



Monocular camera based time-to-intrusion estimation

A method for estimating the time-to-intrusion of a vehicle to a protected zone using only a monocular camera

IP Status: Provisional Patent Application Filed

Applications

- Protection of Vulnerable Road Users
- Cycling Safety
- Construction Safety

Technology Overview

Vulnerable road users such as cyclists and construction workers benefit from monitoring tools that can detect potential intrusion of vehicles into protected zones. Current approaches rely on expensive instrumentation such as Radar or LiDAR which can also be bulky. Researchers at the University of Minnesota have developed a method to estimate the time-to-intrusion of a vehicle to a protected zone around a cyclist or construction worker using only a monocular camera. This method allows a warning to be provided to at-risk individuals at a reduced cost, smaller form-factor, and without requiring any a priori knowledge of the surrounding vehicles.

Phase of Development

TRL: 3-4

Working prototype

Desired Partnerships

This technology is now available for:

- License
- Sponsored research
- Co-development

Please contact our office to share your business' needs and learn more.

Researchers

- [Rajesh Rajamani, PhD](#) Professor, Department of Mechanical Engineering

Technology ID

2024-129

Category

All Technologies
Engineering & Physical Sciences/Instrumentation, Sensors & Controls
Engineering & Physical Sciences/Transportation
Software & IT/Algorithms
Software & IT/Image & Signal Processing
Software & IT/Transportation

Learn more

