

**BOSTON  
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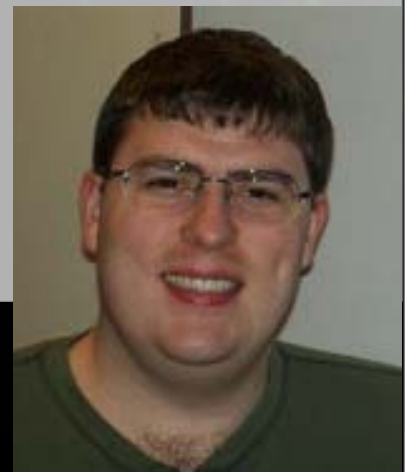
**Boston University College of Arts & Sciences  
Center for Space Physics**

**2018 - 2019 SPACE PHYSICS SEMINAR SERIES**

# Geospace Electrodynamics

Efforts to understand the near-Earth space environment and space weather increasing require studying geospace as a connected system of many parts. Historically, studies of the ionosphere, inner magnetosphere, outer magnetosphere, and solar wind have been performed by different groups of researchers using different mathematical formulations to describe space plasmas. In order to gain a holistic understanding of all of geospace, one needs to first understand the relationships between the many different mathematical formulations. All of the historical theories of geospace electrodynamics can be viewed as limiting cases of a single theoretical framework. This talk will review the historical formulations used in ionospheric physics, inner magnetospheric physics, and outer magnetospheric physics, and show how they are all interrelated.

Finally, many outstanding questions in geospace science exist at the interfaces between regions where the limiting approximations made in the historical theories are violated.



**Thursday, November 8th**

4:00 - 5:00 p.m.

725 Commonwealth Avenue | Room 502



**Roger Varney**

Center for Geospace Studies  
SRI International