

# A New Method for Automatic, Real-Time Face Detection and Expression Recognition

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## TECHNOLOGY DESCRIPTION

University researchers have invented a method for automatic, real-time face detection and expression recognition that is robust for unconstrained situations such as free human motion, varied facial expressions, and many other human and machine factors. The main application has been in human-robot and human-computer interactions, though security applications are also well within reach. Other applications include market surveys, psychological assessment, truth quantification, and automatic tutoring systems.

## PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	7,624,076	11/24/2009	2003-227
United States Of America	Issued Patent	7,587,069	09/08/2009	2003-227
United States Of America	Issued Patent	7,379,568	05/27/2008	2003-227

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## OTHER INFORMATION

### KEYWORDS

robots, human-machine interface,  
security, smart environments

### CATEGORIZED AS

- ▶ **Imaging**
  - ▶ 3D/Immersive
  - ▶ Other
  - ▶ Security
- ▶ **Sensors & Instrumentation**
  - ▶ Other
  - ▶ Physical Measurement

### RELATED CASES

2003-227-0