



**C2E2SPOTLIGHT**



**June 13, 2022**

## **Causal Epistemology: From Association to Precision Medicine**

How do we know that the vaccine works and that cancer treatment prolongs life? We see the treatment and we see changes in health. But we don't see a causal relationship. How do we know that one causes the other? It comes from reasoning. We reason that randomization makes treatment groups alike. We reason that stratification blocks covariation. We then credit the treatment with changes in health. We see association, rule out covariation, and declare causation.

What problem does causal epistemology face? You see, both causation and covariation manifest themselves as an association. And statistics cannot distinguish between them. In this talk, I will share with you the breakthrough that Prof Pearl has made by discovering and systematically exploring the Ladder of Causality. The main learning objective is understanding the different roles of seeing, doing, and imagining in making causal claims.

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C2E2 Spotlight is held monthly on the second Mondays of the month from 12:00 pm to 1:00 pm in the VGH Research Pavilion, Room 700, 7<sup>th</sup> Floor, 828 West 10th Avenue, Vancouver, BC.

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