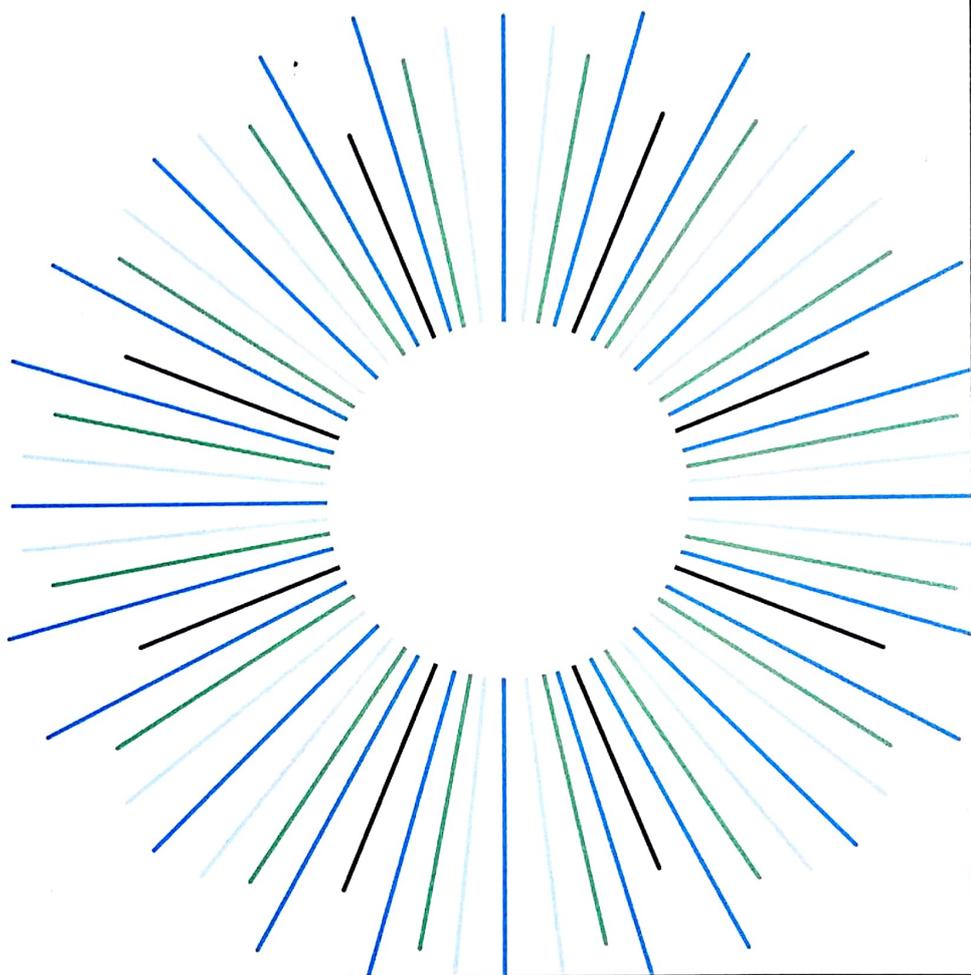
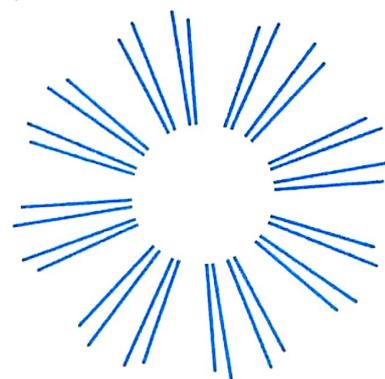
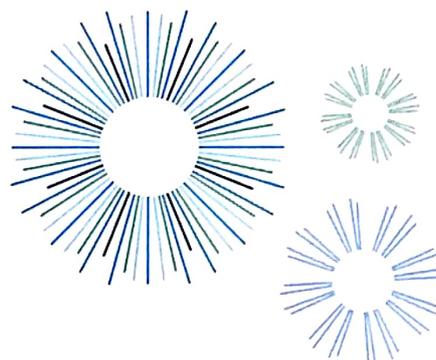
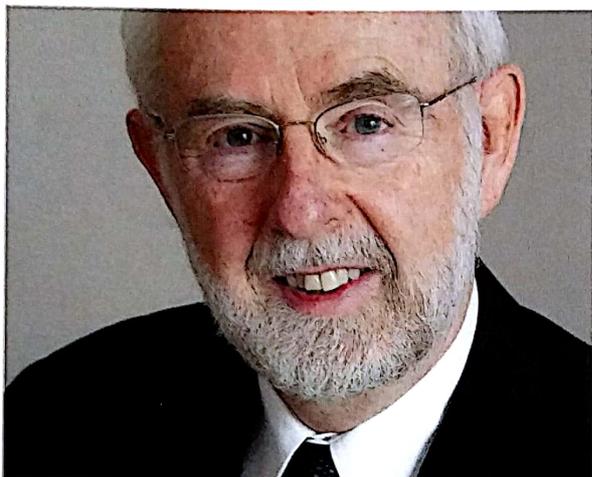


**Canadian excellence,
Global recognition:**
**Canada's 2017 winners
of major international
research awards**



**Universities
Canada.**



THE LEADING SCHOLARS PROFILED in this publication exemplify the creativity and dedication of Canada's research talent. Their award-winning work is helping to build Canada's reputation for research excellence across the globe, and their success makes a strong case for enhanced investment in the fundamental research that transforms society.

These scholars demonstrate why Canada is increasingly a partner of choice in international research collaboration. While our researchers and research networks often achieve their best work through international collaboration, there is a uniqueness about the Canadian research landscape that warrants recognition. Our work on the Sudbury Neutrino Observatory benefited greatly from this, with wonderful contributions from our international collaborators and from a very skilled research team representing many

institutions across Canada. There is a chemistry associated with the Canadian research environment – an entrenched spirit of collaboration, enviable talent pool, and an unwavering determination to solve problems and address the most pressing challenges facing humankind – that leads to breakthroughs.

I offer my congratulations to the winners celebrated here and express my hopes that they and their colleagues will continue to produce work that transforms our understanding of ourselves and the universe around us – whether they conduct their research at a desk, in a laboratory or a lake, in a neighbourhood or on a farm, or two kilometres down a mine shaft.

Art McDonald
January 2018

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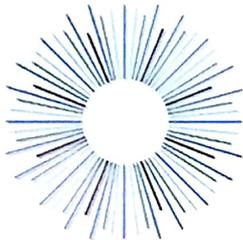
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Canadian excellence, Global recognition: Canada's 2017 winners of major international research awards

THIS IS CANADA'S GLOBAL MOMENT. And talented researchers across the country are seizing the moment by advancing new knowledge and generating discoveries that drive innovation and improve quality of life at home and abroad.

Our researchers collaborate with scientists from around the world in the race to find solutions to the world's urgent challenges. In doing so, they strengthen Canada's international reputation for world-leading research.

Canada's top researchers also mentor and train the next generation of researchers – including the Nobel

Prize winners of tomorrow – in a diverse and interdisciplinary research ecosystem.

These pages celebrate the achievements of 12 top Canadian researchers, all winners of prestigious international research awards and fellowships in 2017. Their fields of research range broadly but they all share exceptional creativity, curiosity, drive and passion.

The 2017 laureates' success demonstrates the value and impact of investments in fundamental research. They exemplify that bold ideas translate into big breakthroughs and better solutions. And they are helping build a better world.

Angela Schoellig

Embracing robotic technology to empower and elevate people

University of Toronto
Sloan Fellowship in Computer Science



ANGELA SCHOELLIG, an assistant professor at the University of Toronto's Institute for Aerospace Studies (UTIAS), was awarded a Sloan Fellowship for her early scholarship in the interface between robotics, controls and machine learning. Dr. Schoellig, who heads the Dynamic Systems Lab at UTIAS, is also an associate director at the Centre for Aerial Robotics Research and Education at the university.

With her team, Dr. Schoellig aims to enhance the performance of robots, enabling them to learn autonomously from experience so they can become safer and more efficient tools for humans. The applications for her research range from flying drones that can perform dangerous search operations during a disaster to self-driving cars that can adapt to changing weather conditions.

Dr. Schoellig holds an MSc in engineering science and mechanics from the Georgia Institute of Technology, as well as a masters degree in engineering cybernetics from the University of Stuttgart, Germany. Her PhD

from ETH Zurich was awarded the ETH Medal, and she was one of 35 recipients of the 2013 Dimitris N. Chorafas Foundation Award. Since then, she has received much recognition for her early scholarship, including as the youngest member of the 2014 Science Leadership Program, which promotes outstanding scientists in Canada.

The Sloan Research Fellowships seek to stimulate fundamental research by early-career scientists and scholars of outstanding promise. These two-year fellowships are awarded yearly to 126 researchers in recognition of distinguished performance and a unique potential to make substantial contributions to their field.