

MY FIFTY YEARS WITH FINITE ELEMENTS!

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October 29, 2007

ABSTRACT

The year 2008 marks the fiftieth anniversary of my introduction to what would later become known as the *Finite Element Method*. In 1958, R.W. Clough, Jr. presented a course on the subject solving plane stress problems using 3-node triangular elements. This complemented well the courses in mechanics presented at UC by E.P. Popov and K.S. Pister. There are several ingredients that combine to make this subject of continued interest to me: Finite element theory, mechanics, mathematics, computer programming and people.

My first decade of work was focused on solution of problems in linear viscoelasticity, especially those areas leading to near incompressibility and mixed methods of solution. In 1969 I spent my first sabbatical year at Swansea in Wales and began an association with O.C. Zienkiewicz, whom we honor at this Congress for his numerous contributions. The subjects of finite element methods and computational mechanics were now maturing and expanding rapidly into many new areas.

This presentation will summarize several of the topics that have been of interest to me and the contributions of some of the many people who have influenced my continued lifetime “love affair” with the subject!