



NOV **KEYNOTE SPEAKER**
04 PHILIP FERGUSON
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BRIDGING THE VALLEY OF DEATH: HOW THE AEROSPACE INDUSTRY IN MANITOBA LEARNED TO INNOVATE

ABSTRACT As engineers, we continually strive to improve society with responsible technology implementations that promise to improve our daily lives. From automated controllers to electric vehicles, new medical devices to 3D-printing, the possibilities for modern innovation are endless. Some industries, such as the consumer electronics and automotive industries, have embraced new technology pathways. Other industries, such as the aerospace industry, have traditionally been reluctant innovators. While this reluctance often stems from an abundance of caution and conservatism, it points to a more fundamental gap between engineering research and industrial technology adoption or commercialization. Commonly referred to as the “Valley of Death”, this talk will explore the disconnect between the engineering research being published in peer-reviewed journals and what eventually benefits industry and the public. We will discuss examples of technologies that successfully found their way into industrial applications, and other notable ones that did not. Most importantly, this talk will demonstrate how the Manitoba aerospace community is bucking the trend, highlighting the advances Manitoba has made, making us a leader in aerospace innovation.

BIO Dr. Philip Ferguson holds a Masters and PhD from MIT in Aerospace Engineering. After graduation, he developed attitude control systems for small space telescopes at Microsat Systems Canada, eventually becoming the Engineering Manager. Dr. Ferguson then worked on the RADARSat Constellation Mission at Magellan Aerospace, Winnipeg, eventually becoming the Engineering Manager for the electrical and software engineering teams. Later, Dr. Ferguson became the Vice President of Product Development at PrecisionHawk, where he led the drone engineering team. Dr. Ferguson currently holds the NSERC / Magellan Aerospace Industrial Research Chair in Satellite Engineering at the University of Manitoba. His research focuses on new spacecraft manufacturing and control technologies that can improve satellite reliability while reducing the cost and design times, thereby improving the accessibility of space.