# CTFS

Complex Fourier Series

Combined Trigonometric Fourier Series

Trigonometric Fourier Series

Properties

: average value of over a single period.

If is real and even is real and even.

If is real and odd is purely imaginary and odd.

Response

If and , with system having frequency response , then

# CTFT

Definition

Inverse CTFT

Energy

Frequency response for LTI system

Notice that: for sinusoid input , the output is given by

Properties

Magnitude spectrum is even function and phase spectrum is odd function

Sampling theorem

Text, letter

Description automatically generated

# Laplace Transform

Definition

Inverse Laplace transform

Frequency response for LTI system

# DTFS

Definition

# DTFT

Definition

Inverse CTFT

# -Transform

Definition

Inverse -transform

# CTFS

## Properties

Text

Description automatically generated with low confidence

# CTFT

## Properties

Table

Description automatically generated

Text, letter

Description automatically generated

## Formulas

Table

Description automatically generated

# DTFS

## Properties

Graphical user interface, text

Description automatically generated

# DTFT

## Properties

Table

Description automatically generated

Graphical user interface, text

Description automatically generated

## Formulas

Text

Description automatically generated

# Laplace Transform

## Properties

Table

Description automatically generated with low confidence

## xFormulas

Table

Description automatically generated

Table

Description automatically generated

# -Transform

## Properties

Text

Description automatically generated with low confidence

## Formulas

A picture containing text

Description automatically generated

Text

Description automatically generated

# Basis function

## Impulse

A picture containing chart

Description automatically generated

## Unit step

Chart, box and whisker chart

Description automatically generated

## Ramp

A picture containing shape

Description automatically generated

## Rect

Chart, box and whisker chart

Description automatically generated

## Tri

Chart

Description automatically generated