

Brice Carnahan retires from the standing faculty at Michigan

To celebrate the formal retirement of Professor Brice Carnahan from the standing faculty at the University of Michigan in the Spring 2002, two dinners were held over the past two years. The first at the Los Angeles Meeting of the AIChE, in November 2000, was organized by the CACHE Corporation and second, at the University of Michigan, on September 7, 2001, was organized by the Michigan Department of Chemical Engineering.

Brice's contributions in the 1960s as the Technical Director of the Ford Foundation project, *Computers in Engineering Education*, and subsequently, as Associate Director of a follow-on NSF project, *Computers in Engineering Design Education*, led a generation of engineering faculty to use the digital computer in engineering courses. Both projects were carried out in collaboration with the late Professor Donald L. Katz, with Brice providing the technical leadership in digital computing and numerical methods. During this period, together with Professor James O. Wilkes, Brice taught a graduate course on applied numerical methods in 1963. By 1969, the notes they generated during this course blossomed into the pioneering textbook, *Applied Numerical Methods*, published by John Wiley, and widely recognized as the prime source of clear expositions on numerous numerical methods, accompanied by 47 completely documented computer programs illustrating the various techniques. For many years, these computer programs were used widely by students, faculty, and practitioners in numerous applications. From this text, Brice and Jim subsequently culled materials especially well suited for teaching digital computing and numerical methods to over 1,000 freshmen annually at Michigan.

Foremost in the minds of faculty, students, and practitioners that came in contact with Brice, through his numerous courses and short courses, was his contagious enthusiasm for the rapidly developing digital computer, with its unlimited potential. Brice described the details, usually at the working level, in fast-moving lectures. His precise delivery enabled novices, in just a few hours, to master the skills to write computer programs and generate solutions to complex problems. This gift rapidly became recognized throughout the University of Michigan, and was an important reason for the accelerated pace of computing development at Michigan.

In chemical engineering courses and research, Brice taught process simulation techniques, and together with his graduate students developed one of the first dynamic simulators. Perhaps of greater consequence, in late 1960's, Brice was one of the first to recognize the need to stimulate cooperation among universities, industry and government in the development and distribution of computer-related and/or technology-based educational aids for the chemical engineering profession. In 1969, he convened a meeting of 15 chemical engineering educators to initiate and begin formulating what eventually became the CACHE Corporation. Brice served as the initial Chair during the

crucial period in which the proposal for NSF funding was completed. Over the next 32 years, to this date, Brice has served as the Chair of the CACHE Publication Committee. In this role, he has overseen the publication of and edited numerous reports and conference proceedings. One of the most notable, published in connection with the 25th Anniversary Celebration of CACHE in 1994, *Computers in Chemical Engineering Education*, contains a comprehensive collection of papers that examine the history and status of computers in chemical engineering education.

Although retired from the standing faculty, Brice plans to continue to reside in Ann Arbor and teach courses from time-to-time. Perhaps the statement by Larry Evans, of Aspen Technology, addressed to Brice, best summarizes our collective thoughts: “Brice, I don’t know what you will do as you move into this new phase of your life, but I am pretty sure of two things: that you are going to keep exploring and learning new things and that you will find a way to explain it to the rest of us.”

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