

### **Abstract**

Forensic odontology has long been carried out by forensic experts of law enforcement agencies for postmortem identification. We address the problem of developing an automated system for postmortem identification using dental records (dental radiographs). This automated dental identification system (ADIS) can be used by law enforcement agencies as well as military agencies throughout the United States to locate missing persons using databases of dental x rays of human remains and dental scans of missing or wanted persons. Currently, this search and identification process is carried out manually, which makes it very time-consuming in mass disasters. We propose a novel architecture for ADIS, define the functionality of its components, and describe the techniques used in realizing these components. We also present the performance of each of these components using a database of dental images.