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A Computer Vision System for Aerosol Can Recognition in X-ray Imagery of Passenger Carry-on Baggage.

Monday November 1, 2004
10:30 a.m., Thornbrough 204
University of Guelph

Abstract:

This seminar will present progress on the development of a computer vision system for the automatic recognition of aerosol cans in X-ray images of passenger carry-on baggage. Computer vision systems can typically be divided into three stages: object segmentation, feature extraction, and feature analysis. In this problem, the primary challenge appears to be in the first stage, as the objects to be identified are difficult to segment correctly from their background. Without good segmentation of the object, it is difficult for a computer vision system to be able to correctly recognize the objects of interest. In this presentation we show a number of approaches to address this problem and demonstrate their effects on the final results of the computer vision system.

Bio:

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Dr. Paranjape's main research interests are in the development of Applications for Mobile Agent Systems. There are three main foci to this work: Analysis and Retrieval of Medical Data from Distributed Databases, Modeling of Societies, Economic systems and E-commerce and 3D Graphic Visualization of Agent Societies. In addition, he has research interests in the extraction of meaningful information from signals and images using methods of Digital Signal Processing, Computer Vision and Statistical Analysis. Dr. Paranjape has worked as Research Scientist, Software Engineer, Project Leader, and Project Manager in Canadian Industry. He is currently Professor and Chair of Electronic Systems Engineering at the University of Regina.