



# **SNS COLLEGE OF TECHNOLOGY**

**(An Autonomous Institution)**

**COIMBATORE-35.**



Accredited by NBA – AICTE and Accredited by NAAC – UGC with ‘A+’ Grade  
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

## **DEPARTMENT OF AUTOMOBILE ENGINEERING**

### **COURSE NAME : 19AU0302 - RECENT TRENDS IN AUTOMOBILES**

**III YEAR / VI SEMESTER**

**Unit 5 – Adaptive Control Systems**

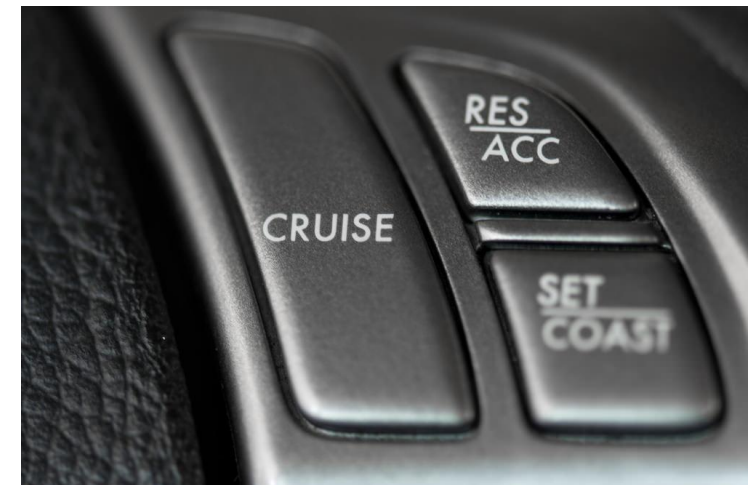
**Topic : Adaptive Cruise Control**



# INTRODUCTION TO CRUISE CONTROL

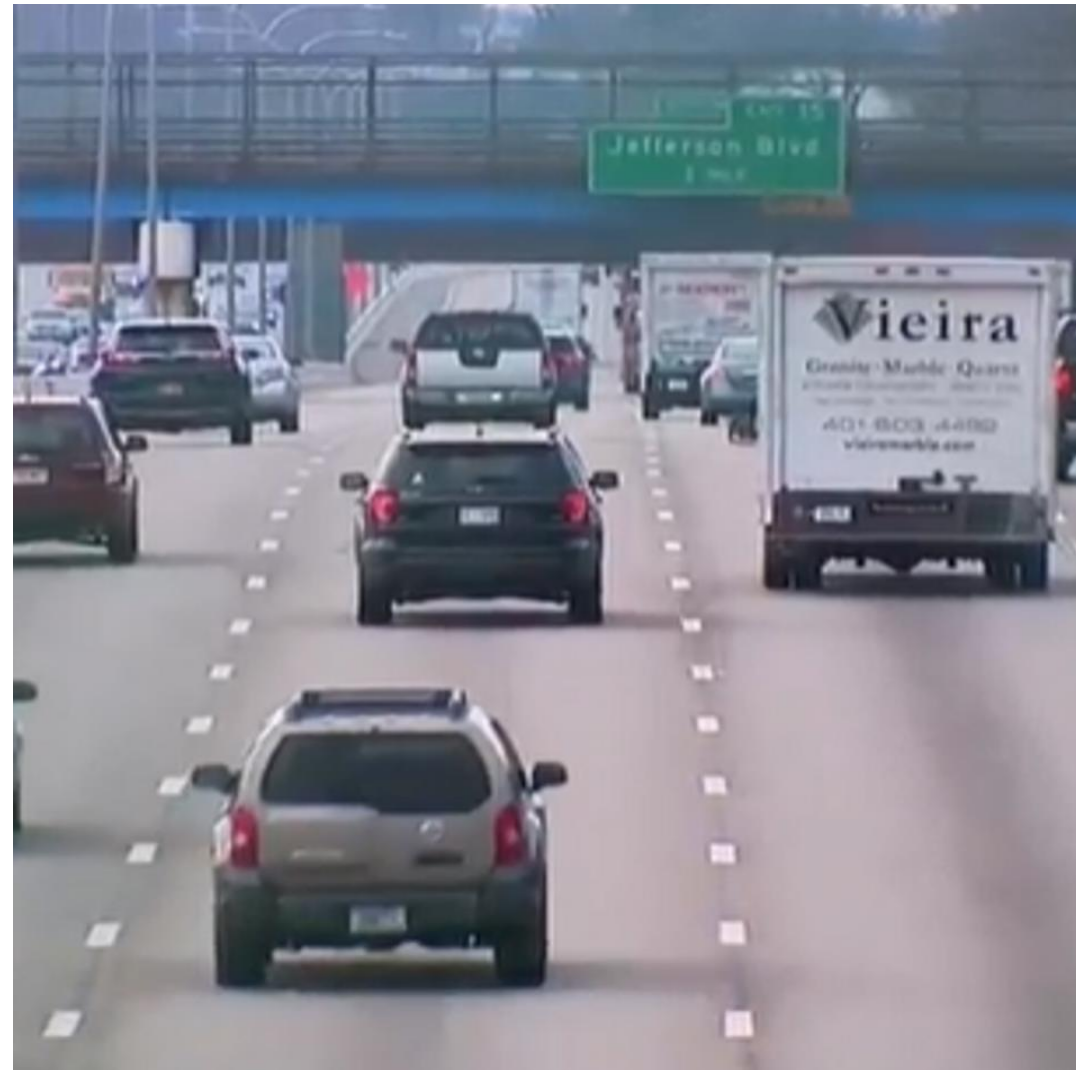


- Cruise Control is a system which is capable of maintaining the speed of a car at a desired level.
- The conventional systems are capable of taking over the throttle once the driver activates Cruise Control and sets the desired speed.
- This feature is very useful for long drives where the roads are fairly good and high speed cruising is possible.





# Need for Adaptive Cruise Control

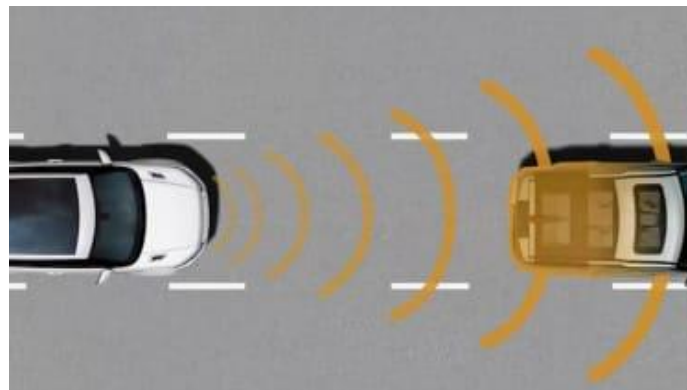




# INTRODUCTION TO ADAPTIVE CRUISE CONTROL



- **Adaptive cruise control (ACC)** is a technology that automatically adjusts the vehicle speed to maintain a safe distance from vehicles ahead.
- ACC technology is widely regarded as a key component of future generations of intelligent cars.
- They impact driver safety and convenience as well as increasing road capacity by maintaining optimal separation between vehicles and reducing driver errors.



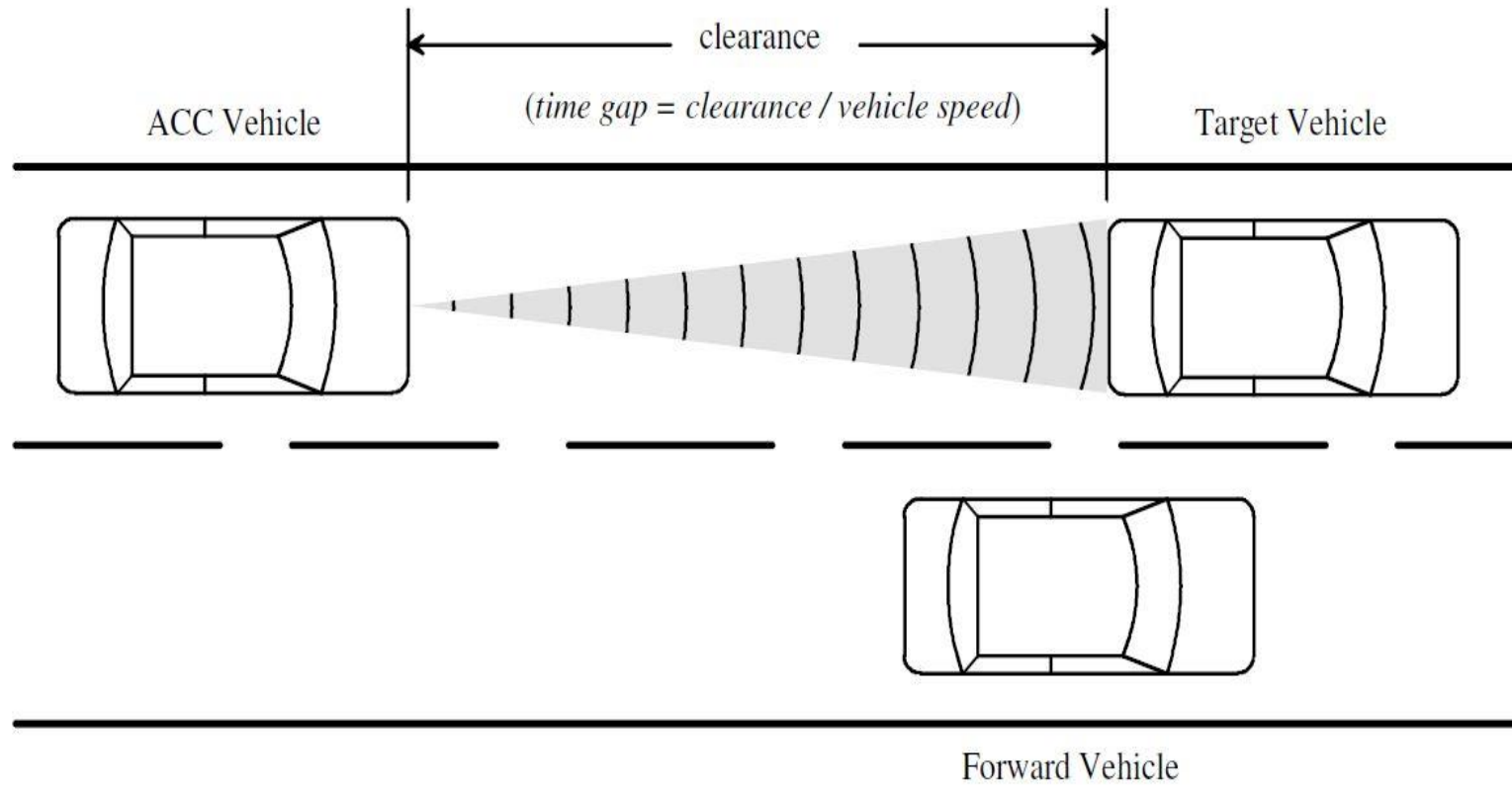


# COMPONENTS



- Sensors
- ACC Module
- Brake Control Module
- Engine Control Module
- Electronic Vacuum Actuator
- CAN







# ADVANTAGES



- The driver is relieved from the task of careful acceleration, deceleration and braking in congested traffics.
- A highly responsive traffic system that adjusts itself to avoid accidents can be developed.
- Since the braking and acceleration are done in a systematic way, the fuel efficiency of the vehicle is increased.

**ADVANTAGES**



# DISADVANTAGES



- A cheap version is not yet realized.
- A high market penetration is required if a society of intelligent vehicles is to be formed.
- Encourages the driver to become careless.





## REFERENCE



- [https://en.wikipedia.org/wiki/Adaptive\\_cruise\\_control](https://en.wikipedia.org/wiki/Adaptive_cruise_control)



THANK YOU !!!