Canadian Association of Physicists
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(I) The winding road from a degree in physics to the development of leading-edge optical sensors

Tuesday 8 June 2021 14:30 (30 minutes)

This talk aims to give an example of how a degree in physics can lead to an interesting industrial career in optical sensor development. A broad understanding of different physical laws and behaviors (mechanics, thermodynamics, electromagnetics, optics), combined with a practical grounding in electronics, programming and machining, provides an ideal skill set for developing optical instruments where complex interactions between different sub-systems must be understood and anticipated. I will describe how my university physics degrees led to a varied and interesting career developing satellite instruments for ozone monitoring and wildfire measurement, thermal and terahertz imaging cameras, magnetic tools for pipeline inspection and a laser-based instrument for disease diagnosis in exhaled breath. Along the way I will give a brief introduction to the inner workings of these various sensors.

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