Subject: Re: fitting mixed gaussians
Posted by David Fanning on Tue, 17 May 2005 18:32:59 GMT

View Forum Message <> Reply to Message

Ben Tupper writes:

> I would like to employ a "mixed gaussian" fitting routine that fits not
> just one peak in a distribution but rather fits any number of peaks.
> According to my old Gonzales and Woods Image Processing book this
> technique is used in Bayesian classifier - in the two class problem the
> saddle of the two fitted curves is used as the point around which the
> classes are separated. I just to segment simple grayscale images with it
> usiing the histogram as the data to model.
>
> Using GAUSSFIT or MPFIT it's very easy to fit one (the tallest) peak
> shown in the example (see code example below.)   But how the heck to fit
> the second peak?   I have scoured the internet and find much written
> about it - but it is all in Greek. Really. Yikes.
>
> Is it possible to make the curve fitting routines I have on hand to fit
> two gaussian models?

Craig is going to fill you in on all the details of this,
using MPFIT, but I just wanted to mention that Rob Dimeo's
PAN program is super for allowing you to fit as many curves
as you like onto a set of data interactively.

   http://www.ncnr.nist.gov/staff/dimeo/panweb/pan.html

Just draw and adjust the initial curve parameters on
the data itself, then go fit it with a click of the button.
Of course, it is simply a wrapper for MPFIT. The tutorial
Rob has provided is helpful for getting started.

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/