded a PhD for his thesis "A Study of Fluidic Oscillators".

1971 to 1996 - Alex was appointed a Lecturer in Mechanical Engineering at the University of NSW. He rose to become an Associate Professor in the School. In this period he established Design and Build Competition for undergraduates with sponsorship from Warman and developed it into a major event involving universities across Australia.

1996 to date - Alex in retirement has continued as Adjunct Associate Professor and maintains an interest in and still tutors for the undergraduate design courses in the University. He continues to practice as a Consulting Engineer with Unisearch.