Subject: Genetic algorithms and curve fitting Posted by robert.dimeo on Thu, 27 Mar 2003 21:26:10 GMT

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Hi,

Over the past few years I have been writing IDL programs to analyze data by fitting to models using standard least-squares methods. The problems that we face here, however, sometimes are not amenable to the least-squares approach and, having multi-modal chi-squared surfaces, could benefit from a more robust global optimization. I have been working on a hybrid genetic algorithm/least squares function that appears to work "pretty well" for model fitting.

Has anyone on this newsgroup you used GAs or GA hybrids for data fitting? I am seeking someone with whom I can "compare notes" and discuss what works well and what does not. I am happy to share this code with anyone (especially if you're interested in helping me improve it!)

Many thanks in advance!

Rob

Robert M. Dimeo, Ph.D. NIST Center for Neutron Research National Institute of Standards and Technology 100 Bureau Drive - Stop 8562 Gaithersburg, MD 20899-8562 Telephone: (301) 975-8135 FAX: (301) 921-9847

www.ncnr.nist.gov/staff/dimeo

Subject: Re: Genetic algorithms and curve fitting Posted by Allard de Wit on Fri, 28 Mar 2003 16:10:37 GMT

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Rob Dimeo wrote:

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- > Rob
- > -----
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Hi Rob.

I do not have an extensive knowledge of GA techniques but for the relatively simple optimisation problems that I have used GA's for I used a so-called micro-GA which worked pretty well. I implemented the micro-GA in IDL code, you can find the code at www.xs4all.nl/~ajwwag/

As it this GA was my first attempt to write something in IDL using object-oriented programming, the programming style may be somewhat clumsy, any comments on the code (errors/fixes) are welcome. Maybe, it is usefull for you.

best regards,

Allard de Wit

Subject: Re: Genetic algorithms and curve fitting Posted by pford on Wed, 23 Apr 2003 18:57:51 GMT View Forum Message <> Reply to Message

"A. De Wit" <adewit@operamail.com> wrote in message news:<3e8473ac\$0\$49109\$e4fe514c@news.xs4all.nl>...

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I used a simple GA in the past written in C and called using CALL EXTERNAL. I will be happy to send this to you. I am in the SLOW process of converting it to DLM on MacOS X. I have to relearn IDL and learn Unix and gcc, etc.

Patrick Ford, MD **Baylor College of Medicine** Page 4 of 4 ---- Generated from comp.lang.idl-pvwave archive