



**From
the
Chair**

It is indeed an honor to serve IEEE Pittsburgh Section as Chair for 2005. While serving as the Chair of Power Engineering Society (PES) and Industry Applications Society (IAS) during the last two years and being associated with the Section, I thank the past two Chairs – Harold Hagerty and Elena Schreiber – for giving me the necessary training for the current job.

In the new year, my goals are to increase the participation of the local members into various IEEE events and make the IEEE Pittsburgh Section as one of the best Sections in the world, much the same way we have established PES and IAS as the contenders for the Outstanding Chapter Award for 2004. In order to increase Section activities, we need to attract and retain volunteers. The Executive Committee meets every third Thursday of the month to plan for the Section activities. If you can spare some of your time for this great cause, please come to a Section meeting. There are still several committee positions that need to be filled. Any contribution – big or small – from you will add up and make our Section a model Section for the whole world.

I welcome your comments. You may call me at (724) 696-1611 or email at senkk@ieee.org.

- Kal Sen



**Rail Guns
Keith H. Sueker, PE**



Electromagnetic rail guns can accelerate projectiles to hyper velocities that chemical powder propellants cannot produce. Development activities have been in progress for some twenty years, and now the Army has funded a demonstration system. The Navy and Marine Corps have also expressed interest, the Navy with ultra-high energies. The electrical parameters of these systems are spectacular, with their current pulses of several million amperes and voltages to ten kilovolts. While the principles are easy to understand, reducing the theory to a practical system for mobile operation is a daunting task.

This program is underway at the Curtiss-Wright Electro-Mechanical Corporation technology center near Mt. Pleasant, PA. The overall system design will be presented as well as some of the design details for the air core generators and the million ampere SCR switches. A working rail gun pushes the design envelope in nearly all aspects, and it is a fascinating, multi-discipline project.

Mr. Sueker is a graduate of the University of Minnesota with a BEE degree and of the Illinois Institute of Technology with an MSEE. He was employed by Westinghouse for 19 years and then for 24 years by Robicon Corporation as engineering manager of the power systems group. In that position, he was responsible for large pulsed power supplies and many specialized applications of power electronics. Mr. Sueker is currently employed by Curtiss-Wright Electro-Mechanical Corporation on an Army development project. He is a Senior Member of the IEEE and a registered professional engineer in the Commonwealth of Pennsylvania.

Place: Westinghouse Energy Center, Monroeville
Date: February 23rd
Social: 6:30 PM Pizza and soda will be provided.
Program: 7:00 – 9:00 PM

This meeting will be of particular interest to the members who belong to the PES and IAS societies. For more information or to register, contact Chuck Urso at (412) 338-0700 or cURSO@ieee.org.

Directions: From downtown Pittsburgh, take the Parkway East Outbound to Exit 14A (Monroeville). Cross the traffic light (Business 22) and proceed on Rt. 48 South for two traffic lights. Turn left onto Northern Pike. Proceed East ~ 0.2 miles and turn right at the first traffic light onto Westinghouse Drive. Travel 0.7 mile to the three flags where the main entrance is located. Parking in the evening will be plentiful in the large area in front of the building. Enter the main entrance. Check with the security inside. You will be directed to the proper auditorium for the presentation.

From PA Turnpike, take Exit 57 (Monroeville). After the toll plaza, get in the left lane (Business-22). At the first light, turn left on to Rt. 48 South and follow the directions shown above.

New Officers for 2005

Congratulations to the new officers for 2005. Officer elections were held at the Executive Committee meeting on January 20th, 2005.

Chair

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