

Biography



Duncan McKenzie Fraser (born 1946) has been involved in engineering education at the University of Cape Town (UCT) since he obtained his BSc(Chem. Eng.) in 1967. After obtaining his PhD in 1977 he spent three years working in oil refining, which gave him valuable insights into practicing engineering. Since 1979 he has been involved in a range of curriculum development initiatives, from course development to programme development, as well as improving teaching and learning (including the use of collaborative learning, computer simulations, and problem-based learning). A formative experience in this regard was year's sabbatical at Imperial College in London.

Professor Fraser's research interests are in Process Synthesis and Engineering Education. In Engineering Education, his interests are focused on improving student learning and success, both by curriculum reform and by better ways of teaching. In Process Synthesis, he has worked in Heat Exchanger Network Synthesis, as well as Mass Exchange Network Synthesis, making use both of Pinch Technology and Mathematical Programming.

He was a founder of the Centre for Research in Engineering Education (CREE) at UCT in 1996, and also served as Director of CREE from 2000-2005. He was a founder member of the African Engineering Education Association (AEEA) and has been its Secretary-General since its formation in 2006. Duncan was elected to the first Governing Board of the Research in Engineering Education Network (REEN) in 2009, and in 2011 he was elected Chair of the REEN Board. In 2011 he was elected a Vice-President of the International Federation of Engineering Education Societies (IFEES). Professor Fraser has published numerous papers in peer-reviewed journals and made many presentations at national and international conferences, and also run workshops, in both of his research areas.