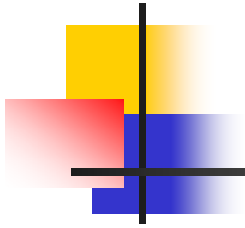


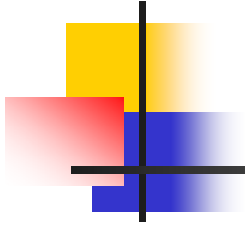
Electrical Measurements



⋮

DC) AC ,
(





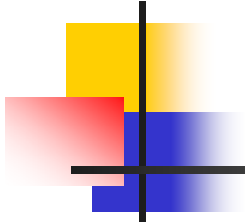
A/D
()

D/A

:

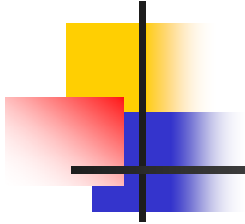
<http://ee.sharif.edu/~measurement>



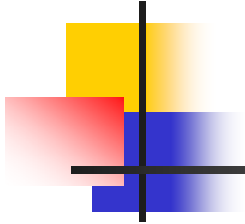


- Jones & Chin: Electronic instruments and measurements, 2nd ed. , Prentice Hall, 1991

- 1) Helfrick & Cooper: Modern electronic instrumentation and measurement techniques , 3rd ed. , Prentice Hall , 1990
- 2) Sawhney: A Course in Electrical and Electronic Measurements and Instrumentation, 2nd ed. , Dhanpat Rai & Sons , 1988

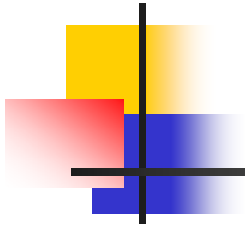


- 3) Wolf : Guide to electronic measurements and laboratory practice, 2nd ed., Prentice Hall,1983.
- 4)Wolf , Smith: Student reference manual for electronic instrumentation laboratories,Prentice Hall,1990.
- 5)Carr : Elements of electronic instrumentation and measurement, 3rd ed., Prentice Hall,1996.
- 6)Stout : Basic electrical measurements, 2nd ed. Prentice Hall of India,1981.



- 7) Buchla & McLachlan : Applied electronic instrumentation and measurement , Prentice Hall, 1992 .
- 8) Witte , "electronic test instruments , theory and applications" , Prentice Hall, 2nd ed. , 2002.

: (■
.



()

Jones



text

()

: Sawhney



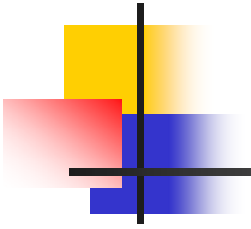
: Jones



: Jones



... data acq



.



.



.



.

.

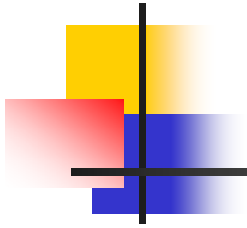
.



.



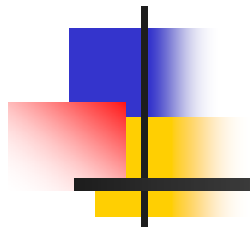
.



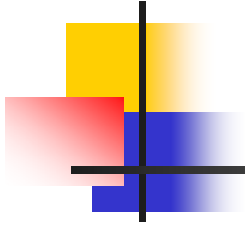
()

:





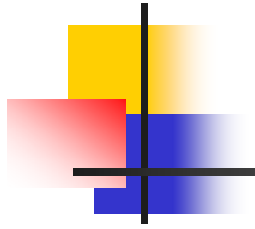
Introduction



⋮

- ■
- ■
- ■
- ■

()



⋮

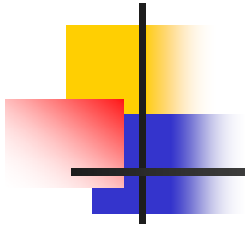
(control)

(maintenance)

(design)

(...

)



:

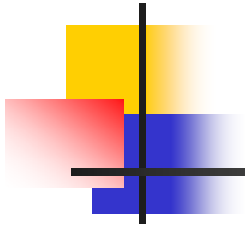


.

.

).

(.



:



.

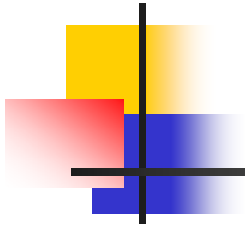
:



.()



.



NBS)

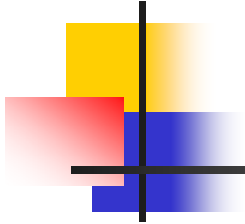
(National Bureau of Standard



()

International Bureau of Weights and Measures



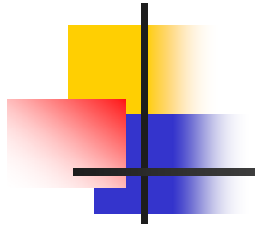


International standard

Primary standard

Secondary standard

Working standard



—

ppm

. 5ppm

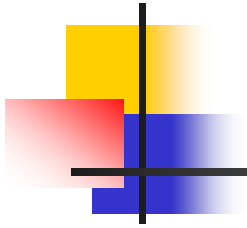
. cooper p.37_45

10^{-8}

NBS



...



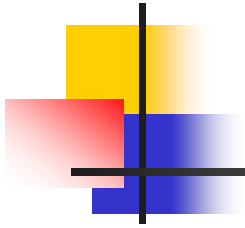
.2



.

()

.



:



)

.(



(

)

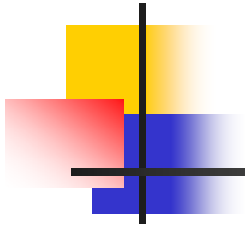
)

)

.

(

(



()

)

(

.(

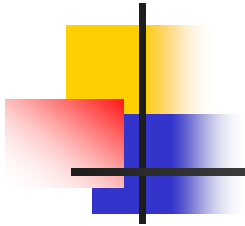
.

).)

(

.



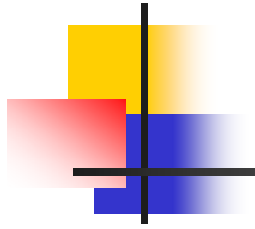


.

. (transducer)

.





:

.3

()
)

:

:

.1



...

(

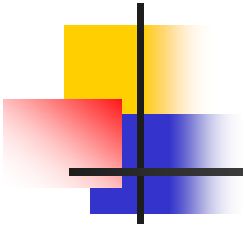
:

.2



.

.



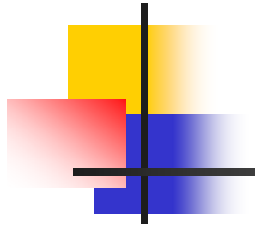
() .

)

. ()



.) () (... ()



:

.4

:

Transducer

:



Signal Modifier

:



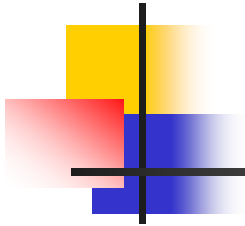
A/D

()

)...

F/V D/A

.(...



.



—

(Display)



(Record)



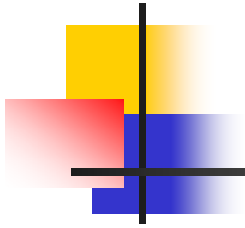
.

—

—

.(control)





(

)

:

ECG

)

.(...



.(

)