Subject: Re: Normally distributed vectors
Posted by Ewan A. Macpherson on Wed, 10 Jun 1998 07:00:00 GMT
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Emilio Martines wrote:

> Hello, I am looking for a routine to generate random 3-component vectors
> sampled from a 3-dimensional normal distribution (with non-zero covariances of
> course...). I think that I know how to write it, but being rather lazy I hope
> that someone out there has already done it... Thanks in advance.

All you need to do is generate each component from
independent normal distributions.

--
Ewan Macpherson <emacpher@umich.edu>
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Subject: Re: Normally distributed vectors
Posted by Emilio Martines on Thu, 11 Jun 1998 07:00:00 GMT
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I sent by mistake my reply just to Ewan Macpherson, instead of the whole
newsgroup. However, since it might be of interest to other people, I post it
here together with his reply.

>>>
>>> All you need to do is generate each component from
>>> independent normal distributions.
>>>
>>
>> Hmmm... I might be wrong, but I think that this is true only if the
>> covariance matrix (the 3X3 matrix made up of variances and
>> covariances) is diagonal. In the other cases, I should find the
>> basis where it is diagonal, sample from independent normal
>> distributions, and then go back to the original basis. Just some
>> linear algebra.
>
> Yes indeed. I misread the part of your message where you
> specified NON-zero covariances. Oops!
> cheers,
> --
> Ewan Macpherson <emacpher@umich.edu>
> Central Systems Laboratory
> Kresge Hearing Research Institute

> http://www-personal.umich.edu/~emacpher

So, thanks Ewan for your attempt. Of course, my original request is still valid. Greetings to everyone.

Emilio
