

# Equivalent Formulations Of Special Relativity

Joshua Babic      Lorenzo Cocco

## **Abstract**

We will compare a geometric system for Minkowski spacetime with the hungarian school's axiomatization of special relativity in terms of observers and coordinate systems. We will argue that they are theoretically equivalent: two presentations of the same theory. We will show in particular that they are Morita equivalent, but not definitionally equivalent. This provides corroboration for the thesis that Morita equivalence is the right standard of equivalence. However, minor modifications to the hungarian dynamical approach will be recommended on philosophical grounds. The implications of these results will then be briefly discussed.