

Information Science and Technology Seminar Speaker Series



Frank Pabian

Los Alamos National Laboratory

“Geospatial Tools for Nonproliferation Analysis”

Wednesday, August 22, 2012

3:00 - 4:00 PM

TA-3, Bldg. 1690, Room 102 (CNLS Conference Room)

Abstract: This presentation focuses on the growing role and importance of imagery analysis for nonproliferation monitoring and verification applications and how commercial satellite imagery, together with the newly available geospatial tools, can be used to promote “all-source synergy.” As additional sources of openly available information, satellite imagery in conjunction with the geospatial tools can be used to significantly augment and enhance existing information gathering techniques, procedures, and analyses in the remote detection and assessment of nonproliferation relevant activities, facilities, and programs. Foremost of the geospatial tools are the “Digital Virtual Globes” (i.e., GoogleEarth, Virtual Earth, etc.) that are far better than previously used simple 2-D plan-view line drawings for visualization of known and suspected facilities of interest. Recent exemplar studies will be discussed to illustrate the role and value of this ongoing research at LANL.

Biography: Frank Pabian is the Senior Geospatial Information Analyst at the Los Alamos National Laboratory in the Global Security Directorate and a visiting scholar at CISAC. Frank has nearly 40 years in the nuclear nonproliferation and satellite imagery analysis fields including 30 years with US National Laboratories. During 1996-1998, he served as Nuclear Chief Inspector for the United Nation’s International Atomic Energy Agency (IAEA) during ground inspections in Iraq, focusing primarily on equipment/materials “Hide Sites”, and “Capable Sites” that were deemed potentially associated with weapons of mass destruction development and/or production.

His responsibilities at Los Alamos National Laboratory include “Rest-of-World” infrastructure analysis involving the exploitation of all-source information, particularly commercial satellite imagery in combination with openly available geospatial tools for visualization. Frank has published in numerous peer-reviewed scientific journals on the use of commercial satellite imagery for treaty verification and monitoring, and his work has been featured on magazine covers and in textbooks for training in the nonproliferation and intelligence professions. Frank is a recipient of the US Intelligence Community Seal Medallion (gold medal) for “sustained superior performance” for Nuclear Non-Proliferation Treaty verification support to the IAEA during South Africa’s denuclearization, and for associated discoveries derived from original analysis of all-source, including open source, information. Frank is also a “Certified Mapping Scientist, Remote Sensing” with the American Society for Photogrammetry and Remote Sensing (ASP&RS).