

# JUACEP Special Lecture <2>

## By Prof. Shaker Meguid, University of Toronto

### The University of Toronto: Status and Prospects

#### Shaker A. Meguid

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#### Abstract

The University of Toronto was founded as King's College in 1827 and has evolved into a large and complex institution. It now occupies three campuses: Scarborough and Erindale and the historic St. George campus. It is federated with three smaller universities which are on the St. George campus, and is affiliated with several colleges and institutes. There are ten fully affiliated teaching hospitals in metropolitan Toronto. Faculty conduct research in many places in Canada, USA, Europe and around the world.

The University is Canada's most prestigious research institution and has gained an international distinction for its research. It enrolls more students, employs more faculty, and offers a greater range of courses than any other Canadian university.

The University's places significant importance on research in all disciplines that made it the major hub for graduate education in Canada. It produces the majority of the nation's doctoral candidates in many disciplines.

The University of Toronto is committed to being an internationally significant research university, with undergraduate, graduate and professional programs of excellent quality.

Meguid will share his thoughts not only about the University of Toronto, but also his department, the Department of Mechanical and Industrial Engineering in a virtual but enjoyable journey to the city of Toronto and Canada,



Autobiographical Sketch – April 25, 2023

#### Professor Shaker Meguid

Professor Shaker Meguid is an internationally respected scholar with significant contributions in computational and experimental mechanics at varied length scales. Undoubtedly, his research activities have contributed significantly to the areas of aerospace engineering design, multiscale modelling, advanced and smart piezoelectric nanocomposites, crashworthiness, fracture mechanics and failure prevention.

He has published 335 papers in leading tier-1 scientific journals, 286 presentations in international conferences of significance with a large number of these being invited as keynote and plenary speaker. He authored 4 books on fracture mechanics, nanomechanics and micromechanics, edited 17 international conference proceedings and contributed 18 book chapters. His new book titled, "Atomistic and Continuum Fracture Mechanics of Solids" is the first to integrate atomistic and continuum behaviour of solids in one volume which will be published in the fall of this year by Springer.

He is the Founding Editor-in-Chief of Int. J of Mechanics and Materials in Design, former Technical Associate Editor of ASME J. of Engineering Materials and Technology (for two consecutive terms), former Associate Editor of IMechE Journal of Mechanical Process Engineering, Guest Editor to a number of Journals including Mechanics of Materials and a member of the editorial board of numerous journals.

He is the Founding Head of the Aerospace Engineering Division of Nanyang Technological University, Singapore. He taught different branches of mechanics in 4 continents: Europe (Manchester, Oxford (England) and Milano Polytecnico (Italy)), North America (Toronto, Canada), and Asia (NTU, Singapore), Hunan, Peking, and BIE (China), and Africa (Cairo University, Egypt). He directed a very large number of doctoral and master students as well as deeply involved in Capstone design projects for seniors in UofT.

He is an Engineering Consultant to the United Nations, a lifetime senior member of American Institute of Aeronautics and Astronautics, member of the American Academy of Mechanics, Professional Engineer in the Province of Ontario (PEng), Chartered Engineer in Great Britain (CEng), Fellow of ASME, Fellow of IMechE and Fellow of the Engineering Institute of Canada.

He works closely with the aerospace and automotive industries and is regularly approached by members of the media for clarification of engineering issues and accidents.

Professor Meguid and his research team won many awards, with the most recent honor being the nomination by his department for the gold medal by the Governor General of Canada, holder of the Robert Hooke Award bestowed by the European Society for Experimental Mechanics, Engineering Award-Research and Development by the Professional Engineers of Ontario for his significant contribution to research and development in Canada.

May 10, 2023  
Lecture rm. 232,  
15:00-16:00  
Eng. Bldg. #2