Re: Diagonalization of an orthogonal matrix with determinant 1

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- *From*: "Lucillon" <nospam@xxxxxx>
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> > I have just seen that every matrix in the special orthogonal group
> > SO(n,Complexnumbers)={A in M(n,C) where
> > Transpose(A)A=ATranspose(A)=identity−matrix and det(A)= 1}, can be
> > diagonalized using Lie−group theory. Does any body know how to show this
> > in
> > a simpler way for example using linear algebra?
>
> Orthogonal matrices are unitary, and thus normal. Use the Spectral
> Theorem.

How do you see that orthogonal matrices are unitary? I agree for the real
matrices but how about the complex matri ces?

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