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Automobilski trening centar za Centralnu Srbiju



Univerzitet u Kragujevcu  
Mašinski fakultet Kraljevo

# *Laboratorija za pneumatiku i hidrauliku*

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## CILJ:

Unapredjenje veština i znanja iz oblasti hidraulike i pneumatike.

## AKTIVNOSTI:

Osavremenjavanje nastavnih programa i njihovo prilagođavanje potrebama automobilske industrije. Kursevi obuke za različite nivoe znanja polaznika.

Opremanje didaktičke laboratorije za hidrauliku i pneumatiku kao podrška praktičnom izvođenju nastave.



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## TEMATSKE CELINE:

- Hidraulika i pneumatika.
- Merenja i akvizicija podataka u fluidnoj tehnici.
- Upravljački sistemi u fluidnoj tehnici.
- Softverski alati u fluidnoj tehnici.
- Primena hidro-pneumatskih sistema u automobilskoj industriji.



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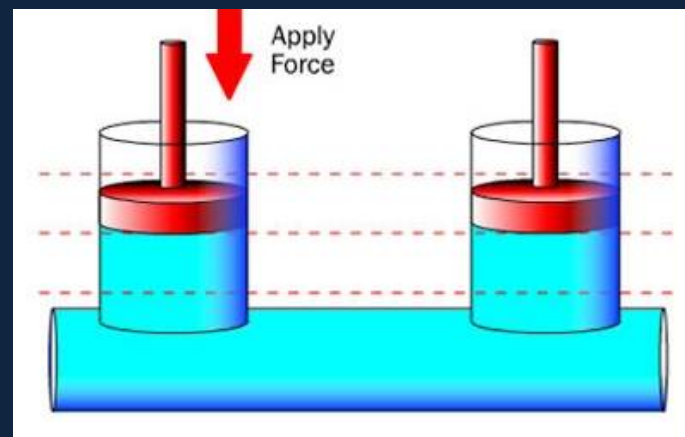
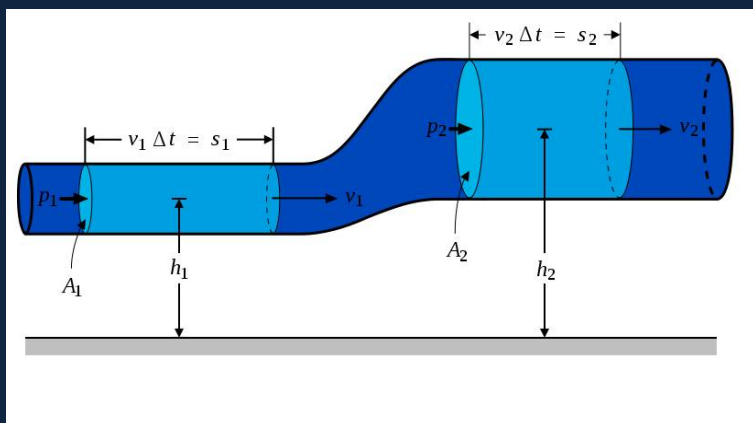
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## HIDRAULIKA I PNEUMATIKA:

### *Osnovni pojmovi i zakoni fluidne tehnike*

(radni fluid, gustina, pritisak, viskoznost, strujanje fluida, gubitak strujne energije, zakoni održanja, lokalni otpor, curenje, zaptivanje, podmazivanje)





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R.D.E.P.R.

Regionalni razvojni program Srbije

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## *Hidraulične i pneumatske komponente*

(izvori energije, upravljački elementi, izvršni organi, pomoćna oprema)





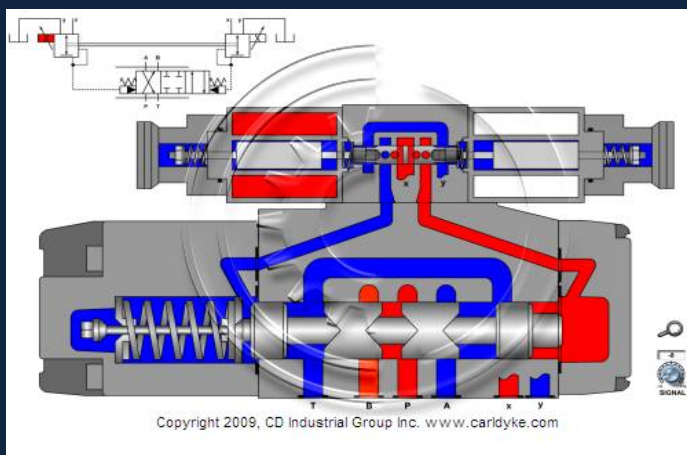
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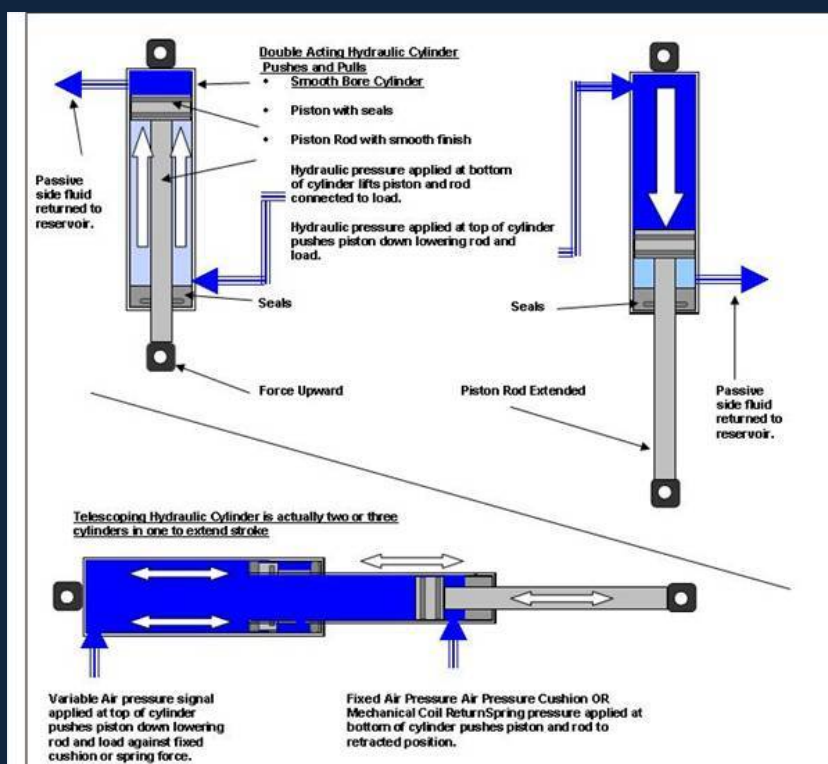
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Engineering Research Development Program

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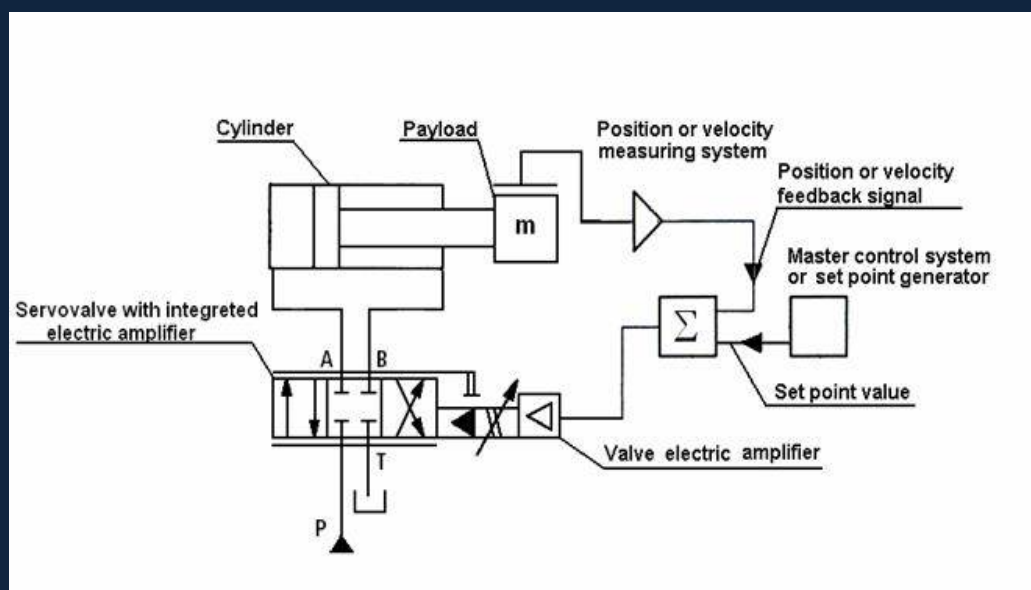
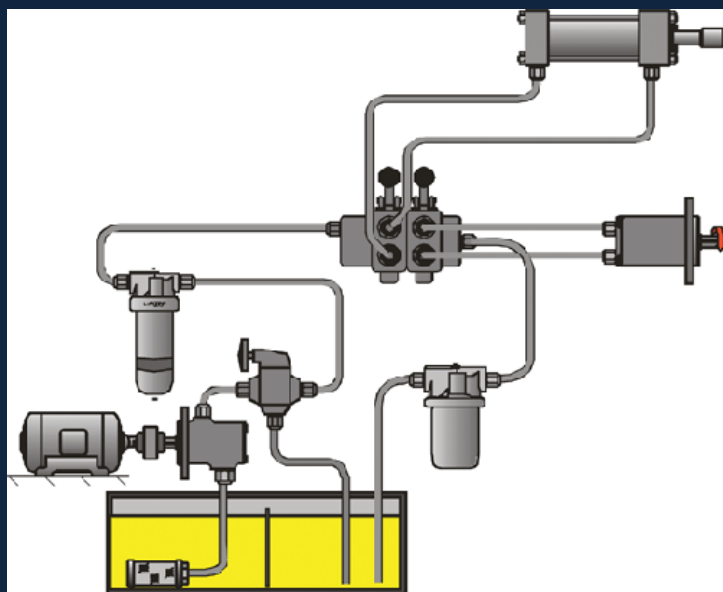
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## *Hidraulički i pneumatski sistemi*

(otvorena i zatvorena kola, sa regulacijom protoka, sa regulacijom pritiska, translatorno i obrtno kretanje)







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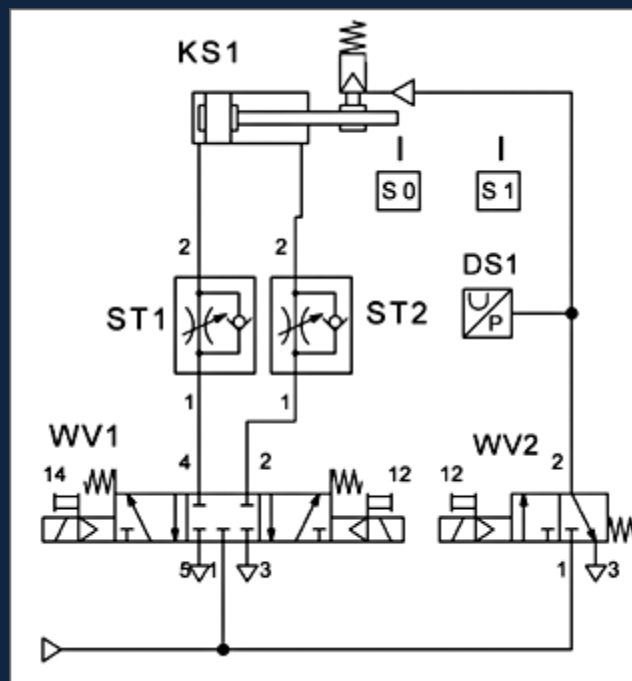


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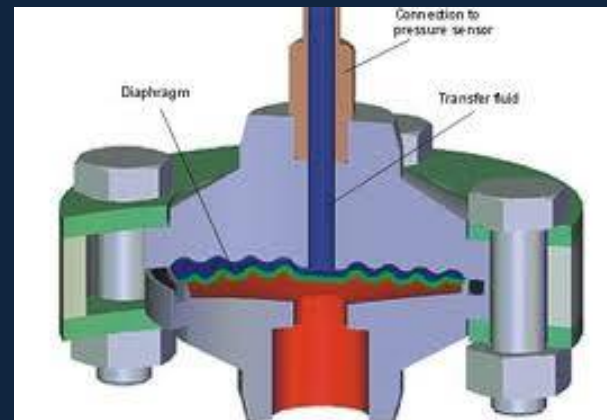
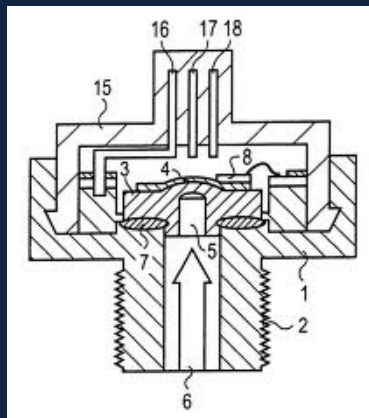
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## MERENJA I AKVIZICIJA PODATAKA U FLUIDNOJ TEHNICI

(merni pretvarači za pritisak, protok, temperaturu)







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(kondicioneri signala, AD konverzija, softver za akviziciju)





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## UPRAVLJAČKI SISTEMI U FLUIDNOJ TEHNICI

(algoritmi upravljanja i kontroleri)

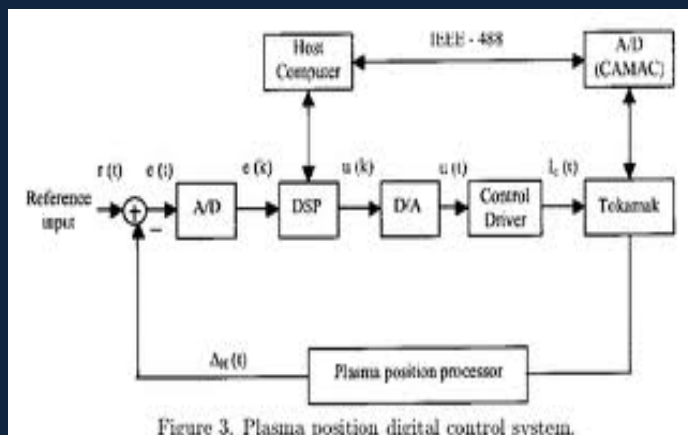
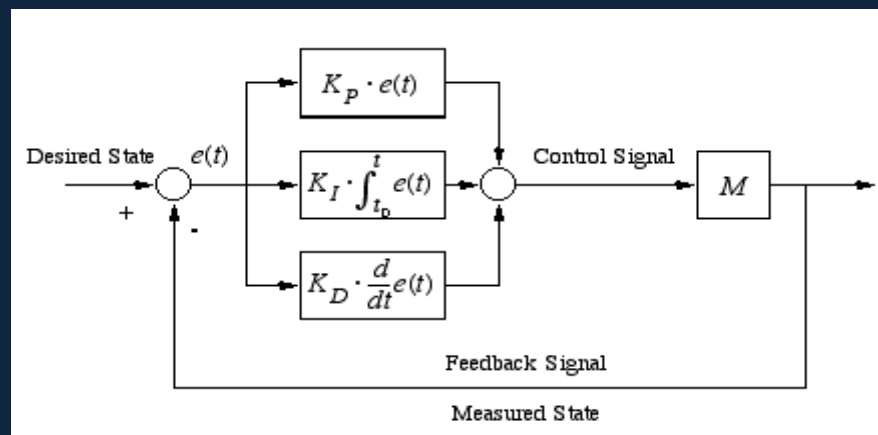


Figure 3. Plasma position digital control system.

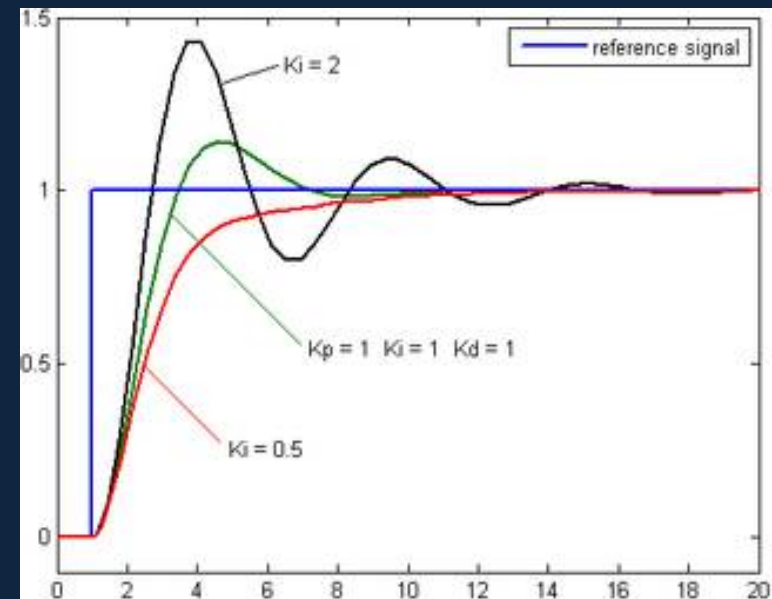




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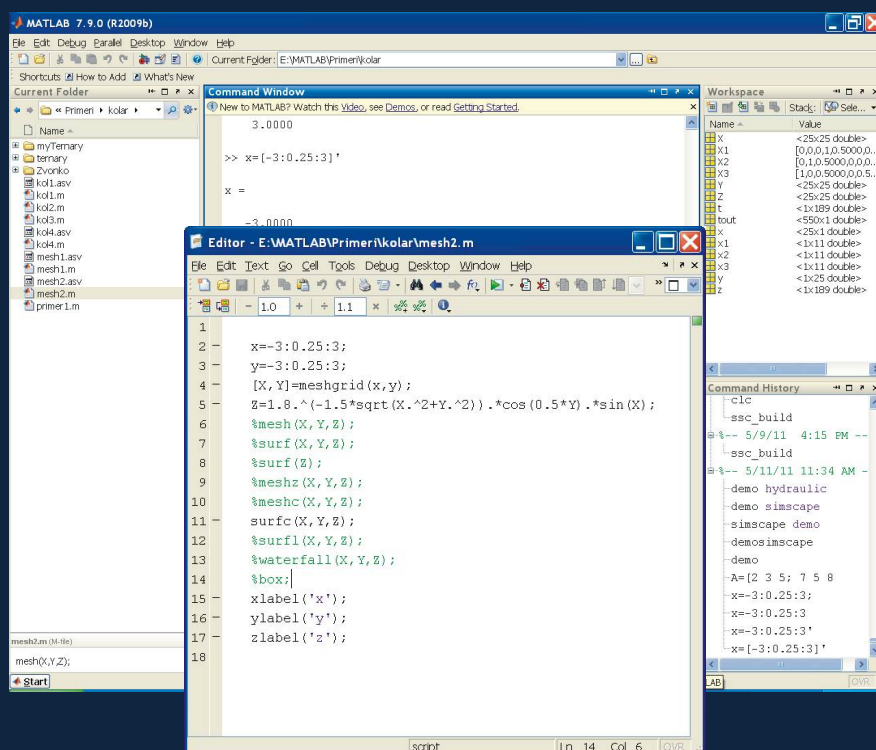
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# SOFTVERSKI ALATI U FLUIDNOJ TEHNICI

(softver za proračun i analizu, softver za modeliranje i simulaciju )







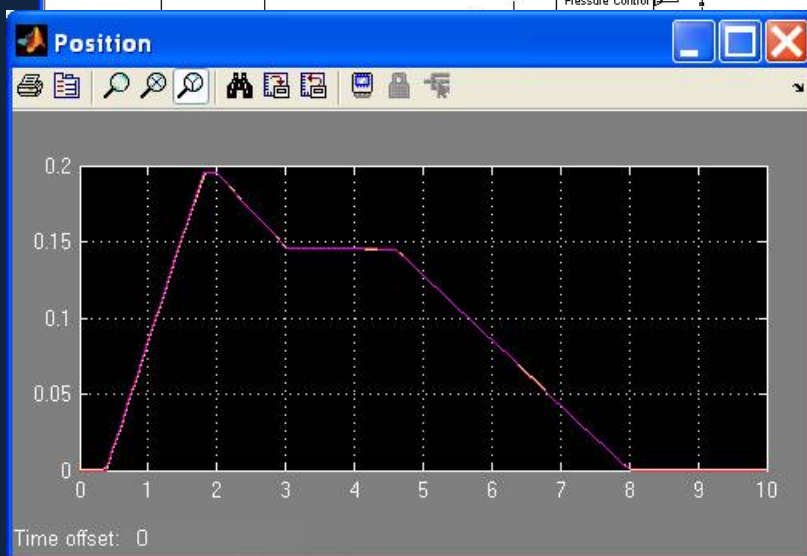
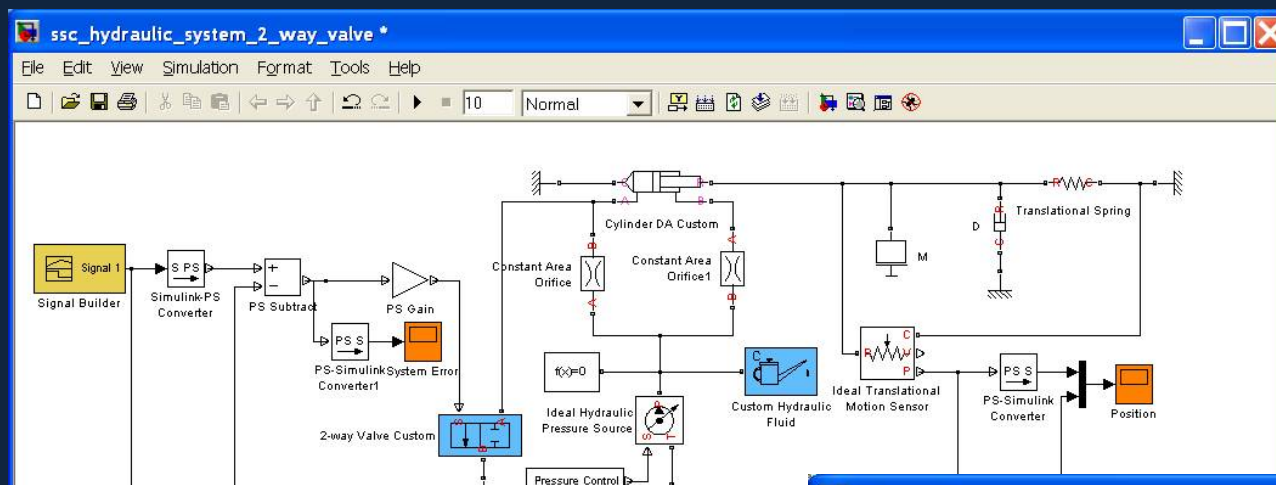
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Regional Development and Economic Program

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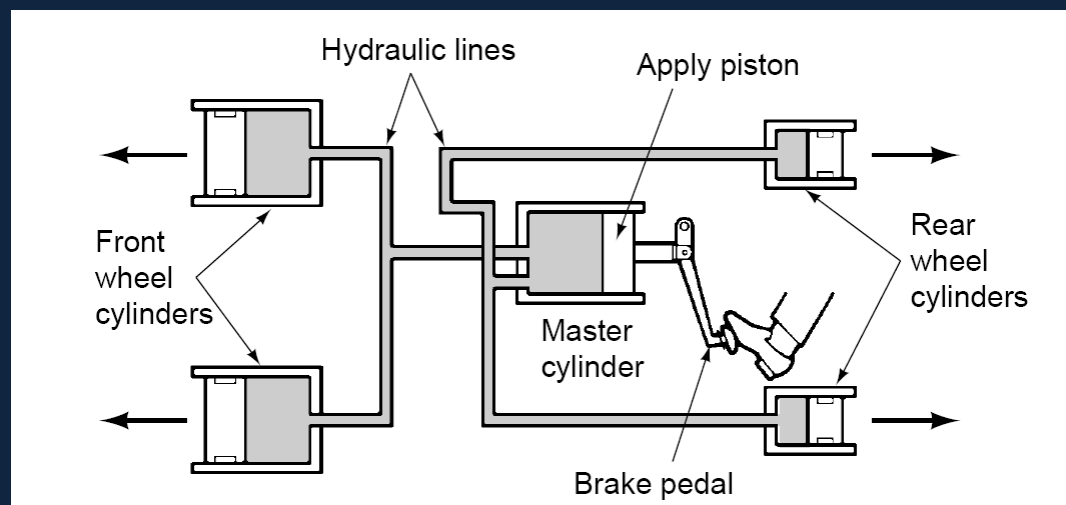
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## PRIMENA HIDRO-PNEUMATSKIH SISTEMA U AUTOMOBILSKOJ INDUSTRIJI:

### *Sistemi za kočenje*

(osnovi dinamike kretanja automobila, načini kočenja, parametri procesa kočenja, energetska analiza procesa kočenja, kočioni mehanizam, podešavanje kočnica )





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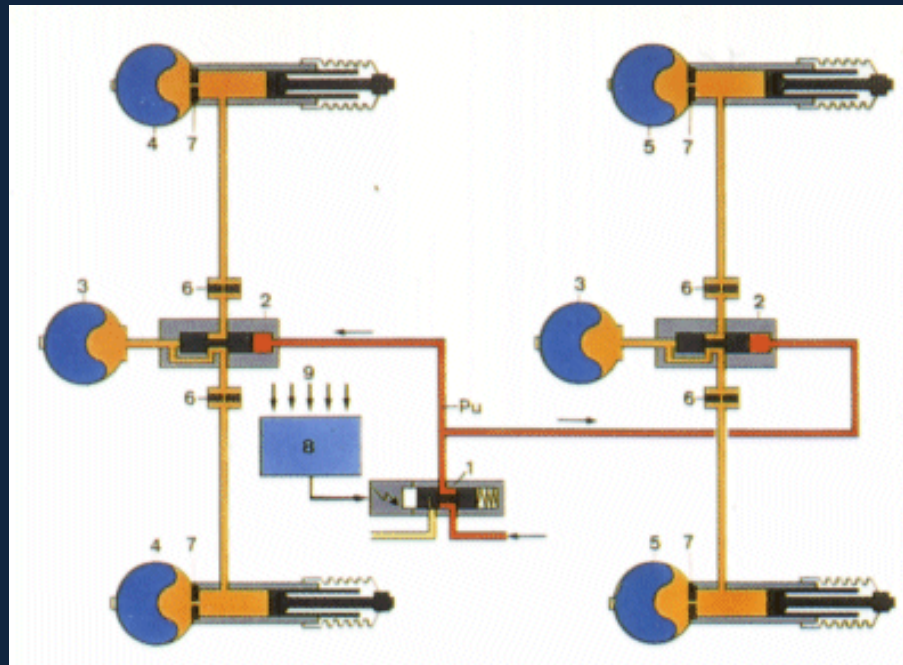
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## *Sistemi oslanjanja*

(tipovi sistema oslanjanja, MacPherson-ov sistem oslanjana, pneumatski sistemi oslanjanja, hidropneumatski sistemi oslanjanja, sistemi za upravljanjem nivoa)





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