



**Memorial Tribute to**

**JAMES SMITH**

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

**February 29, 2016**

Be it resolved that the Council of the Faculty of Applied Science & Engineering record with deep regret the death on Friday, November 13, 2015 of Professor Jim Smith.

After completing a B.A.Sc. and M.A.Sc. at the University of British Columbia, Professor Smith began his professional career in 1955 when he joined DuPont Canada as a process engineer. He obtained his Ph.D. in 1960 at Imperial College and then began teaching and research at the University of British Columbia. He joined the Department of Chemical Engineering and Applied Chemistry at the University of Toronto in 1962 and was promoted to full professor in 1972. He served in many leadership roles in the University, including as Assistant Head for Professor Jack Breckenridge and Associate Chair to Professors William Graydon and Michael Charles. He was the first Director of the Office of Occupational Health and Safety from 1981 to 1985 and in 2000, chaired a special committee that reviewed the University's Health and Safety programs. He served as Chair of the Department from 1985 to 1996, at which time he retired to become Professor Emeritus. Over his career he supervised 13 Ph.D., 20 M.A.Sc. and 50 M.Eng. students. He remained very active after his retirement within and outside the University in roles that included the Manager of SLOWPOKE 2 Nuclear Reactor Decommissioning process, Chair of the Chemical Engineering Honours and Awards Committee, and as Senior Technical Advisor to Eco-Tec Inc.

Jim had an outstanding ability to innovate based on his deep and practical knowledge of chemical engineering and industrial chemistry coupled with exceptional creativity. He was the author or co-author of over 100 scientific publications, and inventor or co-inventor of over 30 U.S. Patents. He was actively involved in several spin-off companies, including being President of Apollo Environmental Systems, and Director and shareholder of ArborScience Inc., Polyphalt Inc., and Thor Technologies Corp. Among his greatest achievements is the development of the BioGas Purification System. Biogas is a mixture of methane (CH<sub>4</sub>) and carbon dioxide (CO<sub>2</sub>) and is often contaminated with toxic concentrations of hydrogen sulfide (H<sub>2</sub>S). The technology is a biogas scrubbing process for the removal of H<sub>2</sub>S and particulate matter from biogas as it is produced. Using a patented, high efficiency gas-liquid contacting process, H<sub>2</sub>S is absorbed and the gas is purified for reuse in power generation facilities, cogeneration facilities, boiler units, and other heating applications.

As Chair, Professor Smith was a truly inspiring leader whose efforts continue to be felt to this day. He hired 23 faculty and created an exceptionally supportive community atmosphere that helped faculty, staff and students to thrive and reach their full potential. He was a pioneer in academic strategic planning, leading a Future State Visioning process that included a two-day retreat with faculty, staff, students and alumni to develop plans for enhanced teaching and research, and build a strong community spirit. He initiated our annual Department dinner, bringing together faculty, staff, alumni and industry partners each year to celebrate our achievements; the dinner is now in its 31<sup>st</sup> year and has close to 400 attendees. He made a point of reaching out to new faculty to get their opinions on the direction of the Department and also in supporting and recognizing the important role of our administrative staff. He had a deep interest in students. He advised graduate students whether or not he was their supervisor and made a point of encouraging and recognizing outstanding teaching.

Jim was a Fellow of the Chemical Institute of Canada and recipient of the R.S. Jane Memorial Award, the premier award from the Canadian Society for Chemical Engineering. He received a Distinguished Service Award of the Society of Chemical Industry of the United Kingdom. His was a registered Professional and Designated Consulting Engineer in the Province of Ontario.

Professor Smith had a profound impact on our Department, the University and on chemical engineering in Canada and beyond. He was a great example to us all.

Be it further resolved that a record of his service be inscribed in the minutes of this Council, and that a copy be sent to his family as an expression of the respect and gratitude of the members of Council.

*Prepared by D. Grant Allen*