

# 4<sup>th</sup> International Conference on Physics

September 17-18, 2018 | Berlin, Germany

## An immanent-logical analysis of the foundations of SRT

**Bernardo Gut**

Volkshochschule beider Basel, Switzerland

Einstein's Special Theory of Relativity (SRT) belongs to the set of dogmatic–deducible theories. Einstein based the SRT on two postulates, which prescribe, with regard to certain settings, the kind of sensory appearances, i.e. observations, above all measurements, that are to be expected. Its postulates are:

1. Postulate of Relativity (= PoR), insisting that in inertial frames of reference  $K^0$ ,  $K'$  moving reciprocally at a constant speed  $|v|$  along their parallel  $x^0$ – $x'$ –axes identical laws of Nature have to be valid.

2. Postulate of Constant Velocity of Light (= PoL), initially declaring that for observers in  $K^0$  a light signal  $L^0$ , emitted by a source  $Q^0$  of  $K^0$  along its  $x^0$ –axis, moves at velocity  $|c|$ , independently of any motion of  $Q^0$ .

According to the PoR, the PoL must also hold good for observers in  $K'$ , but only so if symmetric premises to those valid for observers in  $K^0$  are given for observers in  $K'$  – this being a strict, irrevocable *conditio sine qua non*. Relativists, however, apply the PoL together with the PoR directly to  $L^0$ , without transferring the source of light from  $K^0$  to  $K'$ , i.e. without assembling in the frame of reference  $K'$  a symmetric configuration to the one previously established for the frame of reference  $K^0$ . This lack of symmetry means that relativists fail to apply either of the postulates properly; in fact, they suddenly change the meaning they had initially conferred to the two expressions 'PoR' and 'PoL', thereby transgressing the fundamental Principle of Identity. Furthermore, they break the Principle of Non–Contradiction, since they had previously declared the mutual relative speed of  $K'$  and  $K^0$  to be  $|v|$ , thereby implicitly inferring that the same real units were meant by the same terms (e.g. 'm' and 's' to specify velocity) in both frames of reference  $K^0$  and  $K'$ . It follows that the SRT is logically inconsistent; as such, it is not possible to corroborate the theory experimentally.

## Biography

Bernardo Gut went to the St. Andrew's Scots School, studied Science in Zürich, obtaining his PhD from the University of Zürich. He taught Science, Philosophy, and Spanish at the Gymnasium Münchenstein, near Basel, from 1967 till 2005. He has published more than 20 papers in several journals and written several books, above all on epistemology, consistency in set theory and in the theory of relativity, but also on biological subjects.

bernardo.gut@gmx.ch

## Notes: