



Carolyn Hansson

Carolyn was born on 15th March 1941 in Hazel Grove, Cheshire, England. Both of her parents left school at the age of fourteen and although they recognized the importance of an education, they did not direct her into a specific career path. Still, she says, her mother was both a strong woman and role model. Carolyn was educated at an all-girls school and in her last two years of high school specialized in chemistry, physics, math and applied mechanics; these subjects were not commonly taken. Carolyn remained unsure about what to pursue at university until she received some literature on the field of metallurgical engineering at a careers convention.

Carolyn was the first female student to attend the Royal School of Mines at Imperial College. She was thrust into an all-male environment and found it initially difficult because the male students wanted little to do with her. Carolyn used her sense of humour to navigate the unwelcoming environment and eventually felt more at home amongst her peers. While in her last year of undergraduate studies, Carolyn considered private sector research opportunities. In 1961, however, after consistently being asked if she was interviewing for technician positions, she decided to continue her education to obtain her Ph.D. Her thesis examined superconductivity and crystal structure at liquid helium temperatures.

Upon receiving her doctorate, Carolyn moved with her then husband to the United States and began working at Martin Marietta Research Laboratories researching liquid metal embrittlement. Her boss, she says, was a fantastic mentor. When her husband moved again for a new job, Carolyn entered academia, joining Columbia University as an assistant professor of metallurgical engineering before moving to the State University of New York at Stony Brook. In 1973 she was appointed associate professor and in 1975 she became chair of the Department of Materials Science.

In 1976 Carolyn went to work for A&T Bell Laboratories. The opportunity, she says, was exciting because Bell was tremendously competitive and known as a pressure-cooker. That same year, she and her husband adopted their son. Carolyn joined the Danish Corrosion Centre in 1980, first as a research scientist and then as head of the research department. There, she was given the opportunity to run a project on a new type of cement. This was her first foray into the field of corrosion of steel in concrete.

It was not until 1990 that Carolyn moved to Canada; again, she says, following her then husband who had accepted a position at Alcan Aluminum in Kingston, Ontario. With few local industry opportunities, she returned to academia and joined Queen's University as a professor and the head of the Department of Materials and Metallurgical Engineering.

Since 1996 Carolyn has been a professor of materials engineering at the University of Waterloo. She was the Vice-President of University Research from 1996 to 2000, and served as the co-director of the Centre for Pavement and Transportation Technology from 2001 to 2005. Carolyn is not only a dedicated and passionate educator, but she is a leading researcher in the field of materials science, focusing more recently on the durability of reinforced concrete. Over the course of her career, she has led more than

fifty research projects, edited three books, and authored ten book chapters and more than twenty technical reports. She has more than eighty refereed journal publications to her name.

Carolyn serves on a number of professional boards and committees, including the board of governors of Acta Materials Incorporated, the Canada Research Chairs Committee of the University of Ontario Institute of Technology (UOIT), and the Merit Review Committee of the UOIT. She is associate editor of *Cement and Concrete Research*. Carolyn is a fellow of the Royal Society of Canada, the Canadian Academy of Engineering, the Danish Academy of Technical Sciences, the UK Institution of Materials, Minerals and Mining, the American Concrete Institute, and the US Minerals, Metals and Materials Society