1145-15-150   **David Hestenes*** (`hestenes@asu.edu`). *Quaternions in Geometric Algebra and Physics.*
Geometric Algebra and Calculus has emerged as a unified mathematical language for the whole of physics —- a language that simplifies formulation and solution of all fundamental equations while providing new insights into the geometric structure of physics [1]. In this talk I discuss how quaternions fit into Geometric Algebra with emphasis on rotational dynamics, spinors and Hopf fibrations in electrodynamics.

[1] Geometric Calculus website: <http://geocalc.clas.asu.edu>. Most papers and books on GC can be accessed or traced from here and links to other websites, especially one at Cambridge University. (Received August 09, 2018)