

## The Engineering Institute of Canada 2024 Award Citation EIC Fellow



Carolyn Ren

## Nominated by the Canadian Society for Mechanical Engineering

Dr. Carolyn Ren is a professor and Canada Research Chair in Microfluidic Technologies in the Department of Mechanical and Mechatronics Engineering at the University of Waterloo. She is renowned for her pioneering contributions to droplet and air microfluidics. Her physical and theoretical models, as well as her design and optimization tools, have enabled new, integrated Lab-on-a-Chip devices for life sciences, environmental monitoring, and materials synthesis applications.

She is forging a new frontier in soft, wearable assistive robotics technologies development, enabled by air microfluidics techniques. These light-weight tetherless innovations are transforming prosthesis design and treatment of lymphedema, edema, and arthritis. She has published over 210 journal and conference papers, filed 23 patents, and co-founded four start-up companies to commercialize her team's inventions.

She has served on the editorial boards of seven different journals in her field, five currently. She is a member of the Royal Society of Canada College of New Scholars and a Fellow of both the Canadian Academy of Engineering and the Canadian Society of Mechanical Engineers.

Ladies and gentlemen, and Ms. President, please welcome Carolyn Ren as a Fellow of the Engineering Institute of Canada.