

ERIC GEDDES LECTURE SERIES



PATRICK PILARSKI

Canada Research Chair in Machine Intelligence for Rehabilitation

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Dr. Patrick M. Pilarski is a Canada Research Chair in Machine Intelligence for Rehabilitation at the University of Alberta, and an Associate Professor in the Division of Physical Medicine and Rehabilitation, Department of Medicine. Dr. Pilarski is a Fellow of the Alberta Machine Intelligence Institute (Amii) and principal investigator with the Reinforcement Learning and Artificial Intelligence Laboratory (RLAI).

Dr. Pilarski received the B.A.Sc. in Electrical Engineering from the University of British Columbia in 2004, the Ph.D. in Electrical and Computer Engineering from the University of Alberta in 2009, and completed his postdoctoral training in computing science with Dr. Richard S. Sutton at the University of Alberta. Dr. Pilarski's research interests include reinforcement learning, real-time machine learning, human-machine interaction, rehabilitation technology, and assistive robotics. He leads the Amii Adaptive Prosthetics Program—an interdisciplinary initiative focused on creating intelligent artificial limbs to restore and extend abilities for people with amputations.

As part of this research, Dr. Pilarski explores new machine learning techniques for sensorimotor control and prediction, including methods for human-device interaction and communication, long-term control adaptation, and patient-specific device optimization. He has also pioneered techniques for rapid cancer and pathogen screening through work on biomedical pattern recognition, robotic micro-manipulation of medical samples, and hand-held diagnostic devices.

Dr. Pilarski is the author or co-author of more than 80 peer-reviewed articles, a Senior Member of the IEEE, and has been supported by provincial, national, and international research grants.