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Use Laplace transform to solve DES Cch7)

Laplace transform belongs to one type of ",

, Let's first have some basic understanding about

About "integral transform":

O Integral transform is one technique to convert a function to another function by

For example:

Depending on the Kernel function used, there are many types of integral transforms:

3) The meaning of such integration is a measure of

Take Laplace transform for example

 $y(t) \longrightarrow Y(s)$

This Y(s) measures

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The larger value of the integral, the more yets is "like"

. As an extreme case, if yet = est, the integrand
is, and the integral is

ex: Take a simple example of yet) =1. Let's compare y(t) =1 To est at different s.

The reasons to use these integral transforms:

- DEs are much easier to some after

ex:

- Laplace transform has many nice properties (because) This makes Laplace transform very successful in solving DEs.

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Introduction of Laplace transform

Def: Laplace transform of a function y(t) is

Remarks

D Laplace transform is defined as an

To be certain that the LT of a function y(t) exists, \Rightarrow $ex: y(t) = e^{t^2}$, y(t) = t, e^t , zust

-> yet) should be

3 LT of some basic functions:		
	t-domain yet)	5-domain Y(s)
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