University of Lethbridge NEWS RELEASE

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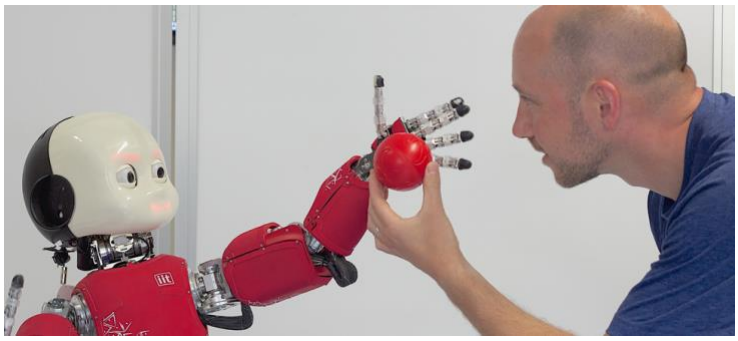
PUBlic Professor Series event explores how humans talk to robots

Robotics is a transformative technology, and within the coming decade, we'll likely have smart and helpful machines that will exist alongside us at home and in the workplace. Those machines should, quite literally, do what we tell them to do. That is, we should be able to communicate our goals to robotics systems in the same way we interact with other people; we should be able to talk to robots. However, there's a significant problem: most robots can't hear.



On Thursday, Oct. 24, University of Lethbridge neuroscience professor, Dr. Matthew Tata, will present *How to Talk to Your Robot: Using Cognitive Neuroscience to Make Robots That Can Hear*. This is the second talk of the 2019/20 season for the Faculty of Arts & Science's PUBlic Professor Series. The free event runs from 7 to 9 p.m. at the Sandman Signature Lethbridge Lodge and is open to the public.

Tata's Cognitive Robotics Lab in the U of L's Department of Neuroscience has been developing auditory AI for the past five years, and this talk will explore how we solve some of the problems that face all hearing systems, whether they are biological or machine. Auditory AI needs to solve these computational problems in fast and efficient ways, so we turn to the human brain for inspiration in developing our algorithms. By studying how we localize sounds, understand speech, and focus our auditory attention, we not only achieve a better understanding of how the human brain works, but we also can translate these discoveries into algorithms for robots so they can behave more naturally in the auditory world.

His research program explores how the brain solves the computational problems of vision and hearing, using a range of technologies including dense-array electroencephalography (EEG), perceptual psychophysics and computer simulations. He

is passionate about applied science and the translation of basic research into technologies that help people

Tata is also the co-founder and CEO of Reverb Robotics, a Lethbridge-based tech startup that develops auditory artificial intelligence for robotics and autonomous applications.

To view online: https://www.uleth.ca/unews/article/public-professor-series-event-explores-how-humans-talk-robots

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