
Subject: Re: Plane fit

Posted by [Dick Jackson](#) on Tue, 20 Apr 2004 15:55:19 GMT

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Hi Steve,

"Steve" <Steve.Morris@libero.it> wrote in message
news:606669c3.0404200355.71209718@posting.google.com...

> Hi!

> I was wondering if there is any function/routine to compute a 2
> dimensional fit (i.e. a surface) that fits a series of points spread
> in 3-dim space.

> Cheers,

> S.

This is what I use, based on Craig Markwardt's excellent MPFIT routines
(you'll need at least mpfit.pro and mpfit2dfun.pro from
<http://cow.physics.wisc.edu/~craigm/idl/fitting.html>):

;------

```
FUNCTION Plane2DFunction, x, y, parms, dParms
; parms define a plane: [c00, c01, c10] (1st-order polynomial in 2
vbles)
Return, parms[0] + parms[1]*x + parms[2]*y
END
```

;------

```
:: Then, if data is a (3, n) array of xyz points...
```

```
fitParms = MPFIT2DFUN('Plane2DFunction', $
    data[0, *], data[1, *], data[2, *], $
    0D, $ ; Error measure, ignored with Weights...
    [Mean(data[2, *]), 0D, 0D], $ ; Estimate
    Weights=Replicate(1D, nPts), /Quiet)
```

```
:: Then, for any x and y values...
```

```
fitZ = Plane2DFunction(x, y, fitParms)
```

;------

Hope this helps!

Cheers,

--

-Dick

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