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In[5]:= (*Define the hybrid transfer function T(v,x)*)
HybridTransferFunction[v_, x_, alpha_, gamma_] :=
  (1 / (1 + Exp[-alpha v])) * (1 / (1 + (x^2 / gamma^2)))

(*Define the integrand for the line integral symbolically*)
Integrand[t_, k_, alpha_, gamma_] := Module[{v = t, x = k t, ds}, ds = Sqrt[1 + k^2];
  (*Arc length element for a straight line*)
  HybridTransferFunction[v, x, alpha, gamma] * ds]

(*Perform the symbolic integration*)
SymbolicResult = Integrate[Integrand[t, 1, alpha, gamma], {t, 0, 2}]

(*Display the symbolic result*)
Print["The symbolic result of the line integral is: ", SymbolicResult]

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$$\text{Out[7]} = \int_0^2 \frac{\sqrt{2}}{\left(1 + e^{-\alpha t}\right) \left(1 + \frac{t^2}{\gamma^2}\right)} dt$$

The symbolic result of the line integral is: $\int_0^2 \frac{\sqrt{2}}{\left(1 + e^{-\alpha t}\right) \left(1 + \frac{t^2}{\gamma^2}\right)} dt$