Subject: Optimal Interpolation ---HELP Posted by k0c7289 on Tue, 14 Jun 1994 20:25:47 GMT View Forum Message <> Reply to Message Hello, Help!!! I am looking for the subroutine of the optimal interpolation in time and space which produces regular gridded data from the irrrgulary sampled data in space and time. I am working with satellite sea surface height track data. Please send me a mail(cho@linkji.tamu.edu) if you have information. Thanks K.CHO TAMU Subject: Re: Optimal interpolation Posted by the cacc on Thu, 22 Aug 2002 00:33:52 GMT View Forum Message <> Reply to Message "Luis" <pgodino@eucmos.sim.ucm.es> wrote in message news:<ak02d9\$bdq\$1@crispin.sim.ucm.es>... > Hi, > does somebody know abouts an optimal interpolation subrroutine. I am trying > to compare some different interpolation techniques and this is the only one than I don't have programmed. > > thank you! > > Luis Prieto Godino > Dpto. Fï¿1/2 sica de la Tierra II.

There's this great resource called The Internet that you may have heard of? Try it, you'll like it!!!

> U.C.M. Spain

Subject: Re: Optimal interpolation Posted by David Fanning on Thu, 22 Aug 2002 02:23:48 GMT

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trouble (the_cacc@hotmail.com) writes:

- > There's this great resource called The Internet that you may have
- > heard of? Try it, you'll like it!!!

I think he was asking for IDL code. This would appear to be the appropriate place to ask the question, even *after* an exhaustive search of the Web. At least I know it is where I would have asked the question.

Cheers,

David

--

David W. Fanning, Ph.D.

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Phone: 970-221-0438, E-mail: david@dfanning.com

Coyote's Guide to IDL Programming: http://www.dfanning.com/

Toll-Free IDL Book Orders: 1-888-461-0155

Subject: Re: Optimal interpolation

Posted by Luis on Thu, 22 Aug 2002 08:35:58 GMT

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- > There's this great resource called The Internet that you may have
- > heard of? Try it, you'll like it!!!

I have been searching on the web and I don't have found a complete IDL code for this technique. So I heve decided to post this question here. Any help will be welcome.

Subject: Re: Optimal interpolation

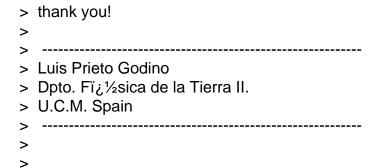
Posted by Robert Stockwell on Thu, 22 Aug 2002 15:49:18 GMT

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Luis wrote:

- > Hi,
- >
- > does somebody know abouts an optimal interpolation subrroutine. I am trying
- > to compare some different interpolation techniques and this is the only one
- > than I don't have programmed.

>



I've got some Loess fitting routines for 3D interpolation of a two component vector field. It uses SVD to solve the 3D second order polynomial fitting. These fitting parameters are then used to interpolate the data. The Loess part is a local fitting routine that weights the data based on its distance from the required point. That weighting could easily be modified to be based on some error measurement and therefore become an optimal interpolation routine. It also returns an estimate of the error of the value of the interpolated point.

Does this sound like it would be useful?

It would take me a bit of work to bang it into a generalized form. Also, my code for selecting the "near points" is a bit outdated as it is based on 2 one dimensional histogram with return_index. That part should be rewritten.

Cheers, bob

Subject: Re: Optimal interpolation
Posted by jacobian on Thu, 22 Aug 2002 19:07:03 GMT
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oh well.. i think that really depends on your data

i analyze MRI data, so I have to use sinc and windowed sinc interpolation (which is NOT implemented in IDL), so i have to spawn several times external programs for that purpose. After trying to make some dlm's it just took too much time to glue them to IDL... and eventually did not work.

I hope the next version will simplify DLM's a little bit..:/
Or at least the Watsyn product will offer some decent registration and interpolation algorithms. Anyone tried it?

cheers

Giorgos
Department of Radiology
Vrije Universiteit Medical Center
Amsterdam
The Netherlands

David Fanning <david@dfanning.com> wrote in message news:<MPG.17cdf92226117b93989971@news.frii.com>...

> trouble (the_cacc@hotmail.com) writes:

>

- >> There's this great resource called The Internet that you may have
- >> heard of? Try it, you'll like it!!!

>

- > I think he was asking for IDL code. This would appear
- > to be the appropriate place to ask the question, even
- > *after* an exhaustive search of the Web. At least I
- > know it is where I would have asked the question.

>

> Cheers,

>

> David

Subject: Re: Optimal interpolation

Posted by Paul Van Delst[1] on Thu, 22 Aug 2002 19:46:37 GMT

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GB Karas wrote:

>

> oh well.. i think that really depends on your data

>

- > i analyze MRI data, so I have to use sinc and windowed sinc
- > interpolation

OT, but...

What is sinc (and windowed sinc) interpolation?

paulv

--

Paul van Delst
CIMSS @ NOAA/NCEP/EMC Beer is good.
Ph: (301)763-8000 x7274 My wife.

Fax:(301)763-8545

Subject: Re: Optimal interpolation Posted by jacobian on Wed, 28 Aug 2002 16:25:14 GMT

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sinc interpolation relies on the following interpolating kernel:

sinc(x)=sin(x)/x

> paulv

Paul van Delst <paul.vandelst@noaa.gov> wrote in message news:<3D653F9D.223EDD66@noaa.gov>... > GB Karas wrote: >> >> oh well.. i think that really depends on your data >> >> i analyze MRI data, so I have to use sinc and windowed sinc >> interpolation > > OT, but... > What is sinc (and windowed sinc) interpolation?

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