

Contribution ID: 4061

Canadian Association of Physicists

Association canadienne des physiciens et physiciennes

Type: Invited Speaker / Conférencier(ère) invité(e)

## The road ahead for physicists to maximize innovation with a minimum of harm.

Tuesday 20 June 2023 13:35 (20 minutes)

With a career path spanning over 20 years across several continents, I followed and adapted to the opportunities as they arose. Beginning from an applied physics base, I have worked in; defense, solved product heat treatment problems using 1st principles physics, destroyed products, destroyed plasma coating machines, then designed and built them, developed thin film coating material solutions from cutting tools to solar panels to erosion-corrosion coatings in gas turbine engines. The path to success has been a constant battle of destruction and redesign to test new concepts and bring them to market.

This process of creative destruction got me interested in the innovation process and teams, then management, then complex systems.

Now I am involved in two very different but complimentary start-up companies, one in plasma physics that helps other companies grow, and one leveraging bleeding edge developments in theoretical and applied physics to apply a general physics solution to any problem. The interesting part is how the different experiences have required different physics skills sets, but there is one core feature from my physics training I have needed every step of the way - this I will share with you.

Today we stand at an inflection point for society, one where we can accelerate the innovative growth for humanity with a minimum of harm or hit a Fermi bottleneck. Let's focus on the former but be mindful of the latter.

## Keyword-1

industry

## Keyword-2

complex systems

Keyword-3

Author: Dr VOM BRAUCKE, Troy (GP Plasma LLC)

Presenter: Dr VOM BRAUCKE, Troy (GP Plasma LLC)

**Session Classification:** (DAPI) T3-5 Private Sector Physicists | Physicien(ne)s dans le secteur privé (DPAI)

**Track Classification:** Symposia Day (Tues. June 20) / Journée de symposiums (mardi, le 20 juin): Symposia Day (CAP/DAPI - ACP/DPAI) - Private Sector Physics | Physique du secteur privé