Subject: 4/6-dimensionl numerical integration?
Posted by Arne Gennerich on Tue, 08 Oct 2002 10:20:38 GMT
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Hi Folks!

Who can provide me IDL-functions which can calculate 4- and
6-dimensional numerical integrals?

Best
Arne

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Subject: Re: 4/6-dimensionl numerical integration?
Posted by Arne Gennerich on Fri, 11 Oct 2002 17:04:34 GMT
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Craig Markwardt wrote:

> Arne Gennerich <agenner@gwdg.de> writes:
>> Hi Folks!
>>
>> Who can provide me IDL-functions which can calculate 4- and
>> 6-dimensional numerical integrals?
>
> Probably you will have to provide it for yourself. I have wanted to
> make an extension to my QUADPACK integrator to support
> multi-dimensional integrals, but haven't gotten around to it yet. If
> your integration hypervolume is rectangular then it is pretty trivial.
> However, when you get to high enough dimensions, you probably want to
> use Monte Carlo, no?
>
> Craig
>

Thanks Craig for your answer! Probably the Monte Carlo Integration is a good suggestion. Is the random number generator RANDOMN usefull for this approach? Any experience?

Best
Arne

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Subject: Re: 4/6-dimensionl numerical integration?
Posted by Craig Markwardt on Fri, 11 Oct 2002 18:48:41 GMT
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Arne Gennerich <agenner@gwdg.de> writes:
> Craig Markwardt wrote:
>
>> Arne Gennerich <agenner@gwdg.de> writes:
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>>>
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>> However, when you get to high enough dimensions, you probably want to
>> use Monte Carlo, no?
>>
>> Craig
>>
>
> Thanks Craig for your answer! Probably the Monte Carlo Integration is a good
> suggestion. Is the random number generator RANDOMN usefull for this approach?
> Any experience?

I am satisfied with RANDOMN and RANDOMU, but I have not subjected it
to the torture tests that statisticians would. There have been
problems with non-randomness in those routines in the past.

Craig

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Craig B. Markwardt, Ph.D. EMAIL: craigmnet@cow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
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