

# DEVICE-FREE HUMAN IDENTIFICATION SYSTEM

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## PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Published Application	20220124154	04/21/2022	2018-132

## BRIEF DESCRIPTION

In our electronically connected society, human identification systems are critical to secure authentication, and also enabling for tailored services to individuals. Conventional human identification systems, such as biometric-based or vision-based approaches, require either the deployment of dedicated infrastructure, or the active cooperation of users to carry devices. Consequently, pervasive implementation of conventional human identification systems is expensive, inconvenient, or intrusive to privacy.

Recently, WiFi infrastructure, and associated WiFi-enabled mobile and IoT devices have become ubiquitous, and correspondingly, have enabled many context-aware and location-based services.

To address the challenges of human identification systems and take advantage of the popularity of WiFi, researchers at UC Berkeley developed a human identification system based on analyzing signals from existing WiFi-enabled devices. This novel device-free approach uses WiFi signal analysis to reveal the unique, fine-grained gait patterns of individuals as the "fingerprint" for human identification.

## SUGGESTED USES

- » Secure authentication
- » Tailor-made services

## ADVANTAGES

- » Lower cost
- » More convenient
- » Less intrusive

## RELATED MATERIALS

## ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- ▶ Unsupervised WiFi-Enabled Device-User Association for Personalized Location-Based Services
- ▶ Automatic Fine-Grained Radio Map Construction and Adaptation

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## INVENTORS

- » Spanos, Costas J.

## OTHER INFORMATION

### KEYWORDS

Software, Authentication, WiFi

### CATEGORIZED AS

- » **Communications**
  - » Wireless
- » **Computer**
  - » Software
- » **Environment**
  - » Sensing
- » **Security and Defense**
  - » Other
- » **Sensors & Instrumentation**
  - » Other

### RELATED CASES

2018-132-0

