Subject: Dimeo genetic algorithm
Posted by josea.malpica on Mon, 24 Mar 2008 17:55:17 GMT
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I am using the genetic algorithms code by R. Dimeo (www.ncnr.nist.gov/staff/dimeo/idl_programs.html)
for the optimization of image classification. I have tried to pass data (image matrices) to the function to by optimaze (test_func_1) from the main program. First I tried with Functargs through keyword Extra, as in Dimeo's notes pg 80 "Application Development in IDL", but I got an error that said that the matrices have been undefined ¿?. I have tried everything but always get the same error. Dimeo's code works perfectly in my computer but when I put my data in I get my "undefined variable" error. The funny thing is that actually it runs the whole genetics algorithm, but at the end it produces the error. Then I tried to pass the parameter directly as pointers (because they are matrices 1000x1000) and the error says the same "undefined" or that the variable should be a pointer.
I use to program in C++, and is my first programming in IDL, The code of the function is something like this:

```
function test_func_1, p,G1_ptr,G2_ptr, _EXTRA = extra
 x1 = p[0] & y1 = p[1]
 z=total(x1*(*G1_ptr)-y1*(*G2_ptr))
 return,z
end
```

And the called from the main program

```
prange = [[-1.0,1.0],[-1.0,1.0]]
ofun = 'my_obj_fun'
func ='test_func_1'
GENES1 = fltarr(num_bands,num_cols,num_rows)
GENES2 = fltarr(num_bands,num_cols,num_rows)
GENES1[*,*,*]=fid1
GENES2[*,*,*]=fid2
G1 = fltarr(num_cols,num_rows)
G2 = fltarr(num_cols,num_rows)
G1[*,*]=GENES1[1,*,*]
G2[*,*]=GENES2[1,*,*]
G1_ptr=ptr_new(G1)
G2_ptr=ptr_new(G2)
quiet = 0B
if ~quiet then begin
   xsize = 400 & ysize = 400
   window,0,xsize = xsize,ysize = ysize
   winvis = 0
   window,/free,/pixmap,xsize = xsize,ysize = ysize
```

```
   winpix = !d.window
   iterargs = {winvis:winvis,winpix:winpix}
   iterproc = 'test_ga_iterproc'
endif
ftol = 1.e-2
p = rmd_ga(       ftol,                          $
                function_value = function_value,    $
                function_name = func,              $
                prange = prange,                  $
;                /boltzmann,                     $
                ncalls = ncalls,                 $
                quiet = quiet,                  $
                objective_function = ofun,         $
                pcross = 0.95,                   $
                gene_length = 30,                  $
                pmutate = 0.01,                   $
                stretch_factor = 1.,              $
                itmax = 4,                     $    ; cambiar
esto
                iterproc = iterproc,             $
                iterargs = iterargs,             $
                functargs= functargs,              $
                npop = 250 )
```

Do you know why is this error?
