



UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING

Memorial Tribute to

Rein Luus

**Professor Emeritus
Department of Chemical Engineering
and Applied Chemistry**

October 18, 2021

Be it resolved –

THAT the Council of the Faculty of Applied Science & Engineering record with sincere regret the death on July 28, 2021 of Professor Emeritus Rein Luus at the age of 82.

Professor Luus' family fled from Estonia to Germany to escape the imminent Soviet occupation in 1944 and then immigrated to Canada in 1949. Rein graduated from the Sault Ste Marie Collegiate and entered the Engineering Physics Division in the Faculty of Applied Science and Engineering at the University of Toronto. As the Chemical Option was founded in 1959, Rein Luus was in the first group of students choosing it. The Division was renamed Engineering Science and Rein graduated in 1961. Professor Luus completed his MASc degree in the Department of Chemical Engineering and Applied Chemistry with Professor Graydon and thereafter went to Princeton where he received the PhD in Chemical Engineering in the area of optimal control. He joined the Department of Chemical Engineering and Applied Chemistry at the University of Toronto as an Assistant Professor in 1965, advanced to Associate Professor and then to Full Professor in 1973. He retired in 2005.

Professor Luus was a highly accomplished scholar in the field of optimization, optimal process control, iterative dynamic programming and applied mathematics. He published some 200 papers in journals and refereed conference proceedings along with chapters in several books. He co-authored a book with his thesis supervisor, Prof. Leon Lapidus, that was based on his post-doctoral research and a later another book on iterative dynamic programming. He shared his scientific insights in various consulting engagements and much of his work underpins the foundations behind the optimal and efficient operation of many processes that provide commodities we rely on today. Iterative dynamic programming continues to be a key component of the rapidly advancing field of artificial intelligence.

Professor Luus has won many prestigious awards including the Steacie Prize in 1976, which is an annual award given to a promising young scientist or engineer in Canada. Winning this prize included a special ceremony held at the Governor General of Canada's residence in Ottawa. On

that visit, Professor Luus took the opportunity to engage in an in-depth conversation with then Prime Minister Pierre Trudeau who was apparently standing off to the side on his own.

Professor Luus was a rigorous and intense individual in everything he pursued, whether it was discussing the fundamentals of thermodynamics or playing a game of squash every weekday at 12:20 pm. He was a demanding but well-respected educator who also won a Departmental Teaching Award. Besides his academic and professional interests, he enjoyed sailing and learned to play the violin. He was active in the Estonian academic community and spoke often about his family with great pride.

Professor Luus was a wonderful professor, scholar, educator and colleague who left a lasting legacy on our Department, Faculty and the University of Toronto.

Be it further resolved –

THAT this tribute to Professor Emeritus Rein Luus 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 Council.