



**Prof. Xavier MALDAGUE, PhD., Eng.**  
Laval University  
Department of Electrical and Computing Engineering  
Pavillon Adrien-Pouliot  
1065 Avenue de la Médecine  
Québec (QC) G1V 0A6  
Canada  
e-mail: [Xavier.Maldague@gel.ulaval.ca](mailto:Xavier.Maldague@gel.ulaval.ca)

**QIRT-2024-Short-2**



**ABSTRACT**



**PRESENTATION**



**PAPER**



*Xavier Maldague is a professor at the Department of Electrical and Computing Engineering of the Laval University in Québec (QC), Canada. He has trained more than 50 graduate students (MSc and PhD) and has more than 300 publications. His research interests are in infrared thermography, non-destructive evaluation (NDE) techniques and vision/digital systems for industrial inspection. He holds a Tier 1 Canada Research Chair in Infrared Vision. He is also a chairs of the Quantitative Infrared Thermography (QIRT) Council and a fellow of the Canada Engineering Institute, a Honorary Fellow of the Indian Society of Nondestructive Testing and a fellow of the Alexander von Humboldt Foundation in Germany.*

## **BASICS OF THERMOGRAPHY**

The presentation will deal with the following topics: introduction, theory (radiometry and heat transfer considerations), modelling for 1D, 2D, 3D geometry in solids materials, thermal stimulations in the active approach, infrared detectors and

experimental techniques, deployment, data processing and applications.

It is expected this short course will enable the attendees to grasp the fundamentals of IR thermography for non-destructive testing.