

---

Subject: Re: fitting mixed gaussians

Posted by [jcami](#) on Wed, 18 May 2005 20:35:53 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

> Yes I looked at these - the trouble is that I want to perform this on

> literally thousands of images (each image has one object in it).

Manual

> seeding is not practical. I think what I am after is described here...

>

> <http://tinyurl.com/9horr>

>

> I have started to translate the MatLab code to IDL - but it is clearly

> over my head.

I would start by writing a function that creates multiple Gaussians. Something like

```
FUNCTION multi_gauss, X, P
```

```
; P contains a set of 3 parameters per Gaussian, plus an offset and a slope
```

```
; for the linear part of the model.
```

```
n_gauss = (n_elements(P)-2)/3  
profile = dblarr(n_elements(X))  
for loop=0,n_gauss-1 do begin  
  this_P = P[loop*3:loop*3+2]  
  this_u = (X-this_P[1])/this_P[2]  
  profile = profile + this_P[0] * exp(-5d-1 * this_u^2)  
endfor  
profile = profile + P[n_g * 3]  
profile = profile + P[n_g * 3 + 1] * X
```

```
return, profile
```

```
END
```

You can feed this sort of function to `mpfitfun`; in your peak fitting routine

you can then start with a single Gaussian, subtract the fit from the data and look for a second Gaussian (again using something like `mpfitpeak`); if you find a second Gaussian, you use the parameters for both Gaussians as initial estimates to the `multi_gauss` routine and `mpfitfun` should do the rest.