Paul Yielder, PhD

Associate Professor, Faculty of Health Sciences at University of Ontario Institute of Technology
Oshawa, ON, CA

Internationally renowned neuroscientist rethinks cognitive and sensory impairment to reduce pain and fatigue

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Hand-eye co-ordination is one of the most basic functions we rely on to complete daily tasks. Our ability to perform various tasks with this can be altered by sensory input. Sensorimotor integration (SMI) is the brain's ability to use sensory information from the body to formulate appropriate outputs to muscles, and plasticity is the brain's ability to change in response to training. Dr. Paul Yielder's latest research focuses on the use of eye tracking and electroencephalography (EEG) systems and advanced medical imaging methods to study how SMI and brain plasticity are impacted by altered sensory input. His collaborative work examines neck pain and fatigue, as well as experimentally induced pain, and the use of preferred and non-preferred limbs when learning to perform new movements. This will lead to enhancements in workplace and technology design, reduce injury risk and strengthen workplace performance.

An Associate Professor in the Faculty of Health Sciences, Dr. Yielder's complex research agenda explores anatomy, neuroscience and neuropsychiatry within the framework of advanced clinical imaging techniques, specifically in the area of structural and functional MRI. One of the world's authorities on functional neuroimaging, he has been studying the brain's response to cognitive and sensory input in a clinical and academic setting originating in New Zealand for more than 30 years. Here, he served as an accredited examiner for the College of Radiographers while he was a senior lecturer in Medical Imaging programs at Unitec Auckland. He was co-responsible for the development of the Bachelor of Health Science (Medical Imaging) and Master of Health Science (Medical Imaging) degrees.

A firm believer in reinventing himself, Dr. Yielder joined UOIT in 2007 and has served as Assistant Professor, Director of Health Science Programs and Associate Dean. He completed his Doctorate in Neuromechanics, Movement Science and Bio Signalling, and Imaging Technology in 2009 at the International Doctoral School, University of Aalborg in Denmark, with prior attachment to the State Classical Academy in Moscow, Russia. A Graduate Certificate in Theoretical and Practical Education in Earth and Biological Sciences from the Durham University School of Education in England initiated his early career in teaching. When his interest shifted to health care, he earned his Graduate Diploma in Radio Diagnostic Imaging from the Society and College of Radiographers in London, England.

Advanced Medical Equipment, Education/Learning, Health and Wellness, Program Development, Research

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Anatomical Modelling, Computed Tomography, MRI/fMRI, Musculoskeletal MRI, Neuroanatomy, Neuromuscular Physiology, Neuroscience, Pathophysiology , Performance Asymmetry, Psychopathology, Theoretical Medical Radiations Science, Ultrasound Imaging

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College of Radiographers (London, UK) , Australasian Society of Human Biology , International Society for Magnetic Resonance in Medicine , International Society of Electromyography and Kinesiology , Alumni Association, University of Durham, North East England, State Classical Academy Moscow Russia, Australian Institute of Radiography

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Neuromechanics and Human Tissue Modelling using Advanced Medical Imaging Modalities
Imaging Institute of Electrical and Electronics Engineers and Intelligent Systems Man and Cybernetics Society

Lymph Node Imaging Using Integrated Magnetic Resonance, Positron Emission Tomography and Fluorescence Techniques in Translation from Animal Studies to Human Participant Clinical Trials
Centre for Molecular and Medical Research Centre

International Doctoral School, University of Aalborg, Denmark
PhD Neuromechanics, Movement Science, Imaging Technology

University of Auckland, New Zealand
Ad Eundum Statum BEd Honours Education

Society and College of Radiographers, London, UK
Graduate Diploma Radio Diagnostics

Durham University School of Education
Graduate Certificate Theoretical and Practical Education - Earth and Biological Sciences

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Professor, Medical Radiations Practice Board of Australia
Dr. Yielder holds an adjunct role which includes New Zealand.

Accredited Academic and Clinical Professor, Australian Health Practitioners Registration Agency
Dr. Yielder holds advanced PhD designations in teaching, research and supervision. He is responsible for the development and quality assurance of clinical capability frameworks.
