



The Convergent Innovation Webinar Series:

Inventing “One-World” Solutions for Lifelong Wellness and Sustainable Economic Growth

Applied Complexity: From Epistemic Drift to Epistemic Shift



William Sutherland, MD is a general practice physician presently working in primary mental healthcare, general practice psychotherapy, and functional medicine. He is the innovator of the Complexity Medicine paradigm and the author of the book on the subject, *Grand Rounds: Healing Wisdom for a Complex World*. Complexity Medicine, by answering the call towards greater holism, looks at the embodiment of individual, cultural, and ecological health from an aesthetic, patterned, relational, and systems-based stance. He is a graduate of the Michael G. DeGroot School of Medicine at McMaster University and has completed a residency in rural family medicine. Presently, he is an adjunct faculty member through the School of Environment, Resources, and Sustainability at the University of Waterloo and an External Affiliate Researcher at the Waterloo Institute of Complexity and Innovation (WICI). Research, discussion, and teaching interests include complexity and health, second-order cybernetics, systems biology and physiology, indigenous ways of knowing, radical constructivism, and epistemological and ontological considerations within the complexity sciences.

July 16, 2020

11:00 am EST

(2 hrs in length)

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Chair: Laurette Dubé (Scientific Director of MCCHE)

Co-Chair & Moderator: John G. Keogh (Managing Principal, Shantalla Inc. Toronto)

ABSTRACT: One of the commonly cited criticisms leveled against complexity science specifically, and system’s thinking broadly, is that although it provides a new lens of analysis and a novel framework for understanding our world in its interrelationships, however, this understanding has not brought about sufficient societal change when compared against its reductionist brethren. Conversely, a reductionist-positivist-materialist approach has rendered a tremendous change in the world; yet at cost of unintended consequences now presenting us with a series of interconnected, unmitigated existential and catastrophic risks, and a host of wicked problems at a global scale. How then does one engage in transforming a complex world, in a complex time, complexly? This webinar will look to what has been called the “original science of complexity”; the Cybernetic school of thought, utilizing the specific distinction between notions of first-order and second-order understandings of science and its applied offspring (medicine, engineering, economics, etc.) as a way of shifting from an understanding “about” systems, to one of participation “within” systems to help midwife movements of change in the world that could be considered ecology wise. In this talk, we will examine the first-principles of a second-order complexity such that we may better move in the world as effective agents of systemic transformation in answer to the existential challenges of our times.

Panel Discussion: A multi-disciplinary panel will follow the presentation to advance convergence science and innovation on the multiscale mechanisms for behavioral change and ecosystem transformation at scale for solutions to COVID-19 recovery and beyond. Taking the health sector as entry point, the panel will also address challenges at the juncture with agriculture and food that are also tied to the interface between complex and dynamic system of systems.

ABOUT THE SERIES: The **Convergent Innovation Webinar Series** features cutting edge science, technology and innovation in agriculture, food, environment, education, medicine and other domains of everyday life where grand challenges lie at the convergence of health and economics. Powered by data science, artificial intelligence, and other digital technologies, this disciplinary knowledge bridges with behavioural, social, humanities, business, economics, social, engineering, and complexity sciences to accelerate real-world solution at scale, be it in digital or physical contexts. Initiated in the agri-food domain, the series is now encompassing other grand challenges facing modern and traditional economies and societies, such as ensuring lifelong wellness and resilience at both the individual and population levels.

Global Pulse Innovation Platform:



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