



UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING

Memorial Tribute to

CHARLES ALBERT WARD

Professor Emeritus
Mechanical and Industrial Engineering

December 6, 2022

Be it resolved –

THAT the Council of the Faculty of Applied Science & Engineering record with deep regret the death on October 12, 2022 of Professor Emeritus Charles Albert Ward.

Charles Albert Ward, born May 28, 1939, passed away on October 12, 2022, in Hennick Bridgepoint Hospital, Toronto. He leaves behind family members in Texas: brother, John and his wife, Cissy; nieces, Susan and Delinda; and nephews, David (Clara) and Johnny (Nell).

Charles was born in Bailey, Texas and after graduating from Magnolia High School he studied Mechanical Engineering at the University of Texas. He later earned his PhD from Northwestern University in 1967 at which time he embarked on his academic career. He first joined the Department of Mechanical Engineering at the University of Toronto on July 1, 1967. He became a full professor in the department in 1977. While on paper Charles retired in 2004, he remained active in the Department teaching graduate-level courses, including MIE1101 Advanced Classical Thermodynamics and MIE1107 Statistical Thermodynamics, and continued with his research for a number of years.

Charles was a renowned researcher in his field and the Director of the Thermodynamics and Kinetics Laboratory. The Statistical Rate Theory – a theory for predicting the rate of molecular transport across phase boundaries – developed in his lab has been cited in the open literature over 400 times. During his career he and his students published over one hundred papers in peer-reviewed journals. His studies of interfacial kinetics led to the measurement of a temperature discontinuity at the liquid-vapour interface during evaporation and to the measurement of a new property of water: the surface thermal capacity. This property defines the energy transport by surface-tension-driven flow.

Charles was recognized with many prestigious awards throughout his career including two Alexander von Humboldt Fellowships, the Canadian Society of Mechanical Engineering Robert W. Angus Medal and the Canadian Society for Mechanical Engineering Jules Stachiewicz Medal.

Outside of his academic career, Charles was a loving husband to his wife Barbara with whom he built a happy life in Toronto. They were known for hosting dinner parties, which showcased Barbara's excellent cooking skills and Charles' expert wine pairings. They enjoyed attending opera performances and visiting the Art Gallery of Ontario.

Greatly admired by students and colleagues alike, the Department remembers Charles as kind, thoughtful and well-spoken, and he will be dearly missed by all who knew him.

Be it further resolved –

THAT this tribute to Charles Albert Ward be inscribed in the minutes of this Council meeting, and that copies be sent to his family as an expression of the respect and gratitude of the members of this Council.

Prepared by Lynsey Mellon with input from Professor Emeritus David F. James.

*Presented at Faculty Council by Professor Emeritus David F. James
of the Department of Mechanical & Industrial Engineering.*