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Harold I. Schiff lecture will focus on ozone layer depletion and climate change

A.R. Ravishankara, director of the Chemical Services Division of the Earth System Research Laboratory of the National Oceanic and Atmospheric Administration, Boulder, and professor of chemistry at the University of Colorado, Boulder, will give the 22nd Annual Harold I. Schiff Lecture in 103 Life Sciences Building on Nov. 2.

Organized by the York University Centre for Atmospheric Chemistry and the Faculty of Science & Engineering, Ravishankara's talk, "Ozone Layer Depletion and Climate Change: Connections in Science and Policy", starts at 2:30pm.

A.R. Ravishankara

Ozone layer depletion due to man-made emissions, mostly chlorofluorocarbons (CFCs) and some bromine containing chemicals have been recognized and addressed via the Montreal Protocol. The successful phase-out of ozone depleting substances, listed but not defined by the Montreal Protocol, led to the use of other chemicals that do not deplete the ozone layer. Hydrofluorocarbons (HFCs) were one such class of compounds that have found increasing use over the years. The Montreal Protocol has been credited with helping the climate change issue by phasing out, CFCs, many of which are also powerful greenhouse gases. Many HFCs are also potent greenhouse gases and their increasing use can offset the benefits gained to date. Lastly, all chemicals that can deplete the ozone layer are not necessarily included in the Montreal Protocol and raise the question about including other chemicals in the protocol.

"A prime example is nitrous oxide, which we argue is the most important ozone depleting gas that is being emitted today," says Ravishankara. "I will discuss the phase-in of HFCs, in place of CFCs, and the impact on climate as well as the role of nitrous oxide as an ozone depleting gas."

As part of his presentation, Ravishankara will deliberate on the atmospheric science of these chemicals as well as their implications to decision making.

Ravishankara has worked over the past three decades on the chemistry of the Earth's atmosphere as it relates to stratospheric ozone depletion, climate change and regional air quality. His measurements in the laboratory and in the atmosphere have contributed to deciphering the ozone layer depletion, including the ozone hole; to quantifying the role of chemically active species on climate; and to advancing understanding of the formation, removal, and properties of pollutants. He is an author or coauthor of more than 300 peer-reviewed publications.

He is a member of the US National Academy of Sciences, as well as Fellow of the American Geophysical Union, of the Royal Society of Chemistry, of the American Association for the Advancement of Science, and of the International Union of Pure and Applied Chemistry. His many awards include the Polanyi Medal of the Royal Society of Chemistry, the Stratospheric Ozone Protection award of the US Environmental Protection Agency, and the American Chemical Society's award for Creative Advances in Environmental Sciences. He is currently a co-chair of the WMO/UNEP Science Assessment Panel on Stratospheric Ozone. He has served on many national and international committees.

The Harold I. Schiff Lecture series was established in honour of late Professor Emeritus Harold I. Schiff, who was York's founding dean of the Faculty of Science in 1968. Among his numerous achievements were his major contributions to the development of techniques for measuring trace constituents in the upper atmosphere and to the interpretation of the physics and chemistry of the stratosphere.

An educator and scientist in the field of chemistry, Schiff began at York in 1964 and was named a member of York's Founders Society in honour of his contributions to the early development of the University. While at York, Schiff was chair of the Department of Chemistry and director of the Natural Science Program in 1964, dean of the Faculty of Science from 1965 to 1972 and director of the Centre for Atmospheric Chemistry from 1985 to 1989.



The annual Harold I. Schiff Lecture is organized by the [Centre for Atmospheric Chemistry](#) at York. For more information, e-mail cac@yorku.ca.

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