
Subject: Edge detection for saturn's rings
Posted by [frankosuna](#) on Tue, 15 Jul 2008 00:43:44 GMT
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Hello all,

I've been trying to use some of the built in edge detection routines implemented in idl such as sobel but I haven't found a very good one that will work for images such as this:

<http://frankosuna.googlepages.com/supportImage.jpg>

I am trying to pull out all of the rings in this image and the best I have gotten is this:

<http://frankosuna.googlepages.com/edgeDetect.jpg>

Any suggestions and opinions are welcome.

Thanks,

Frank

Subject: Re: Edge detection for saturn's rings
Posted by [David Fanning](#) on Wed, 16 Jul 2008 03:02:54 GMT
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frankosuna writes:

> I've been trying to use some of the built in edge detection routines
> implemented in idl such as sobel but I haven't found a very good one
> that will work for images such as this:
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> have gotten is this:
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> Any suggestions and opinions are welcome.

Andrew Cool points out to me that as a backyard astronomer, he is always interested in this kind of thing, and that the CANNY edge detection routine is often the best one for this kind of separation. Oddly, though, there is no mention of the CANNY routine under "Edge Detection" in either the IDL 6.4 or IDL 7.x

on-line help! An oversight we hope someone at ITTVIS notices.

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Edge detection for saturn's rings

Posted by [Vince Hradil](#) on Wed, 16 Jul 2008 14:02:49 GMT

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On Jul 15, 10:02 pm, David Fanning <n...@dfanning.com> wrote:

> frankosuna writes:

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>> implemented in idl such as sobel but I haven't found a very good one

>> that will work for images such as this:

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> separation. Oddly, though, there is no mention of the CANNY

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>

> Cheers,

>

> David

> --

> David Fanning, Ph.D.

> Fanning Software Consulting, Inc.

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

> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

I dug around a couple of years ago and found a canny implementation in

idl. I fixed it up so that it works pretty well for me, but I haven't used it in quite a while. The header mentions Julian Walmsley, 1999 requires IDL 5.2.x - based on Gideon Amos, 1997, requires IDL 4.x.

Cheers,
Vince

Subject: Re: Edge detection for saturn's rings
Posted by [David Fanning](#) on Wed, 16 Jul 2008 14:06:38 GMT
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Vince Hradil writes:

> I dug around a couple of years ago and found a canny implementation in
> idl. I fixed it up so that it works pretty well for me, but I haven't
> used it in quite a while. The header mentions Julian Walmsley, 1999
> requires IDL 5.2.x - based on Gideon Amos, 1997, requires IDL 4.x.

The one I mentioned was introduced in IDL 6.3.

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Edge detection for saturn's rings
Posted by [frankosuna](#) on Wed, 16 Jul 2008 16:10:20 GMT
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Good morning Dr. Fanning,

I received your email and tried to reply but there was an error sending the email.

I am actually working on my Computer Science Master's Thesis at the University of Texas at El Paso. The name of my paper, which I am currently working on, is "Automated C-Smithing". We are working side by side with NASA and these images are provided by them. The images I use are actually taken by the Cassini spacecraft currently orbiting around Saturn and its moons. I don't think I have the freedom to provide the images I actually use, but I believe there are some images on their web page. This is the home page where they provide

information about the mission <http://saturn.jpl.nasa.gov/home/index.cfm>
and here is the web page where some images are shown
<http://saturn.jpl.nasa.gov/multimedia/images/images.cfm?startImage=17&categoryID=1&subCategoryID=0>.

Thanks,

Frank
