In[1]:=
```
τc[τcbar_] := τcbar * Log[1 / (1 - RandomReal[])]
```

In[2]:=
```
phaseshift[τ_, τcbar_, N_] := Table[ τc[τcbar] < τ, N]
```

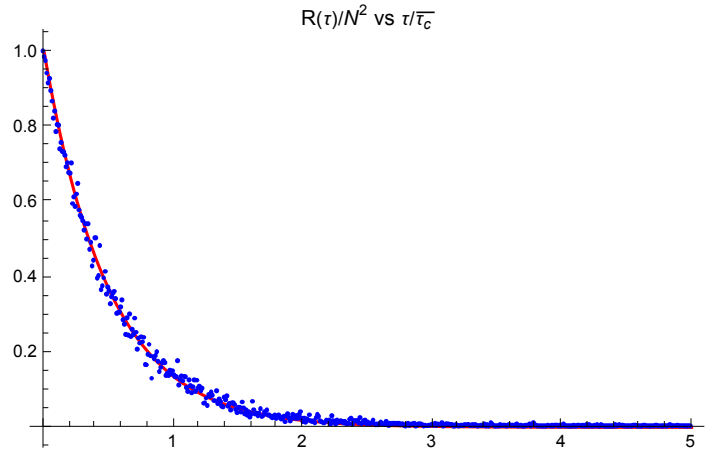
In[21]:=
```
ephiave[t_, τcbar_, N_] :=
 Mean[Exp[-i * If[#, 2 π * RandomReal[{-1, 1}], 0] & /@ phaseshift[t, τcbar, N]]]
```

In[42]:=
```
absephivar[t_, τcbar_, N_] := Abs[
  Variance[Exp[-i * If[#, 2 π * RandomReal[{-1, 1}], 0] & /@ phaseshift[t, τcbar, N]]]]
```

In[50]:=
```
tmin = 0;
tmax = 5;
tstep = 0.01;
n = 1000;
τcbar = 1;
ephi2 = Table[{t, Abs[ephiave[t, τcbar, n]]^2}, {t, tmin, tmax, tstep}];
absephivarTable = Table[{t, absephivar[t, τcbar, n]}, {t, tmin, tmax, tstep}];
```

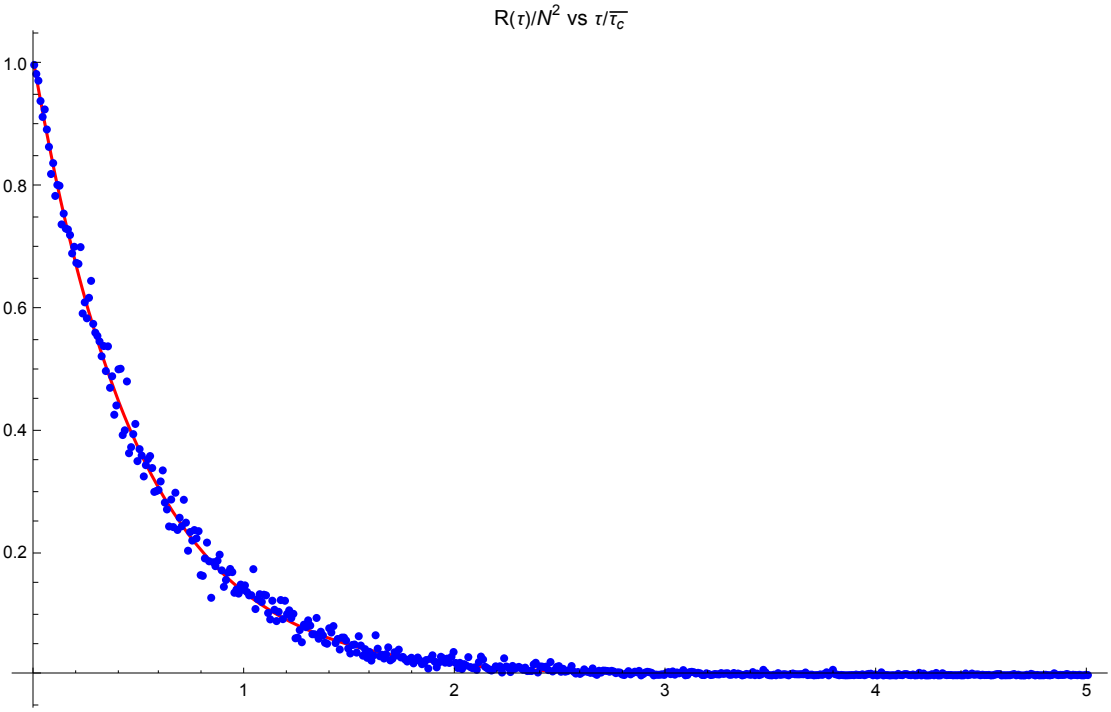
In[38]:=
```
Show[Plot[Exp[-2 t / τcbar], {t, tmin, tmax}, PlotStyle → Red, PlotRange → All,
  PlotLabel → "R(τ)/N^2 vs τ/τ_c"], ListPlot[ephi2, PlotStyle → Blue]]
```

Out[38]=



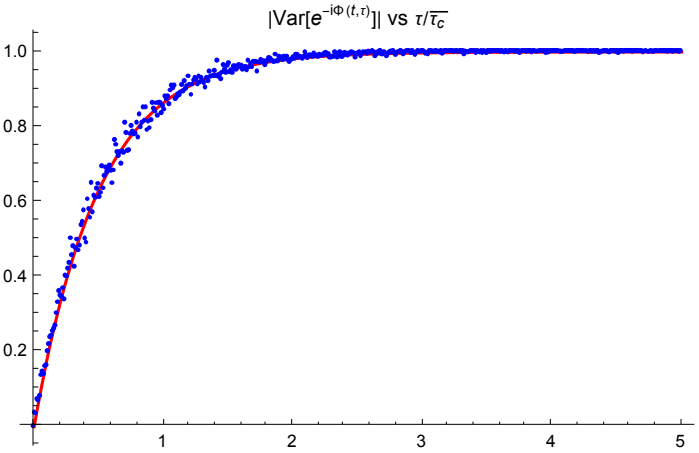
In[40]:=
```
Show[%38, ImageSize → Large]
```

Out[40]=



In[62]:=
```
Show[Plot[1 - Exp[-2 t / τcbar], {t, tmin, tmax}, PlotStyle → Red,
  PlotRange → All, PlotLabel → "|Var[e^-iΦ(t,τ)]| vs τ/τc"],
 ListPlot[absephivarTable, PlotStyle → Blue]]
```

Out[62]=



In[63]:= **Show[%62, ImageSize → Large]**

Out[63]=