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Biographical Sketch

Professor J. S. Chen is the Chancellor's Professor and Department Chair of Civil & Environmental Engineering Department of UCLA. He received PhD from Northwestern University and became Assistant Professor of University of Iowa in 1994. He was promoted to Associate Professor in 1999, then moved to UCLA in 2001, and became Full Professor in 2002. His research activities include development of finite element and meshfree methods for large deformation and contact mechanics, mathematical and computational foundation of multiscale mechanics & materials computation, computational biomechanics for modeling DNA molecular structures and biological tissues, and numerical solutions of Schrödinger equation in quantum mechanics.

He has received numerous awards, including GenCorp Technology Achievement Award, The Faculty Scholar Award, UCLA Chancellor's Professor Endowed Chair, Fellow of US Association for Computational Mechanics, Fellow of International Association for Computational Mechanics, elected Executive Council Member and Officer of US Association for Computational Mechanics (USACM) (Treasurer/Vice President/President of USACM in 2006/2008/2010), and the General Council Member of International Association for Computational Mechanics. He is the Editor-in-Chief of "Interaction and Multiscale Mechanics: an International Journal", the Associate Editor of "American Society of Civil Engineers Journal of Engineering Mechanics", the Editorial Board member of "International Journal for Numerical Methods in Engineering" and four other journals, and has been the Guest Editor of "Computer Methods in Applied Mechanics and Engineering" and "Computational Mechanics" Journals. Two of his papers have been cited for more than 100 times (ISI). He has been invited to deliver Plenary Lectures and Keynote Lectures in many international conferences and workshops.

The meshfree formulation developed by J. S. Chen has been implemented into computational code at Sandia National Laboratories, and in DNYA code at the Lawrence Livermore National Laboratory. His nonlinear meshfree works, initiated by his 1996 paper on Lagrangian Reproducing Kernel Particle Method, are widely cited, and the corresponding meshfree codes are now used in industry such as General Motors, Ford Motor Company, Delphi, Caterpillar Inc, and Army ERDC. His papers on the stabilized conforming nodal integration are highly referenced, and this method significantly reduces the high computational cost of meshfree method which was the major disadvantage of meshfree methods in their early stage of development. These methods have recently been extended to modeling of penetration processes for homeland security applications in US Army. His papers on Arbitrary Lagrangian Eulerian finite elements for path-dependent and contact problems have made a major impact in metal forming industry. Recently, he has developed new and enhanced computational methods for modeling complex topological changes in grain growth and grain boundary migration processes. He has also developed several multi-scale methods for multi-scale homogenization and localization in material science applications as well as in bio-mechanics applications such as multi-scale modeling of DNA molecules.