

12th International Symposium Honouring Noted Mathematical
Physicist Jean-Pierre Vigier

Scientific Dialectic in Physics: An Alternative to Russell, Popper and Kuhn

Akira Kanda¹, Renata Wong² and Mihai Prunescu³

¹ Omega Mathematical Institute/University of Toronto, Toronto, Ontario, Canada

² Department of Computer Science and Technology, Nanjing University, Nanjing, China

³ University of Bucharest, Romanian Academy of Science, Bucharest, Romania

E-mail: kanda@cs.toronto.edu, renata.wong@protonmail.com, mihai.prunescu@gmail.com

Abstract. It has been said that the advancement of physics is a dialectic process. Here we will consider how dialectic process contributed to the formation of modern physics. Facing a mountain of contradictions, it is time to reflect on the past and move forward.

“Without music, life would be a mistake.”

Friedrich Nietzsche

“Without logic, physics would be a mistake.”