1145-53-116   **Ryad Ghanam*** (`raghanam@vcu.edu`), Virginia Commonwealth University in Qatar, Doha, Qatar, and **Gerard Thompson**, University of Toledo, Toledo, OH. *Symmetries of the Eikonal equation.*

In this presentation we consider the n-dimensional Eikonal equation. We show that the infinitesimal algebra of Lie symmetries of the Eikonal equation is isomorphic to $o(n + 1, 2)$ when there are n independent variables. We also give an explicit basis that is aligned with the standard basis coming from the standard matrix representation of $o(n + 1, 2)$ thereby making it possible to read off inequivalent one-dimensional symmetry vector fields. The symmetries are used to construct various solutions of the Eikonal equation. (Received August 02, 2018)