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UCT to honour MIT professor

Klaus-Jürgen Bathe to receive honorary degree on Sunday, 1 September 2013, 17h00, Leslie Social Sciences Building, LT 2A

The University of Cape Town will confer an honorary doctorate on Klaus-Jürgen Bathe, a mechanical engineering professor at the Massachusetts Institute of Technology (MIT) in the United States, this weekend. He will be recognised for his rich contributions in the field of computational engineering mechanics.

Professor Bathe, a UCT alumnus, is regarded as a giant in the field of computational mechanics and ranks among a handful of pioneers of a powerful procedure called the Finite Element Method. It is a numerical method for simulating on computer the response of complex structural and fluid systems in engineering and the sciences - from bridges and cars to biomedical and nano structures.

He has made fundamental contributions in theories and procedures that are used worldwide in computer programmes. On a more practical level, he has developed one of the most advanced and widely used finite-element programmes called ADINA. His book, *Finite Element Procedures,* is a classic in the field. His work has helped create safer engineering structures, devices and machines which continue to benefit millions of people worldwide. He retains strong links with UCT and established the Klaus-Jürgen Bathe scholarship for engineering students in 1997.

Professor Bathe will be awarded an honorary Doctor of Science degree on Sunday, 1 September 2013, at 17h00 in Leslie Social Sciences Building Lecture Theatre 2A on UCT's Upper Campus. This ceremony takes place ahead of the fifth Conference on Structural Engineering, Mechanics and Computation (SEMC 2013), where he will be one of the keynote speakers.

His SEMC 2013 lecture, "Insights and advances in the analysis of structures", will present recent work on simulations of wave propagation, large strains in shells, fluid-structure interactions and electromagnetic effects. He sees the aim of this lifetime work as "trying to predict the future through analysis", and concludes in his paper that "while novel areas of simulations will attract exciting attention, it is also important to continuously increase the efficiency of methods in traditional areas of analysis".

SEMC 2013, hosted by UCT, aims to bring together academics, researchers and practitioners in the fields of structural engineering, engineering mechanics and associated computation. They will review recent progress and understanding in these areas, share the latest developments, and address the challenges that the present and the future pose. The conference, attracting 500 delegates from 60 countries around the world, takes place from 2 to 4 September 2013 in the Leslie Social Science Building on UCT's Upper Campus.

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