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**Maxwell's Equations through the Major Vector Theorems**<sup>1</sup> JOSH STOFFEL, Ohio Northern University — Maxwell's Equations are four equations that describe some important principles of the physics of electricity and magnetism. First we briefly explore the physical significance of these equations by looking at their mathematical properties. Then, after a description of Stokes' Theorem and the Divergence Theorem from vector calculus, we bring Maxwell's Equations together to derive the wave equation, a foundational result in the electromagnetic theory of light.

<sup>1</sup>Advisor: Dr. K. Boyadzhiev, Ohio Northern University

Josh Stoffel Ohio Northern University

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