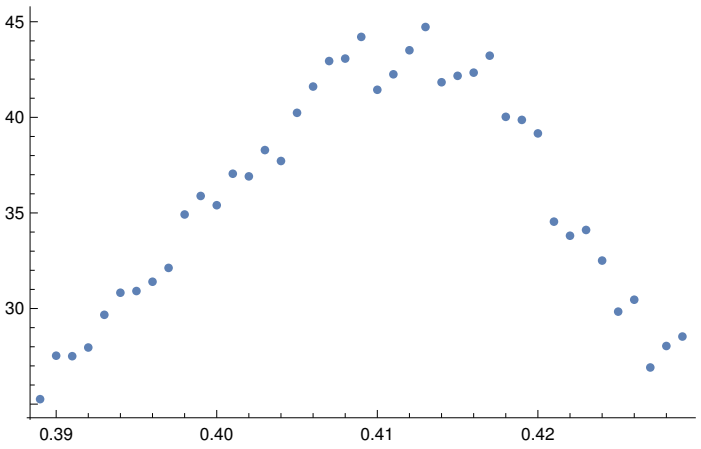
In[95]:=
```
SetDirectory[NotebookDirectory[]];
CvData = Import["32_cv.dat", "Table"];
MagnetData = Import["32_magnetization.dat", "Table"];
SusceptData = Import["32_susceptibility.dat", "Table"];
```

In[99]:=
```
ListPlot[Take[SusceptData, {190, 230}], PlotRange → Full]
```

Out[99]=



In[100]:=
```
SusceptFit = NonlinearModelFit[Take[SusceptData, {190, 230}],
    A * Exp[-(x - mu)^2 / (2 Sigma^2)], {{A, 42}, Sigma, mu}, x];
```

In[52]:=
```
SusceptFit[{"BestFit", "ParameterTable"}]
```

Out[52]=

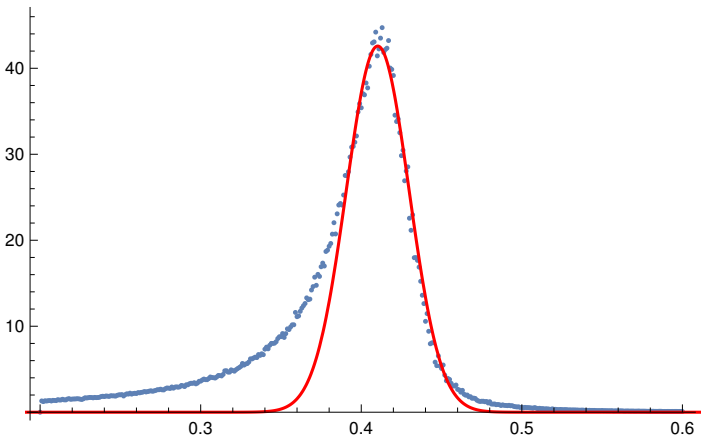
$$\left\{42.5822\, e^{-1309.29\,(-0.410239+x)^2},\right.$$

	Estimate	Standard Error	t-Statistic	P-Value
A	42.5822	0.385789	110.377	2.95547×10^{-49}
Sigma	0.0195419	0.000450101	43.4167	5.41441×10^{-34}
mu	0.410239	0.000250668	1636.58	9.89268×10^{-94}

$\left.\right\}$

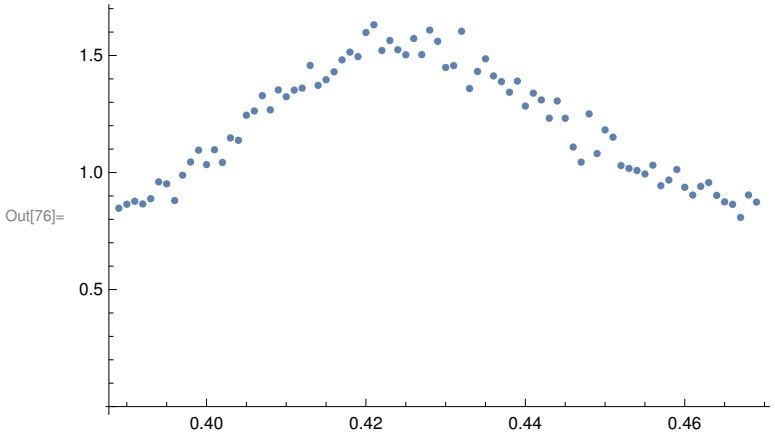
In[53]:=
```
Show[ListPlot[SusceptData, PlotRange → Full],
 Plot[SusceptFit[x], {x, 0, 0.8}, PlotRange → {{0, 0.8}, {0, 400}}, PlotStyle → Red]]
```

Out[53]=



In[76]:=
```
ListPlot[Take[CvData, {190, 270}]]
```

Out[76]=



In[111]:=
```
CvFit = NonlinearModelFit[Take[CvData, {180, 240}],
  A * Exp[-(x - mu)^2 / (2 * Sigma^2)], {{A, 1.6}, Sigma, {mu, 0.42}}, x]
```

Out[111]=
```
FittedModel[ 1.50681 e^-403.027 (-<<18>>+x)^2 ]
```

In[112]:=
```
CvFit[{"BestFit", "ParameterTable"}]
```

Out[112]=

$$\left\{1.50681\, e^{-403.027\,(-0.426955+x)^2},\right.$$

	Estimate	Standard Error	t-Statistic	P-Value
A	1.50681	0.0123276	122.231	1.13065×10^{-71}
Sigma	−0.0352223	0.00119583	−29.4543	1.3986×10^{-36}
mu	0.426955	0.00110911	384.953	1.58218×10^{-100}

$\left.\right\}$

In[113]:=
```
Show[ListPlot[CvData], Plot[CvFit[x], {x, 0, 0.8}, PlotRange → Full, PlotStyle → Red]]
```

Out[113]=