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David Hestenes* (hestenes@asu.edu), 2416 S. Palm Dr., Tempe, AZ 85282. *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 02, 2017)