IEEE NEWS FOR JANUARY 2008

Rochester Section Meeting Tuesday, January 8, 2007

The next Rochester Section business meeting is on Tuesday, January 8, 2007 at Noon, at the Shanghai Restaurant, 2920 West Henrietta Road, just south of the intersection with Brighton-Henrietta Town Line Road. All IEEE members are welcome to attend this meeting, meet your officers and have lunch for just $3.00.

Section Officers for 2008

The election for Section officers for 2008 took place at the December meeting. The new officers for 2008 are:

Chair: Jayanti Venkataraman
Vice-Chair: Paul Lee
Secretary: Francesca Polo
Treasurer: Alexander Loui
Awards Chair: Jean Kendrick

Geoscience and Remote Sensing Society Western New York Chapter

Date: Tuesday, January 22, 2008. Refreshments at 5:30 PM, meeting at 6:00 PM.
Location: Auditorium of the Chester F. Carlson Center for Imaging Science (Building 76), Rochester Institute of Technology campus
Speaker: Stephen Lach, Center for Imaging Science, Rochester Institute of Technology
Presentation Title: Semi-automated DIRSIG Scene Modeling from 3D Lidar and Passive Imagery

Abstract: The Digital Imaging and Remote Sensing Image Generation (DIRSIG) model is an established, first-principles based scene simulation tool that produces synthetic multi-spectral and hyperspectral images from the visible to long wave infrared (0.4 to 20 microns). Over the last few years, significant enhancements such as spectral polarimetric and active Light Detection and Ranging (lidar) models have also been incorporated into the software, providing an extremely powerful tool for algorithm testing and sensor evaluation. However, the extensive time required to create large-scale scenes has limited DIRSIG's ability to generate scenes "on demand." To date, scene generation has been a laborious, time-intensive process, as the terrain model, CAD objects and background maps have to be created and attributed manually. To shorten the time required for this process, we have developed a comprehensive workflow aimed at reducing the man-in-the-loop requirements for many aspects of synthetic hyperspectral scene construction. Through a fusion of 3D lidar data with passive imagery, we have been able to partially-automate many of the required tasks in the creation of high-resolution urban DIRSIG scenes. This presentation provides a description of the techniques we have implemented.

Biography: Stephen Lach is a doctoral candidate in the Center for Imaging Science at the Rochester Institute of Technology. His current research is based on autonomous 3D scene reconstruction which has entailed work in the fields of photogrammetry and computer vision, advanced lidar processing, hyperspectral image analysis, modern morphological processing, and multi-source data fusion. He received his B.S. and M.S. degrees in Electrical Engineering from Villanova University in 1996 and 1998, respectively.

Congratulations to our latest IEEE Senior Member

Congratulations to Francesca Polo, who was upgraded to Senior Member at the October meeting of the IEEE Awards & Advancement Committee. Francesca is in the Xerox Corporation Research Division, and is also an Adjunct Professor at Rochester Institute of Technology. She is a past-chair and co-founder of the Rochester Chapter of the IEEE Microwave Theory and Techniques Society, a past-chair of the E3 Fair, and served as chair for Region 1 on the IEEE Pre-college Education Committee. Francesca will serve as Secretary of the Rochester Section Executive Committee in 2008.