

# THE LOG PERIODIC

www.scvemc.org Santa Clara Valley Chapter of IEEE Electromagnetic Compatibility Society

## IEEE SCV EMC Society Meeting: Tuesday, January 11, 2010

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Time: Social 5:30 p.m. Presentation 6:30 p.m.

Place: Applied Materials Bowers Cafeteria  
3090 Bowers Ave., Santa Clara, CA 95051-0804

Subject: HEMP, IEMI and Severe Geomagnetic Storm Effects on Critical Infrastructures

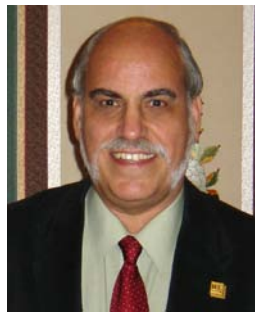
Speaker: Dr. William A. Radasky, President and Managing Engineer of Metatech Corporation, IEEE Fellow, P.E.

### Abstract:

Over the past 10 years there has been a growing awareness that the threat of high-altitude electromagnetic pulse (HEMP) from a nuclear detonation could be devastating to the commercial infrastructures of the United States, with special concern directed to the U.S. power grid. Interestingly it has also been established that a severe geomagnetic storm from a solar event could also create significant damage to our power grid that could also take many years to repair. Finally a new threat of intentional electromagnetic interference (IEMI) produced by electromagnetic weapons by criminals and terrorists raises a third specific electromagnetic threat.

This presentation will briefly review each of these threats and describe their potential impacts on the U.S. power grid. In addition, past work by the U.S. Congressional EMP Commission, the National Academy of Sciences and the International Electrotechnical Commission (IEC) will be mentioned. The talk will close with a brief summary of current actions being taken at FERC, NERC and the U.S. Congress.

### Speaker Bio:



Dr. Radasky received his Ph.D. in Electrical Engineering from the University of California at Santa Barbara in 1981. He has worked on high power electromagnetics applications for more than 42 years. In 1984 he founded Metatech Corporation in California, which performs work for customers in government and industry. He has published over 400 reports, papers and articles dealing with electromagnetic environments, effects and protection during his career. He is Chairman of IEC SC 77C and IEEE EMC Society TC-5.

Dr. Radasky is very active in the field of EM standardization, and he received the Lord Kelvin Award from the IEC in 2004 for outstanding contributions to international standardization.

### Refreshments:

Light Dinner and beverages will be served for a fee. Coffee, tea, and snacks are served free of charge.

$$\begin{aligned}\nabla \times \vec{E} &= -\frac{\partial \vec{B}}{\partial t} \\ \nabla \times \vec{H} &= \frac{\partial \vec{D}}{\partial t} + \vec{J} \\ \nabla \cdot \vec{D} &= \rho \\ \nabla \cdot \vec{B} &= 0\end{aligned}$$



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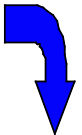
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