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Editor of
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Dr. Henry Tan（谭鸿来）is the Chairman of the International Symposium on Energy Challenges and Mechanics, and founding editor of the *Journal of Energy Challenges and Mechanics*. He was a Guest Professor of the School of Aeronautics and Astronautics, Zhejiang University, China (2008-2012); a Guest Professor of the School of Mechanical Science and Engineering, Huazhong University of Science and Technology, China (2004-2006); a Visiting Assistant Professor of the Department of Mechanical Engineering, Louisiana State University, USA (2001-2002); a Research Assistant Professor of the Department of Materials Science and Engineering, University of Utah, USA (2000-2001); a Research Scientist of the Department of Mechanical Science and Engineering, University of Illinois at Urbana-Champaign, USA (2003-2007), and a Lecturer of the School of Mechanical, Aerospace and Civil Engineering, University of Manchester, England (2007-2009). He is currently a Senior Lecturer of the School of Engineering, University of Aberdeen, Scotland.

For research, Dr. Tan has obtained achievements in both energy applications and fundamental mechanics. He leads the Subsea Integrity Research team of the Lloyds Register Foundation Centre for Safety and Reliability Engineering at the School of Engineering, University of Aberdeen, UK. Dr. Tan co-edited the book, Corrosion and materials in oil and gas industries, published by CRC Press / Taylor and Francis Group. He delivered the Opening Address, "Structural integrity management: adopting the right risk-based mitigation strategy", at the 5th Annual Pipeline Integrity Management & Maintenance Forum, London. While working in two of U.S. Department of Energy's Accelerated Strategic Computing Initiative (ASCI) centres, Center for the Simulation of Accidental Fires and Explosions (CSAFE) at the University of Utah, and the Center for Simulation of Advanced Rockets (CSAR) at the University of Illinois at Urbana-Champaign, Dr. Tan developed a hierarchical adaptive Material Point Method C++ parallel code for fracture simulations across multiple scales, and established a micromechanics framework for plastic bonded energetic materials accounting for nonlinear interface debonding. The results were used in accident diagnosis of the reusable solid rocket motor of NASA's space shuttle and the PBX9501 of the Los Alamos National Laboratory. For these achievements, he was invited for seminar lectures at the Cavendish Laboratory, University of Cambridge.

For the researches in mechanics of materials, Dr. Tan published papers in journals like *Physical Review Letters* and *Journal of the Mechanics and Physics of Solids*. The researches he conducted are fundamental and are cited by journal papers of cross-disciplinary in technologies relates to energy, biomedical engineering, MEMS, nanomaterials, manufacturing, tectonic engineering, measurement tools, corrosion protection, etc. Dr. Tan determined the cohesive law for interfaces between carbon nanotubes and polymeric matrix in a composite material. The published paper became Top Accessed Articles of the journal *NANO* (2009). Dr. Tan is one of the pioneers in combined atomistic and continuum simulation of the material fracture; because of this achievement he was awarded National

Excellent Doctoral Dissertation by the State Council of China, and the First Prize of National Science and Technology Progress Award by the State Education Commission of China. Because of these achievements, Dr. Tan became a naturalized American under the first priority as a "scientist with extraordinary ability".

Dr. Tan supervised Engineering Doctorates (EngD) and PhDs on subjects including safety and risk management in subsea engineering and other energy industries, environmental protection and condition monitoring. He delivered courses and invited short-lectures, such as Subsea Integrity, Fundamental Safety Engineering and Risk Management Concepts, Simulation in Materials, Materials and Structures, Fluid Dynamics, Deformation and Fracture of Engineering Materials, Fluid Mechanics and Thermodynamics, Explosion Engineering, Aircraft Structural Analysis, Mechanical Design, Computation, Engineering Materials Laboratory, Plasticity, Impact Mechanics of Cellular Materials, Research Methodology, etc., at institutions world widely including: University of Aberdeen, Scotland; International Centre for Mechanical Sciences (CISM), Italy; University of Manchester, England; Louisiana State University, USA; and Zhejiang University, China. Dr. Tan received his academic training from Brown University, USA, and Tsinghua University, China.