Thomas J.R. Hughes, The University of Texas at Austin, USA

Talk title	**The Finite Element Method and Computational Mechanics: Past, Present and a Vision of the Future."**
Biography	Thomas J.R. Hughes holds B.E. and M.E. degrees in Mechanical Engineering from Pratt Institute and an M.S. in Mathematics and Ph.D. in Engineering Science from the University of California at Berkeley. He taught at Berkeley, Caltech, and Stanford before joining the University of Texas at Austin. At Stanford he served as Chairman of the Division of Applied Mechanics, Chairman of the Department of Mechanical Engineering, Chairman of the Division of Mechanics and Computation, and occupied the Crary Chair of Engineering. Dr. Hughes is an elected member of the U.S. National Academy of Sciences, the U.S. National Academy of Engineering, the American Academy of Arts and Sciences, the Royal Society of London, the Austrian Academy of Sciences (Section for Mathematics and the Physical Sciences), the Istituto Lombardo Accademia di Scienze e Lettere (Mathematics Section), and the Academy of Medicine, Engineering and Science of Texas. Dr. Hughes is a Fellow of the American Association for the Advancement of Science (AAAS), the American Institute of Aeronautics and Astronautics (AIAA), the American Society of Civil Engineers (ASCE), the American Society of Mechanical Engineers (ASME), the U.S. Association for Computational Mechanics (USACM), the International Association for Computational Mechanics (IACM), the American Academy of Mechanics (AAM), the Society for Industrial and Applied Mathematics (SIAM), and the Engineering Mechanics Institute of ASCE. Dr. Hughes is a Founder and past President of USACM and IACM, past Chairman of the Applied Mechanics Division of ASME, past Chairman of the US National Committee on Theoretical and Applied Mechanics, and co-editor of the international journal Computer Methods in Applied Mechanics and Engineering. He is an Honorary Member of the Japanese Association for Computational Mechanics (JACM). Dr. Hughes is one of the most widely cited authors in Engineering Science. He has been elected to Distinguished Member, ASCE's highest honor, and has received ASME's highest honor, the ASME Medal. He has also been awarded the Walter L. Huber Civil Engineering Research Prize and von Karman Medal from ASCE, the Timoshenko, Worcester Reed Warner, and Melville Medals from ASME, the von Neumann Medal from USACM, the Gauss-Newton Medal from IACM, the Computational Mechanics Award from the Japan Society of Mechanical Engineers (JSME), the Grand Prize from the Japan Society of Computational Engineering and Science (JSCES), the Computational Mechanics Award from JACM, the Humboldt Research Award for Senior Scientists from the Alexander von Humboldt Foundation, the Wilhem Exner Medal from the Austrian Association für SME (Öesterreichischer Gewerbeverein, OGV), the International Scientific

	Career Award from the Argentinian Association for Computational Mechanics (AMCA), the SIAM/ACM (Association for Computing Machinery) Prize in Computational Science and Engineering, the Southeastern Universities Research Association (SURA) Distinguished Scientist Award, the O.C. Zienkiewicz Medal from the Polish Association for Computational Mechanics (PACM), the A.C. Eringen Medal from the Society for Engineering Science (SES), the Ralph E. Kleinman Prize from SIAM, and the William Benter Prize in Applied Mathematics from the Liu Bie Ju Centre for Mathematical Sciences at City University of Hong Kong. Upon graduation from UC Berkeley, Dr. Hughes received the Bernard Freidman Memorial Prize in Applied Mathematics, the only engineer to have ever done so. At Stanford University, he received the Dean's Award for Academic Accomplishment. At the University of Texas at Austin he has received the Joe J. King Professional Engineering Achievement Award, the Billy and Claude R. Hocott Distinguished Centennial Engineering Research Award, and the University Co-op Career Research Excellence Award. He has also received the Alumni Achievement Award from Pratt Institute. Dr. Hughes has received honorary doctorates from the Université catholique de Louvain (Belgium), the University of Pavia (Italy), the University of Padua (Italy), the Norwegian University of Science and Technology (Trondheim), Northwestern University (Evanston), and the University of A Coruña (Spain). He held the Cattedra Galileiana (Galileo Galilei Chair), Scuola Normale Superiore, Pisa, Italy, in 1999, and the Eshbach Professorship, Northwestern University, in 2000. The Special Achievement Award for Young Investigators in Applied Mechanics is an award given annually by the Applied Mechanics Division of ASME. In 2008 this award was renamed the Thomas J.R. Hughes Young Investigator Award. In 2012 the Computational Fluid Mechanics Award of the United States Association for Computational Mechanics was renamed the Thomas J.R. Hughes Medal. Dr. Hughes has delivered multiple plenary lectures at World Congresses of Computational Mechanics, United States National Congresses of Computational Mechanics and United States Congresses of Theoretical and Applied Mechanics. He also has been a plenary lecturer at the International Congress of Mathematicians, representing the field of Numerical Analysis at ICM 2010. In the over one-hundred-year history of the Congress, Dr. Hughes was only the second engineer to have been invited to deliver a plenary lecture. The first was Theodore von Karman in 1928. One of Dr. Hughes's academic great, great grandfathers is the physicist Niels Bohr, Nobel Laureate, 1922.