

JOHN SWANSON AND ANSYS – AN ENGINEERING SUCCESS STORY

John A. Swanson

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BIOGRAPHY

Dr. John A. Swanson is currently President of Swanson Analysis Services, Inc., a finite-element consulting firm. Dr. Swanson is the founder of ANSYS, Inc., served as President for more than 20 years and most recently was their Chief Technologist until his retirement in March of 1999. John is internationally recognized as an authority and innovator in the development and application of finite-element methods to engineering. He founded Swanson Analysis Systems, Inc. (now ANSYS, Inc) in 1970 to develop, support, and market the ANSYS program, a finite-element software code widely used in the engineering industry. Prior to founding ANSYS, Inc., John was employed at Westinghouse Astronuclear Laboratory (NERVA Project) in the stress analysis group in reactor design, the core analysis and methods group, and the structural analysis group. While at Westinghouse, John recognized that companies could save significant time and money if they could have an integrated general purpose finite-element software code to do the complex calculations which



engineers were then either doing manually or unable to do. Dr. Swanson holds B.S. and M.S. degrees in mechanical engineering from Cornell University. He holds a Ph.D. in applied mechanics from the University of Pittsburgh, obtained in night school with Westinghouse support. Recognition and awards include: 2006 Dr. Swanson was awarded the ASME Presidents Award; 2004 John Swanson was awarded the John Fritz Medal by the American Association of Engineering Societies (John Fritz Medal is described as the highest award in the engineering profession); 2003 ASME Honorary Membership; 1998 Distinguished Alumnus Award from the University of Pittsburgh School of Engineering, 1998 ASME Applied Mechanics Award; 1996 Dr. Swanson named Outstanding Entrepreneur of the Year by Washington & Jefferson College; Elected in 1994 as American Society of Mechanical Engineers (ASME) Fellow; 1994 Industry Weeks Top 5 out of Top 50 R&D Stars in the US; 1991-1993 ANSYS, Inc. CAD/CAM Leader Award voted by Machine Design; Manufacturing Systems ranked ANSYS, Inc. among Top 50 software companies; 1991 John Swanson appeared on nationally televised Computer Business Today program; 1990 John Swanson won the Computers in Engineering (CIE) award for outstanding contributions to the engineering and computing industries; 1988 Dr. Swanson named Pittsburgh Entrepreneur of the Year in High Technology by the Entrepreneurial Services Group of the Arthur Young and Venture magazine; 1986-1987 Dr. Swanson named Pittsburgh Engineer of the Year by ASME. He received the 2011 William Metcalf Award from the Engineers Society of Western Pennsylvania. Dr. Swanson is currently on the Board of Trustees of the University of Pittsburgh and The ASME Foundation and served two six-year terms as a Trustee of Washington and Jefferson College. He is a member of the Engineering College Council at Cornell University. His support of colleges and universities includes the donation of research laboratories to the Engineering Schools at Cornell, the University of Pittsburgh and (with Janet, his wife) the Veterinary School at Cornell.

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He gave the naming gift for the John A. Swanson Science Center at Washington and Jefferson College. The John A. Swanson School of Engineering at the University of Pittsburgh is named in his honor. Swanson recently invested in Applied Quantum Technology (AQT), a California startup company with the objective of reducing the cost of PV Solar Power by another factor of two. He serves on the AQT Board of Directors.

ABSTRACT

This talk will begin with an overview of the life of John Swanson, showing that his success was due to a community effort, and celebrating the people and institutions which made his engineering contributions possible. A milestone in this path is the awarding of the John Fritz Medal, said to be the highest award in the engineering profession. The rest of this talk will be a non-technical history of ANSYS, the worlds premier engineering simulation software. Discussion will include the technical, engineering, and business factors and decisions which put ANSYS on the path to global success. Questions will be welcome at the end of the talk, and at the conference after the luncheon address.