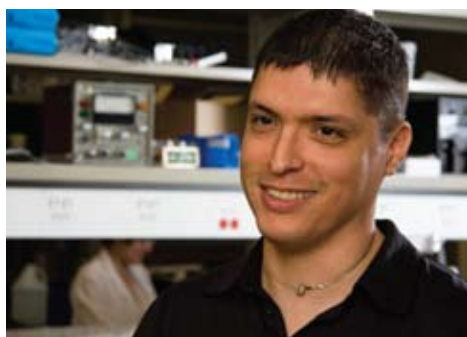


Bringing Discovery to Life



Samuel Pichardo, PhD.
Junior Scientist

EDUCATION

- B.Eng. Electronic Systems, 1995, Instituto Tecnológico y de Estudios Superiores de Monterrey, Estado de Mexico, Mexico
- M.Sc. Imaging and Systems, 2001, Institut National de Sciences Appliquees, Lyon, France
- Ph.D. Imaging and Systems, 2005, Institut National de Sciences Appliquees, Lyon, France

APPOINTMENTS AND AFFILIATIONS

- Adjunct Professor, Department of Electrical Engineering, Lakehead University 2008- present.

RESEARCH AREAS OF FOCUS

Dr. Pichardo's research activity is centered on the use of ultrasound to propose minimally invasive therapeutic applications based in focused ultrasound. Focused ultrasound can concentrate energy inside the tissue using a non-ionizing energy delivery. Some of Dr. Pichardo's previous works include the study of using focused ultrasound to treat superficial venous insufficiency and prostate cancer, new modalities for treatment and imaging of brain tumours,

Scientist Biography

and minimal invasive treatment of the atrial fibrillation.

As a scientist with the Thunder Bay Regional Research Institute, Dr. Pichardo will work to design new therapeutic devices and exploit the potential of a MRI-guided ultrasound therapy system installed at Thunder Bay Regional Health Sciences Centre.

He is particularly interested in developing a research activity that balances a good understanding of the basic effects of ultrasound in tissue, laboratory experimentation and clinical validation. He aims to establish a multidisciplinary environment alongside clinicians so that basic research can be translated to clinical reality in a timely fashion.

Dr. Pichardo is constantly looking for better modeling tools that help scientists and clinicians have an accurate prediction and control of therapy. The Thunder Bay Regional Research Institute has in-house high performance computing tools fully dedicated to test new models. The effects that are mainly investigated include cavitation, sound propagation in heterogeneous media, thermal effects and non-linear effects.

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