



B I O G R A P H Y

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Dr. Hal Morgan is currently Senior Manager, Industry Partnerships and Strategy at Sandia National Laboratories. In this position he is responsible for leading Sandia's Technology Transfer program with industry. Prior to taking this assignment, he spent the first 28 years of his career at Sandia in the Engineering Sciences Center where he developed and applied computational mechanics simulation capabilities for nuclear weapons, energy, and industry programs both as a technical manager and technical staff member. Most recently he was Senior Manager of Computational Simulation Sciences in the Engineering Sciences Center with responsibilities for managing Sandia's Engineering Codes portion of the National Nuclear Security Administration's (NNSA) Advanced Simulation and Computing Program and for leading the development of the SIERRA Mechanics advanced mechanics codes for the nuclear weapons program. The codes, which represent a \$50M+ investment by the NNSA, enable predictive mechanics simulations of nuclear weapons responses to a diverse set of operating environments. These codes also can be used for a broader set of mechanics applications and have been used by several industry partners, including The Goodyear Tire & Rubber Company, and the Department of Defense.

Dr. Morgan has been active over his career in using Sandia's unique computational capabilities to make US industry more competitive. He initiated Sandia's 17-year-old strategic partnership with Goodyear in 1993 and has led and nurtured Sandia's interactions with Goodyear ever since. This partnership, based primarily on adapting Sandia's computational mechanics codes to perform simulations of the mechanical performance of tires, has been highly acclaimed as perhaps DOE's best example of tech transfer between the national laboratories and private industry. Goodyear has used the technology transferred from Sandia to make computational simulation an integral part of their tire design process. In addition to many other awards, Goodyear and Sandia jointly received a R&D 100 Award in 2005 for their use of computational simulation to bring Goodyear's Assurance line of tires to market in record time.

Dr. Morgan has BS and MS degrees in Mechanical Engineering and a PhD degree in Engineering Mechanics, all from Southern Methodist University. In addition to computational mechanics, Dr. Morgan has expertise in the mechanics of composite materials and constitutive modeling and has developed an in-depth knowledge of tire mechanics.