

# TEMPORAL AND SPECTRAL DYNAMIC SONAR SYSTEM FOR AUTONOMOUS VEHICLES

Tech ID: 32109 / UC Case 2021-012-0

## PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	12,181,615	12/31/2024	2021-012

## BRIEF DESCRIPTION

The field of autonomous transportation is rapidly evolving to operate in diverse settings and conditions. Critical to the performance of autonomous vehicles is the ability to detect other objects in the autonomous vehicle's vicinity and adjust accordingly. To do so, many autonomous vehicles utilize a variety of sensors, including sonar. Although these sensor systems have been shown to improve the safety of autonomous vehicles by reducing collisions, the sensor systems tend to be computationally inefficient. For instance, the sensor systems may generate large volumes of data that must be processed quickly (e.g., in real or near-real time). The performance of excessive computations may delay the identification and deployment of necessary resources and actions and/or increase the cost of hardware on the vehicle making it less financially appealing to the consumer.

Researches at UC Berkeley proposed algorithms for temporally and spectrally adaptive sonar systems for autonomous vehicles. These allow utilization of existing sonar system in an adaptive manner and in interface with existence hardware/software employed on autonomous vehicles.

## SUGGESTED USES

autonomous vehicle guidance in two and three-dimensional spaces

military radar systems

commercial sensors

## ADVANTAGES

Faster information processing without excess computation

Adaptive use of existing sonar systems

## RELATED MATERIALS

## ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

## CONTACT

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## INVENTORS

» Yartsev, Michael Moshe

## OTHER INFORMATION

### CATEGORIZED AS

- » **Communications**
- » Networking
- » Wireless
- » **Transportation**
- » Automotive
- » Other

### RELATED CASES

2021-012-0



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