



**IEEE Southeastern Michigan Section  
"Chapter IV" Speaker Series  
Thu, Feb 21, 2008, 5pm – 6pm  
Room #1500, EECS Bldg, North Campus, University of Michigan  
1301 Beal Ave, Ann Arbor, MI 48109**

**Sponsored by IEEE MTT, AP, ED Societies, U of M Amateur Radio Club,  
and The Radiation Laboratory at U of M**



## **"The Life of James Clerk Maxwell"**

**James C. Rautio, Ph.D.**  
IEEE/MTT Distinguished Microwave Lecturer

### **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](http://www.sonnetsoftware.com) and click on the large Distinguished Microwave Lecture Series" button at the bottom of the "News" section.

### **Speaker's Biography:**

James C. Rautio received a BSEE from Cornell in 1978, a MS Systems Engineering from University of Pennsylvania in 1982, and a Ph. D. in electrical engineering from Syracuse University in 1986. From 1978 to 1986, he worked for General Electric, first at the Valley Forge Space Division, then at the Syracuse Electronics Laboratory. At 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 at Syracuse University and at Cornell. In 1988 he went full time with Sonnet Software, a company he had founded in 1983. In 1995, Sonnet was listed on the Inc. 500 list of the fastest growing privately held US companies, the first microwave software company ever to be so listed. Today, Sonnet is the leading vendor of 3-D planar high frequency electromagnetic analysis software. Dr. Rautio was elected a fellow of the IEEE in 2000 and received the IEEE MTT Microwave Application Award in 2001 and is an adjunct professor at Syracuse University.

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