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Chapter2

Transfer Functions

List of Transfer Functions:

Transfer Function								
compet	Competitive transfer function.	С						
hardlim	Hard limit transfer function.	I						
hardlims	Symmetric hard limit transfer function	F						
logsig	Log sigmoid transfer function.	5						
poslin	Positive linear transfer function	Ł						
purelin	Linear transfer function.	\neq						
radbas	Radial basis transfer function.	Ω						
satlin	Saturating linear transfer function.	\square						
satlins	Symmetric saturating linear transfer function	F						
softmax	Softmax transfer function.	s						
tansig	Hyperbolic tangent sigmoid transfer function.	F						
tribas	Triangular basis transfer function.	≞						



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Transfer Function Graphs



Linear Transfer Function

Example1:

```
%%%% Linear Transfer Function %%%%%%%
n = -5:0.1:5;
plot(n,purelin(n),'b+:');
```





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Hard-Limit Transfer Function

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0.9 -		
0.8 -	-	
0.7 -	_	
0.6		
0.0	1	
0.5 -	1	
0.4 -	-	
0.3 -		
0.2 -	-	
0.1-		
0.1		
-5 -4 -3 -2 -1 0 1 2 3	4 5	



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Symmetric Hard-Limit Trans. Funct.

%%%% Symmetric Hard-Limit Transfer Function %%%%%%%

n = -5:0.1:5;
plot(n,hardlims(n),'b+:');





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Log-Sigmoid Transfer Function

Ex: %%% Log-Sigmoid Transfer Function %%%%%%%
n = -5:0.1:5;
plot(n,logsig(n),'b+:');
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Tan-Sigmoid Transfer Function

%%%% Symmetric Hard-Limit Transfer Function %%%%%%%
n = -5:0.1:5;
plot(n,tansig(n),'b+:');





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- - - -

- 1->> simulink (in command windows in matlab)
- 2- ENTER

3- Neural Network Toolbox



Double-click on the Transfer Functions block in the **Neural** window to bring up a window containing several transfer function blocks.

× • •	compet	×٦	hardlim	↓	hardlims	× >	logsig	> 1/n >	netinv	×]/_>	poslin
×//>	purelin	×Ų	radbas	×	radbasn	×] / ×	satlin	×_F	satlins	> 5 >	softmax
×£	tansig	×V	tribas								