



SNS COLLEGE OF TECHNOLOGY

Coimbatore-35
An Autonomous Institution

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

AUTOMOTIVE SAFETY & INFOTRONICS

UNIT V – INFOTRONICS FOR AUTOMOBILES

TOPIC 8: ACTIVE ROLL CONTROL SYSTEM



PRESENTATION OUTLINE



- Problem
- Solution
- Types of ARC
- Single Channel
- Double Channel
- Electric Vs Hydraulic





PROBLEM



- Body roll is caused by lateral acceleration
- Too much roll causes passenger discomfort
- Resulting in roll steer effects
- Adversely influence the driver's control responses



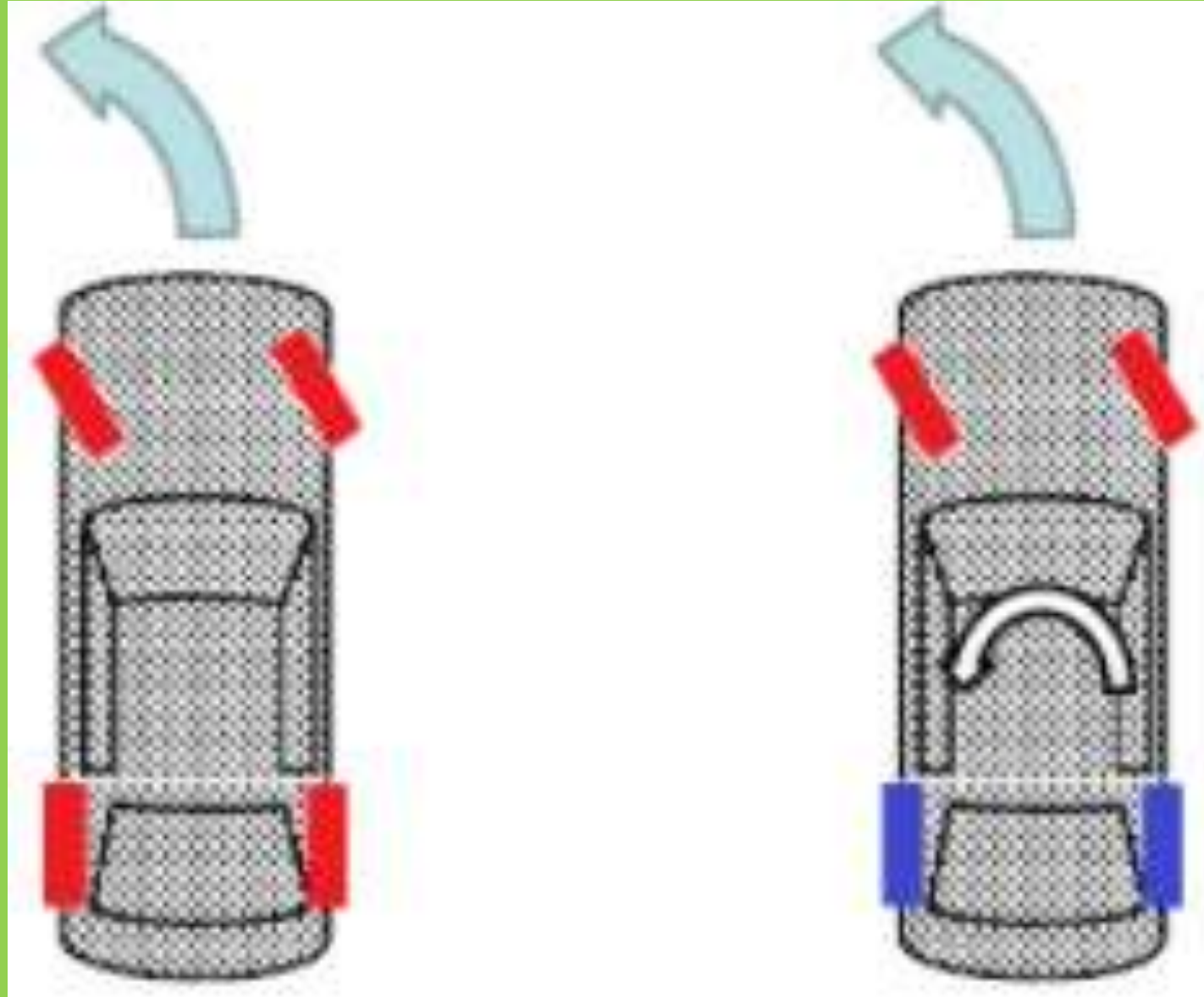
SOLUTION



- Reduce the roll angle by using Active Roll Control System



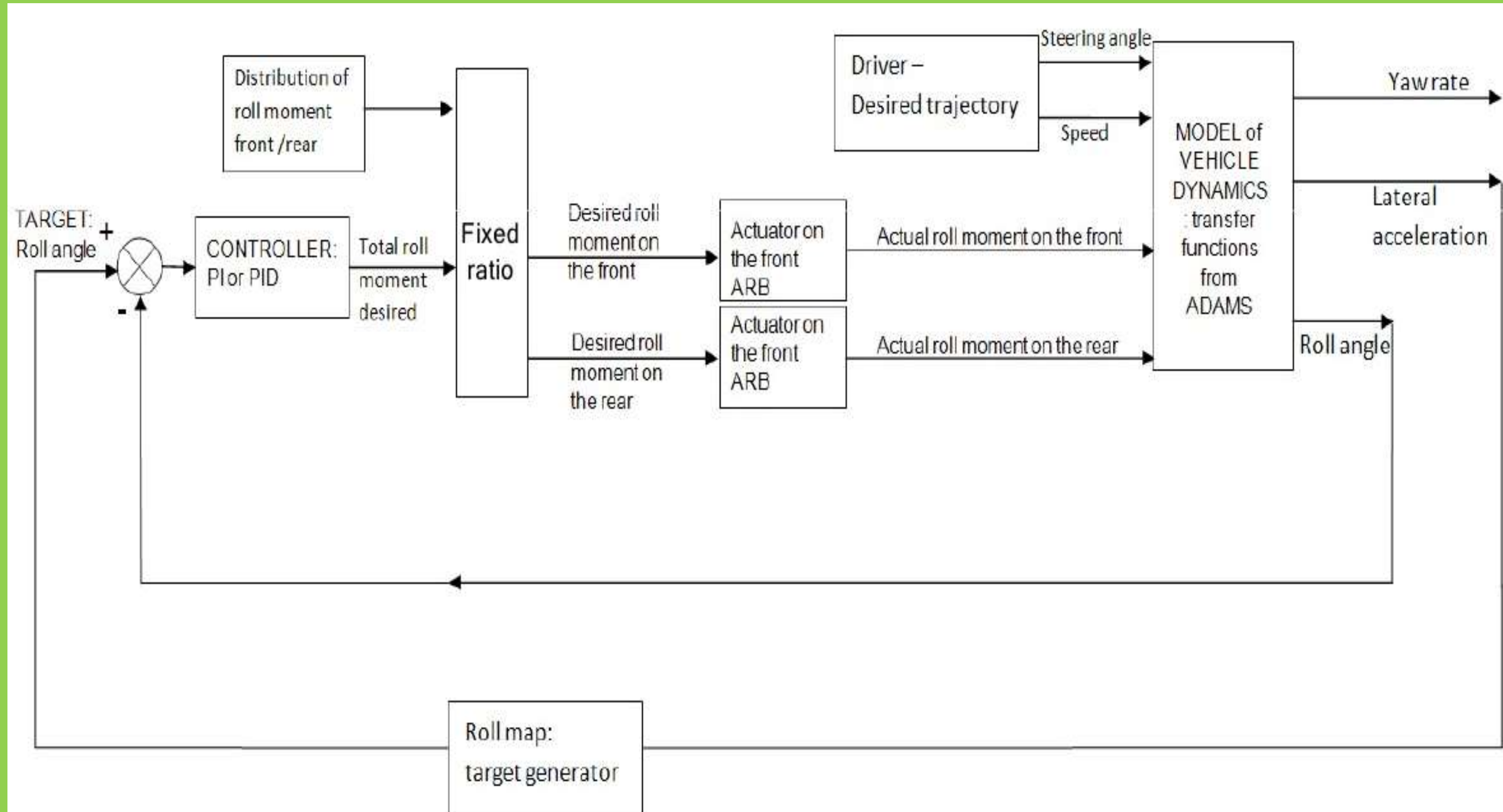
TYPES OF ARC



- Single Channel
- Double Channel

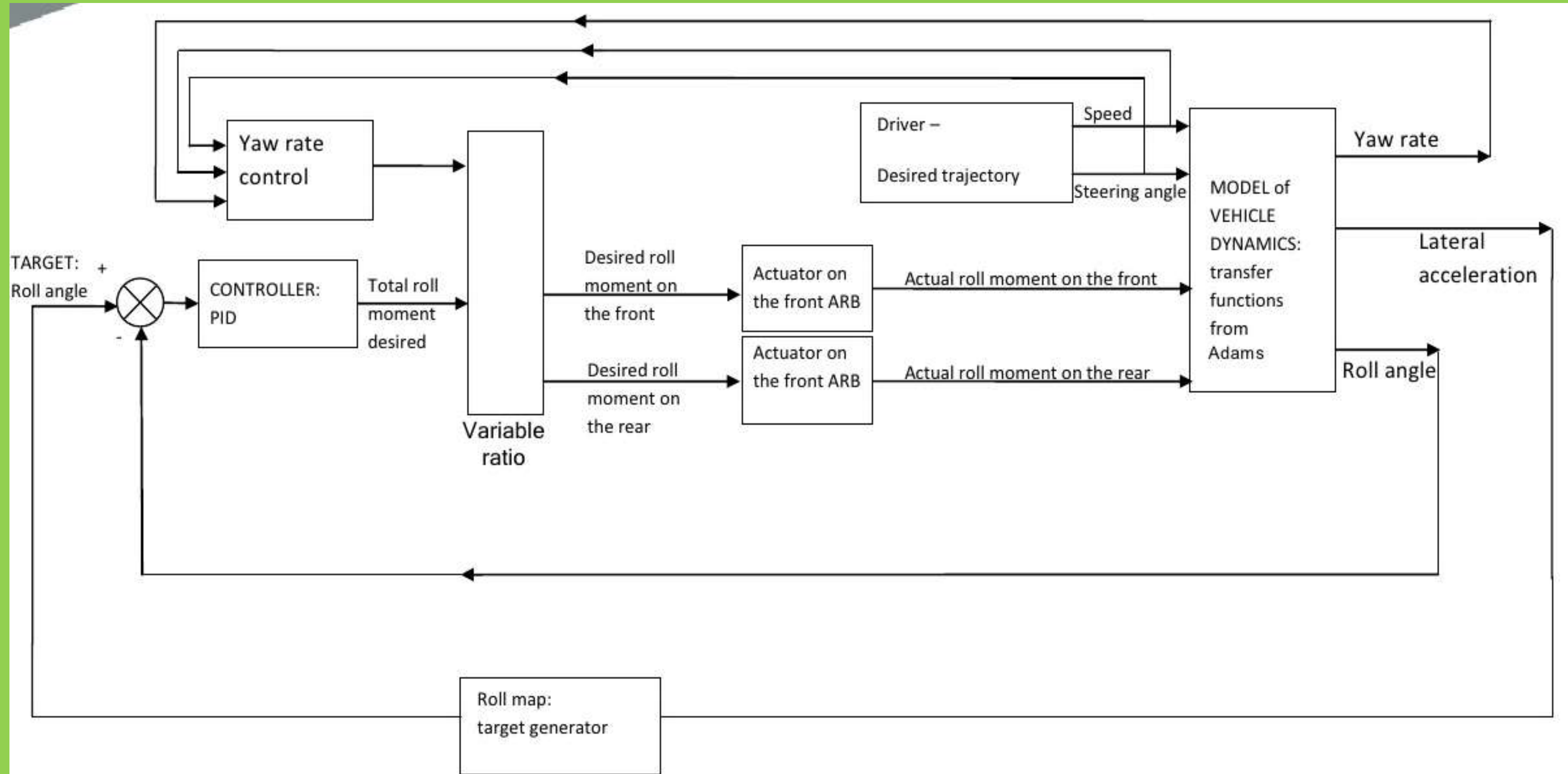


SINGLE CHANNEL ARC





DOUBLE CHANNEL ARC





ELECTRIC VS HYDRAULIC

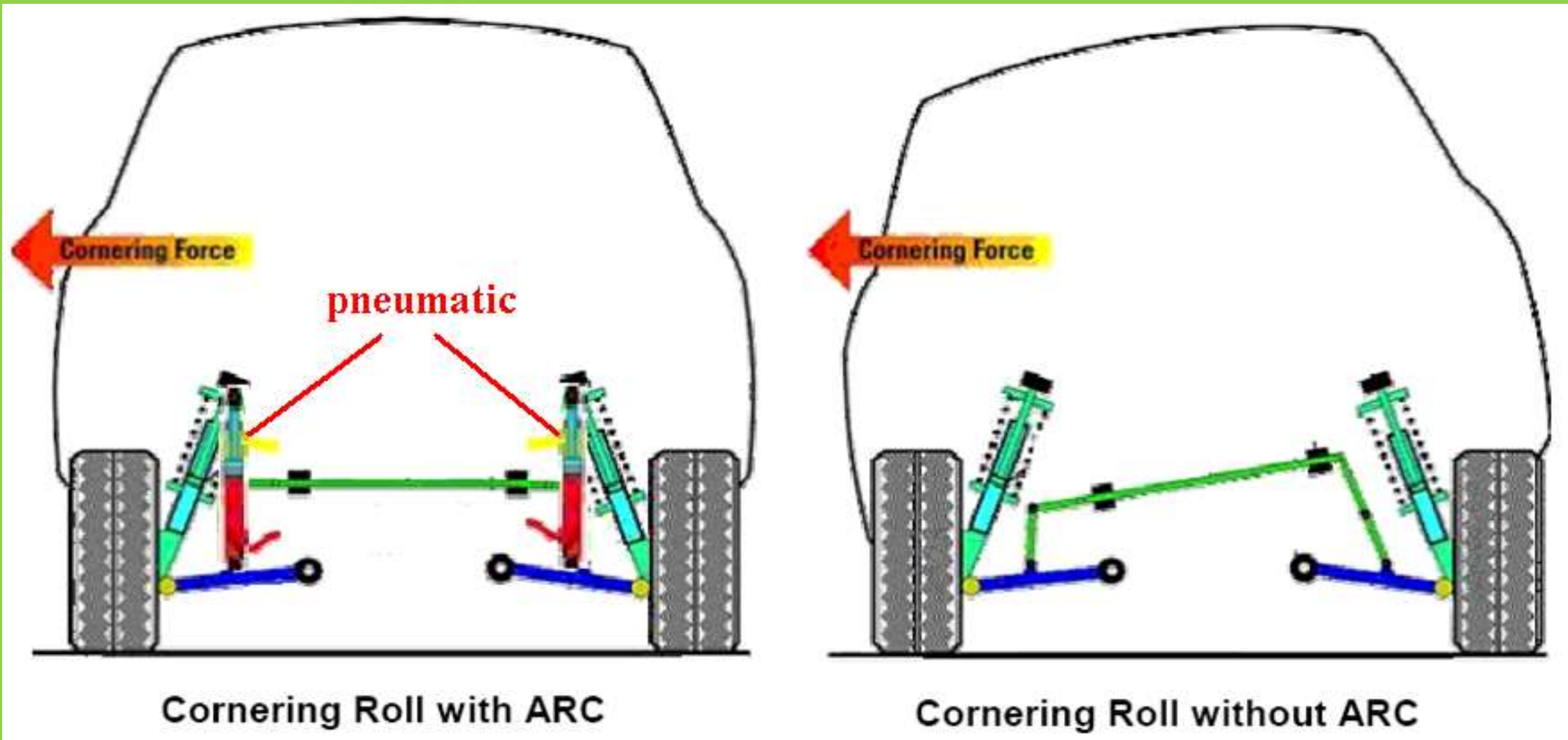


	Hydraulic ARC	Electric ARC
Response	Slow	Quick
Cost	Expensive	Cheaper
Design	Complex	Simple
Maintenance	Difficult	Easier
Adaptability	Difficult	Easier

EARC also offers fuel consumption reduction of 1 – 2% compared to HARC*



WITH VS WITHOUT ARC





PASSIVE SYSTEM VS ARC SYSTEM





REFERENCES



- <https://www.hyundai.news/eu/stories/the-evolution-of-cruise-control/>

Thank you