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Jean Zu is Professor and Chair of the University of Toronto's Department of Mechanical and Industrial Engineering. Her research focuses on vibrations and dynamics, particularly in relation to automotive belts and serpentine belt drive systems, and has resulted in a number of extremely successful partnerships with automotive firms. Jean Zu has contributed over 250 publications in her field, including 116 journal papers, 141 conference papers and one book chapter. Her research funding has totaled close to \$4M and her work has resulted in 2 patents. In her academic career, she has supervised 27 PhD and 30 Master's students, as well as 29 post-doctoral fellows.

Jean Zu has served the academic and professional communities with genuine dedication. She serves on the Canadian National Committee for the International Union of Theoretical and Applied Mechanics and served as President of the Canadian Society of Mechanical Engineering (CSME) in 2006-2008,. She is currently Associate Editor of the ASME Journal of Vibrations and Acoustics. She is currently President of the Engineering Institute of Canada.

Jean Zu has been honoured by a number of organizations for her achievements; she is a Fellow of the American Society of Mechanical Engineers, the Canadian Society for Mechanical Engineering, American Society of Mechanical Engineers, the Canadian Academy of Engineering, the Engineering Institute of Canada, and the American Association for the Advancement of Science. In 2012 she received the Robert W. Angus Medal from CSME.

Jean Zu's research is focused on mechanical vibrations and dynamics. Her most notable contributions have been in the modelling and simulation of nonlinear vibration systems, particularly automotive belt drives. She has applied her findings to several successful collaborations with industrial partners, most notably her 14 year collaboration with Tesma International Inc. and Litens Automotive Group (both subsidiaries of Magna International Inc.). She has been awarded eight contracts with these companies as a result of the advances created through their partnerships. In recent year, her research has been extended to bio-instrument and energy harvesters.

Jean Zu's research advances have had a significant impact on the Canadian automotive industry. As a result of the in-house design capabilities enabled by her research, her industrial collaborators have thrived at a time when the automotive industry in general is in decline (Litens, for example, has experienced a 10% increase in sales over the past ten years). Professor Zu and her research team have developed two commercial software packages on static and dynamic analysis of automotive accessory belt drive systems and automotive timing belt drive systems, respectively. This software has greatly enhanced her industrial partners' product design, function and reliability, resulting in a significant competitive advantage and increased revenues at a time when the automotive industry in North America is facing serious economic challenges.

Q. What makes you decide to become a Mechanical Engineer?

A. In high school, I was very interested in math and the motion and dynamics part of the Physics,

which is a subset of mechanical engineering. Therefore, I chose mechanical engineering.

Q. Who do you admire most?

A. I admire Margaret Thatcher the most. I feel that as a woman, she had confidence, strength, and assertiveness. While leading a very successful career, she maintained a good personal life and had her women's touch. She was beautiful and elegant.

Q. What do you feel has been your most important professional accomplishment to date?

A. My most important professional accomplishment to date is to lead my department

achieving many positive and fundamental changes in a relatively short period of time.

Q. What's one piece of advice you would give to Women in Engineering?

A. Be patient and perseverant. Stick to your principle. Your effort will eventually get paid off.

