**“The Life of James Clerk Maxwell”**

## IEEE MTT/AP Orlando Chapter & Raj Mittra Distinguished Lecture Program

## **DATE/TIME: Thursday, Jan. 28th, 2016 (5:00 PM-6:00 PM) HEC 113**

**SPEAKER:** Dr. James C. Rautio

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**ABSTRACT:**

James Clerk Maxwell stands shoulder to shoulder with Newton and Einstein, yet even those of us who have spent decades working with Maxwell's equations are almost totally unfamiliar with his life and times. This presentation, from the viewpoint of a microwave engineer, draws on many sources in providing an understanding of James Maxwell himself. What was Maxwell like as an infant? What was the tragedy at eight years old that profoundly influenced his life? What unique means of transportation did young Maxwell use to escape a cruel tutor? What memorable event occurred on his first day of school? When did he publish his first papers, and what were they about? What did Maxwell have to do with the rings of Saturn? Why did he lose his job as a professor? Why did he have a hard time getting another job? What was his wife like? What is Maxwell's legacy to us? The answers to these questions provide insight into Maxwell the person and add an extra dimension to those four simple equations we have studied ever since. There are no equations in this presentation. The presentation is appropriate for anyone with a general interest in the origins of modern physics. For electronic handouts for the lecture, visit www.sonnetsoftware.com and go to “Resources”, then “JC Maxwell Biography”.

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**ABOUT THE AUTHOR** James C. Rautio (S’77–M’78–SM’91–F’00) received the B.S.E.E. degree from Cornell University, Ithaca, NY, in 1978, the M.S. degree in systems engineering from the University of Pennsylvania, Philadelphia, in 1982, and the Ph.D. degree in electrical engineering from Syracuse University, Syracuse, NY, in 1986.

From 1978 to 1986, he was with General Electric, initially with the Valley Forge Space Division, then with the Syracuse Electronics Laboratory. During this time, he developed microwave design and measurement software and designed microwave circuits on alumina and on GaAs. From 1986 to 1988, he was a Visiting Professor with Syracuse University and Cornell University. In 1988, he joined Sonnet Software, Liverpool, NY, full time, a company he had founded in 1983. In 1995, Sonnet Software was listed on the Inc. 500 list of the fastest growing privately held U.S. companies, the first microwave software company ever to be so listed. Today, Sonnet Software is the leading vendor of high accuracy three-dimensional planar high-frequency electromagnetic analysis software.

# Dr. Rautio was the recipient of the 2001 IEEE Microwave Theory and Techniques Society (IEEE MTT-S) Microwave Application Award and the 2014 IEEE MTT Distinguished Service Award. He was appointed MTT Distinguished Microwave Lecturer for 2005 – 2007 lecturing on the life of James Clerk Maxwell. His efforts have also resulted in the preservation and restoration of Glenlair, Maxwell’s home.

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| **LOCATION: University of Central Florida**  **HEC 113** | **Organizer: Prof. Raj Mittra and**  **Michael Trampler**  **(904)556-9449, Michael.Trampler@gmail.com** |