Subject: Re: Optimization "AMOEBA"
Posted by Jeremy Bailin on Wed, 23 Sep 2009 11:49:42 GMT
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On Sep 23, 3:54 am, Wox <s...@nomail.com> wrote:
> On Tue, 22 Sep 2009 16:30:45 -0700 (PDT), Nicki
>
> <nickireite...@yahoo.de> wrote:
>
>>> Set a breakpoint in your FUNC and check for NaN's. For example:
>>> "a=NaN" when P=[0.5,30].
>
>> But still... If I set my scale to let's say [0.5, 0.5] for [0.55, 60.]
>> it should definitely work. however i get -0.2000 for P[0] which is not
>> even in the set range for P[0] (it goes from 0.05 to 1 (see above))
>> However I have no idea why... Somebody can help me out?
>
> FUNC will still return NaN at some point! Add the following line to
> FUNC to check it yourself:
>
> FUNCTION FUNC, P
> ...
> if ~finite(s) then stop
> RETURN, -S
> END
>
> I see what your problem is now. The P0 and SCALE define an initial
> simplex and by no means constraint the space in which the minimum
> should lay. See:http://www.nrbook.com/a/bookcpdf/c10-4.pdf
>
> Maybe you can do something like this when P gets out of its range:
>
> FUNCTION FUNC, P
> ...
> if ~finite(s) then return,!values.F_INFINITY
> RETURN, -S
> END
>
> Does that work?

I seem to remember Craig mentioning that implementing a constraint
using a brick wall like that can give you problems. I think he
advocated having a slightly smoother but still very steep transition
from the allowed values to the extremely high values in the forbidden
region. I'm sure it was in the context of his routines, but I wouldn't
be surprised if amoeba behaved similarly.

-Jeremy.