



Signals and Systems



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Signals & Systems

Signals: A signal maybe defined as the physical quantity that varies with times, space and other parameters

Systems: System is defined as a physical device that generates an output signal for an given input signals.



Classification of signals

- Continuous time signal & discrete time signal.
- Deterministic & Not deterministic signal.
- Even & Odd signal.
- Periodic & aperiodic signal.
- Energy signal & Power signal.
- Real & Imaginary signal.

Digital signal prefer over analog signal

- Flexible
 - Cost
- Accuracy
- Mathematical Processing
 - Easy storage
 - Adaptability
 - Repeatability
- Size and Reliability
- Universal Compatibility

DSP application

- Control, Ex- Robot
- Biomedical Engineering, Ex- City Scan
 - Graphics & Images, Ex- Animation
 - Voice & Speech, Ex- Text to speech
- Consumer Application, Ex- Mobile, TV
- Telecommunication, Ex- Video conference
 - Military & Defense.

Number of Independent Variable

One dimension signal: If a signal is a function of only one independent variable such signal is refer as one dimension signal.

Two dimension signal: If a signal is a function of two independent variable such signal is refer as one dimension signal.

Multidimension signal: If a signal is a function of more than two independent variable such signal is refer as one dimension signal.





Thank You!

