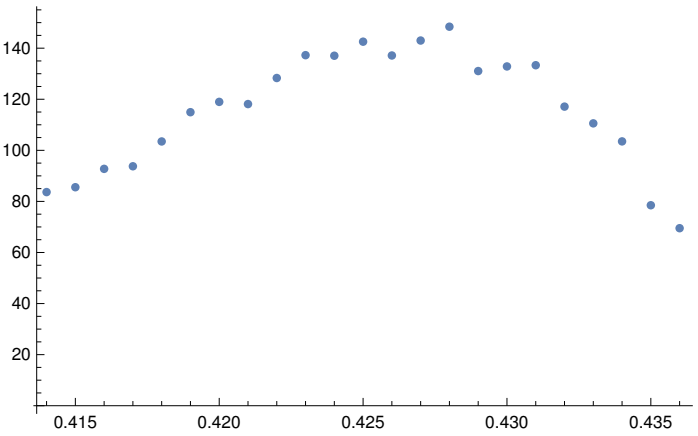
In[73]:=
```
SetDirectory[NotebookDirectory[]];
CvData = Import["64_cv.dat", "Table"];
MagnetData = Import["64_magnetization.dat", "Table"];
SusceptData = Import["64_susceptibility.dat", "Table"];
```

In[77]:=
```
ListPlot[Take[SusceptData, {115, 137}], PlotRange → Full]
```

Out[77]=



In[78]:=
```
SusceptFit = NonlinearModelFit[Take[SusceptData, {115, 137}],
    A * Exp[-(x - mu)^2 / (2 Sigma^2)], {{A, 140}, Sigma, mu}, x];
```

In[66]:=
```
SusceptFit[{"BestFit", "ParameterTable"}]
```

Out[66]=

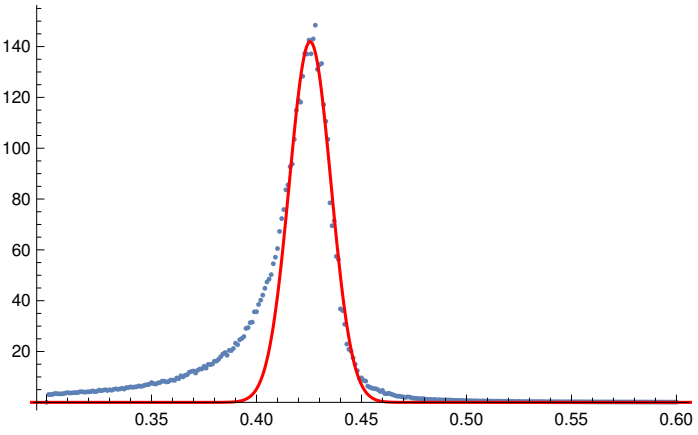
$$\left\{141.934\, e^{-5051.15\,(-0.425546+x)^2},\right.$$

	Estimate	Standard Error	t-Statistic	P-Value
A	141.934	2.34606	60.4987	3.96993×10^{-24}
Sigma	0.00994924	0.000361314	27.5362	2.24011×10^{-17}
mu	0.425546	0.000219512	1938.6	3.21012×10^{-54}

$\left.\right\}$

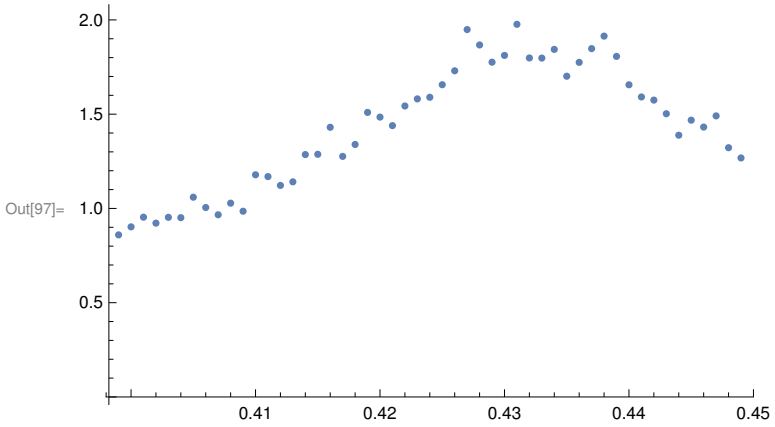
In[79]:=
```
Show[ListPlot[SusceptData, PlotRange → Full],
 Plot[SusceptFit[x], {x, 0, 0.8}, PlotRange → {{0, 0.8}, {0, 400}}, PlotStyle → Red]]
```

Out[79]=



In[97]:=
```
ListPlot[Take[CvData, {100, 150}]]
```

Out[97]=



In[98]:=
```
CvFit = NonlinearModelFit[Take[CvData, {100, 150}],
  A * Exp[-(x - mu)^2 / (2 * Sigma^2)], {{A, 2}, {Sigma, 0.01}, {mu, 0.43}}, x]
```

Out[98]=
```
FittedModel[ 1.75803 e^-852.389 (-<<20>>+x)^2 ]
```

In[99]:=
```
CvFit[{"BestFit", "ParameterTable"}]
```

Out[99]=

$$\left\{1.75803\ e^{-852.389\ (-0.43196+x)^2},\right.$$

	Estimate	Standard Error	t-Statistic	P-Value
A	1.75803	0.0237444	74.04	3.84961×10^{-51}
Sigma	0.0242196	0.000905478	26.7478	1.72066×10^{-30}
mu	0.43196	0.000647341	667.283	6.93199×10^{-97}

$\left.\right\}$

In[100]:=
```
Show[ListPlot[CvData], Plot[CvFit[x], {x, 0, 0.8}, PlotRange → Full, PlotStyle → Red]]
```

Out[100]=