

Review of: "Circuits, Currents, Kirchhoff, and Maxwell"

Lino Reggiani¹

¹ University Of Salento

Potential competing interests: No potential competing interests to declare.

The manuscript reports the main vision of the Author concerning currents and circuits and their physical interpretation in terms of classical physics elaborated around 1850 by Kirchhoff, and Maxwell. From an historical point of view Maxwell was the first one to introduce the displacement current while Kirchhoff was credited for the introduction of the laws to solve network of Ohmic resistors and time constant voltage source in terms of the conduction currents flowing through each resistance. It was proved that for EM fields with wavelength much larger than the dimensions of the circuit Kirchhoff laws are compatible with Maxwell equations. Therefore, the paper does not introduce any novelties on the subject. Rather the Author like to stress the exact character of both Kirkoff and Maxwell equations, when it is well known that Maxwell equations are the classical limit of quantum electrodynamics as shown by Planck in 1901. To this subject, the author should get acquainted with quantum computing, an updated subject in fast development. Unfortunately, I have strong concerns regarding the publishability of this manuscript.