

A Call For Links On The Relationship of Mathematics and Geometry to Reality (and Epicurus' view of the issue)

Post by "Cassius" of August 1, 2019 at 5:24 PM

Full Derek Abbott paper here: <https://ieeexplore.ieee.org/document/6600840>

Lots of good stuff in it:

"Hamming's paper marvels on how complex numbers so naturally crop up in many areas of physics and engineering, urging him to feel that "God made the universe out of complex numbers" [3]. However, for the engineer, the complex number is simply a convenience for describing rotations [7], and, of course, rotations are seen everywhere in our physical world. Thus, the ubiquity of complex numbers is not magical at all. As pointed out by Chappell et al. [8], Euler's remarkable formula $e^{-j\pi} = -1$ is somewhat demystified once one realizes it merely states that a rotation by π radians is simply a reflection or multiplication by -1 ."