S- Shaped Functions

	Function	Visual
1	Logistic Function	$\dfrac{1}{1+e^{-x}}$ x -2 : 0.11920292 -1 : 0.26894142 0 : 0.5 1 : 0.73105858 2 : 0.88079708 5 : 0.99330715
2	hyperbolic function	$\tanh(x)$ x -2 : -0.96402758 -1 : -0.76159416 0 : 0 1 : 0.76159416 2 : 0.96402758
3	arctangent function	$\arctan(x)$ x -2 : -1.1071487 -1 : -0.78539816 0 : 0 1 : 0.78539816 2 : 1.1071487

4	gen_logistic_function	$1 + e^{-2x}$ $\begin{array}{cc} x & \\ -2 & 55.59815 \\ -1 & 8.3890561 \\ 0 & 2 \\ 1 & 1.1353353 \\ 2 & 1.0183156 \end{array}$	
5	algebraic function	$\dfrac{x}{\sqrt{1+x^2}}$ $\begin{array}{cc} x & \\ -2 & -0.89442719 \\ -1 & -0.70710678 \\ 0 & 0 \\ 1 & 0.70710678 \\ 2 & 0.89442719 \end{array}$	
6	gudermannian_function	$2 \cdot \arctan(\tan$ $\begin{array}{cc} x & \\ -2 & -1.3017603 \\ -1 & -0.86576948 \\ 0 & 0 \\ 1 & 0.86576948 \\ 2 & 1.3017603 \end{array}$	