



# Geophysical Society of Houston

VOL. 36, NO. 4

NEWSLETTER

DECEMBER 2001

## Technical Breakfast

Date: December 12, 2001  
Time: 7:30 AM breakfast  
Location: 550 Westlake park Blvd  
(on the SW corner of  
the Westlake office  
complex) RM 177/178  
Hosted by BP  
Speaker: John T. Etgen

**Title:**  
Is Wave Equation Migration the "Magic  
Bullet"?

**Biography:**  
John T. Etgen received a BS degree  
in geophysical engineering from the  
Colorado School of Mines in 1985, an  
MS degree in geophysics from Stanford  
in 1988, and a PhD degree in geophys-  
ics from Stanford in 1990. From 1990  
to 1999, he worked in Amoco's re-

search laboratory in Tulsa. Since 1999,  
he has been with BP in Houston. He  
has watched the demise of many  
supercomputer vendors but has seen the  
desire for wave equation migration grow.  
A good algorithm beats a good com-  
puter.

**Abstract:**  
Wave equation methods for seismic  
migration before stack avoid a range of  
theoretical and practical problems found  
in other seismic imaging approaches.  
Wave equation migration handles  
multipathing of seismic energy better  
than ray-tracing based on Kirchhoff mi-  
gration. Do wave equation migration  
methods handle amplitudes as well as  
Kirchhoff migration methods handle  
amplitudes? In situations where  
Kirchhoff migration fails, the answer is

obvious, since any image is better than  
no image.

How good is the amplitude fidelity  
of wave equation migration in simpler  
situations? If the fidelity is less than per-  
fect, what does this deviation from per-  
fection say about the confidence we  
should have in our wave equation im-  
ages in difficult-to-image areas? Al-  
though we often entertain the notion of  
a "final" migration with our best algo-  
rithms, in my experience no migration  
is ever final. We always want to adjust  
the image to account for remaining ve-  
locity errors, derive a new velocity  
model, or revisit the result in some way.  
For Kirchhoff migration image adjust-  
ment and velocity model derivation tech-  
niques are well established. For wave  
equation migration, the road is less well  
traveled.

**The new address and telephone number of the GSH office are:**

**10575 Katy Freeway, Suite 290 • Houston, TX 77024**

**Telephone: 713-463-9477 • FAX: 713-463-9160**

**GeoEvents calendar telephone number: 713-463-8920**

**The GeoEvents codes are unchanged.**

### REMINDER

#### 16th Annual GSH Sporting Clays Tournament

Saturday, December 1, 2001  
American Shooting Centers  
16500 Westheimer Pkwy.

### I N S I D E T H I S I S S U E

|                              |   |
|------------------------------|---|
| GSH Meetings _____           |   |
| GSH Technical Breakfast      |   |
| December 12 .....            | 1 |
| Potential Fields Party ..... | 5 |
| Data Processing SIG .....    | 6 |

**No Technical Luncheon this month**

|                             |   |
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| Articles and Comments _____ |   |
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| Geophysical Auxillary ..... | 6 |

**GEOPHYSICAL SOCIETY OF HOUSTON**

**Joan Henshaw, Office Manager • 10575 Katy Freeway, Suite 290 • Houston, TX 77024 • Office Hours 8 a.m. - 5 p.m.**

**Phone: (713) 463-9477 • Fax: (713) 463-9160 • Event Reservations Number: (713) 463-8920**

**email: [reservations@hgs.org](mailto:reservations@hgs.org) • website - <http://www.seg.org/sections/gsh/gshhome.html>**

**GSH Board of Directors = GSH Executive Committee + SEG Section Representatives**

|                               |                         | <b>PHONE</b>       |                    | <b>FAX</b>                         |  | <b>E-MAIL</b> |
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| Museum .....                  | Tom Fulton .....        | 281/242-1806 ..... |                    | etinsl@flash.net                   |  |               |
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| Continuing Education .....    |                         |                    |                    |                                    |  |               |
| Speakers .....                | Jim Schuelke .....      | 713/431/7620 ..... | 713/431-6333 ..... | james.s.schuelke@email.mobil.com   |  |               |
| Tech Breakfasts .....         | Scott Sechrist .....    | 281/856-8029 ..... | 281/856-7445 ..... | ScottSe@panaco.com                 |  |               |
| Tech Luncheons .....          | Keith Matthews .....    | 281/275-7500 ..... | 281/275-7660 ..... | kmattews@fairfield.com.            |  |               |
| Tech Committee .....          | Lloyd Weathers .....    | 281/556-5308 ..... | 713/599-9900 ..... | Lloyd_weathers@yahoo.com           |  |               |
| SIGS                          |                         |                    |                    |                                    |  |               |
| Data Processing .....         | Karl Schleicher .....   | 281/701-9032 ..... |                    | karl_schleicher@pgs.com            |  |               |
| Near Surf Geophysics .....    |                         |                    |                    |                                    |  |               |
| Potential Fields .....        | Afif Saad .....         | 281/342-8575 ..... |                    | AfifHSaad@netscape.net             |  |               |
| .....                         | Bob Van Nieuwenhuise .. | 281/679-2208 ..... |                    | Bob.VanNieuwenhuise@pgs.com        |  |               |
| Reality Center .....          | Roice Nelson .....      | 281/579-0172 ..... | 281/579-2141 ..... | rnelson@walden3d.com               |  |               |
| SEC. VP .....                 | Ron Ward .....          | 713/782-1234 ..... | 713/782-1829 ..... | ron@geodev.com                     |  |               |
| Annual Meeting .....          | Jim Moulden .....       | 281/876-8665 ..... |                    | jim_moulden@anadarko.com           |  |               |
| Awards Banquet .....          | April Robertson .....   | 713-783-7837 ..... | 713/783-9780 ..... | april@diamondg.com                 |  |               |
| Golf Tournament .....         | George Lauhoff .....    | 281/275-7623 ..... | 281/275-7550 ..... | glauhoff@fairfield.com             |  |               |
| Salt Water/Bass Tournament .. | Bobby Perez .....       | 281/240-1234 ..... | 281/240-4997 ..... | r_perez@jdkseis.com                |  |               |
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| Sporting Clays .....          | Steve Bircher .....     | 713/780-8334 ..... | 713/780-8335 ..... | sbircher@hrs-us.com                |  |               |
| Tennis Tounament .....        | Joe Jones .....         | 281/438-5626 ..... | 281/682-6928       |                                    |  |               |
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| .....                         | Shane Coperude .....    | 281/275-7514 ..... | 281/276-7660 ..... | scoperude@Fairfield.com            |  |               |

## Editor's Note

To insure your information reaches the GSH society members in a timely manner it must appear in the in the appropriate newsletter issue. Please note the following deadlines and plan your function's publicity strategy accordingly. Items must be received on or before the corresponding deadline date. Materials may be sent to [fklevin@swbell.net](mailto:fklevin@swbell.net). If you have any questions please call Frank Levin at 281/497-1090.

### 2001 GSH Newsletter

#### Deadlines

Issue ..... January 2002

**Deadline .. December 13, 2001**

## Announcements

**Annual Honors and Awards  
Banquet — May 9, 2002**

**Annual GSH meeting —  
May 16**

## News Item

The GSH has a request from Jerry Spring in Calgary for geophysical items for a museum in Canmore. Canmore is near Banff. The GSH plans to send collections of recording media, courtesy of Unocal, and geophones. Bill Gilchrist and Bill Swart have also identified some instruments and a torsion balance to be sent to Mr. Spring.

Since skiers are not interested in geophysics, the museum is closed in winter and the time is used to prepare displays. Volunteers are needed in Houston to build the recording media and geophone collections both for Mr. Spring and for the GSH. The hope is that the volunteers will need only to sort the items and that advantage can be taken of the Canadians initial display work. If you are willing to help with this project, please call Tom Fulton at 281-242-1806.

## GeoEvents Calendar

Make reservations by e-mail at [reservations@hgs.org](mailto:reservations@hgs.org) and include your member number (found on Bulletin mailing label), or use the phone reservation system at 713/463-8920.

### Reservation Codes

Use these codes to make voice mail meeting reservations:

|                                      |            |
|--------------------------------------|------------|
| Technical Luncheon .....             | <b>601</b> |
| Data Processing SIG .....            | <b>602</b> |
| Potential Fields SIG .....           | <b>605</b> |
| Environmental Applications SIG ..... | <b>606</b> |
| Breakfast .....                      | <b>607</b> |

**The GSH would like to thank the following  
companies for their support as corporate members:**

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### **Thank you for your supporting the GSH!**

For information on how to become a corporate member or to endow a scholarship with an organization's name please contact Pat Starich (281) 654-5036 or the GSH office at (713) 463-9477.



# President's Page

At the request of GSH's president, future issues of the *Newsletter* will include a President's Page. The President's Page will provide a forum for GSH members who wish to comment on GSH matters or to make suggestions for improving the Society's services for its members. Items can be sent to the GSH office, to Dave Agarwal at [dave0836@aol.com](mailto:dave0836@aol.com), or Frank Levin at [fklevin@swbell.net](mailto:fklevin@swbell.net).

We would like to hear from you and have some feedback from the general membership. For example, we would like to hear from you on the following issues currently under discussion :

How to increase the membership, especially active membership, which determines our strength and vote at the SEG? Please note that the dues for the Associate and Active members are the same.

How to eliminate delinquency in the payment of annual membership dues? Although annual dues are \$25, which is less than the cost of a good dinner, we

have more than 300 delinquent members! We are certain that most members have just forgotten to renew. Please renew today, if you have not done so already.

How to encourage participation by members in GSH events, particularly younger members. As you are aware, we have monthly technical luncheon meetings, as well as SIG meetings, and occasional technical seminars like DISC, Spring Symposium, SEG Distinguished lectures, OTC etc.. Additionally, we have many social events, Annual Awards and dinner, and an annual meeting.

How can we improve on our programs and communications with the membership?

We have also reserved a page for the recognition of our corporate members/sponsors, GSH prints the name of your company and your company logo in recognition of cash or in-kind donations. We would like to see the name of your company on that page.

We are looking for nominations for

2001-2002 honors and awards. Each year, GSH awards Honorary and Life membership to individuals for service to the science and your society. Presidents awards recognize volunteers and/or committee chairs for their hard work to make GSH programs a success. In addition, SEG members who have completed the year of membership are awarded recognition certificates provided by SEG. We need your support and attendance for this annual event. The next annual Honor and Awards dinner will be held on May 9, 2002 with SEG's president as our guest of honor. We need your suggestions for nominations by March 15, 2002.

We are also looking for the nominations for GSH officers for the Year 2002-2003. We need these nominations no later than January 31, 2002. The nomination committee consists of the current president and two immediate past presidents.

## Earth Science Week 2001



Earth Science week is one of Houston's ways of getting children interested in the geological sciences. The GSH was one of 13 participating technical organizations that, on October 6<sup>th</sup> at the Houston Museum of Natural Science (HMNS), heard Mayor Lee Brown proclaim the second week in October

to be Earth Science week for the city.

Throughout the opening day, visitors to the museum participated in the second annual Earth Exploration Extravaganza. Children engaged in an "energy passport" contest, learning about earth science with hands-on demonstrations. More than 300 children and their families completed all of 10 stations and won prizes provided by Conoco, Anadarko,

BHP, HMNS, and HGS. Some of the passport stations, devised and staffed by volunteers from HGMS, SPE-GCS, the Rice AAPG chapter, and the GCS-SEPM, augmented those of the HGS.

A popular stop was the World Energy Theater, where Denise Martin, HMNS Educator Coordinator for the

Weiss Energy Hall, raised visitors' awareness of the impact of petroleum in everyday life by scheduling performances of Dr. Sydney Berger's play *The Adventures of Gus Gasoline and Jane*. In between performances, Art Berman, Chip Carney, and Greg Simmons talked about geoscience and geoscience jobs.

On the evening of October 6<sup>th</sup>, the symposium *Views of the Earth*, funded by HGS, Apache, and Fugro, provided an opportunity for visitors to meet three prominent earth scientists, Dr. Neal Lane, Ms. Susan Cunningham, and Dr. Kamlesh Lulla, and to hear their views on the Earth and Earth Science. During the reception prior to the symposium the speakers mingled with guests and talked about their career experiences. In their presentations, all three speakers spoke of global warming and other topics ranging from education to the future of the oil industry.

THE POTENTIAL FIELDS GROUP OF  
GEOPHYSICAL SOCIETY OF HOUSTON  
PRESENTS

THE ANNUAL POTENTIAL FIELDS  
**CHRISTMAS PARTY !**

5:30 pm to 8:30 pm  
THURSDAY DECEMBER 13, 2001

At

**THE LIBRARY of THE UNIVERSITY CLUB**  
The Galleria, Houston, Texas

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afifhsaad@netscape.net



## Membership Report

### New Members—Active

Lawrence F. Asher  
Thomas C. Clark  
Elizabeth Diaz  
Robert A. Montgomery

### Associate

Nedra D. Alexander  
Sylvia T. Chamberlain  
William L. Sass

### Emeritus

Arthur S. Cramer, Jr.

### Student

Sonja Kisin

Total Membership - 2048

## Geophysical Society of Houston Officers for 2001-2002

The officers are (from top left) Jim Wood, Secretary; Ron Ward, Second Vice President; Frank Levin, Editor; Dan Ebrom, President-Elect; (Bottom left) Jim Schuelke, First Vice President; Dave Agarwal, President; Donna Sisak, Treasurer



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# Geophysical Auxillary Of Houston

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The Geophysical Auxillary of Houston invites the wife of any past or present member of the GSH or SEG or past member of the GSH or SEG, the widows of former members of these organizations and women members of the GSH and SEG to join us for our 2001-2002 events. Yearly dues are only \$15.00. Call Marinell Williams at 713-467-4517 for information on how to join.

Officers for the year are President -

Georgeann Massell, Vice President/Social - Kathi Hilterman, Vice President/Membership - Marinell Williams, Secretary - Barbara Thigpen, and Treasurer - Emilie Fulton. Other Executive Board members include Donna Parrish, Jean Cooley, Ruth Harrison, Betty Conroy, Linnie Edwards, Jane Hasenpflug, Jerry Templeton, Cass Hanson, Susan Graul, Joyce Kubik, and Carol Gafford.

We extend an invitation for you to

join us on Monday, January 14, 2002 for lunch at the Junior League of Houston located at 11811 Briar Oak Lane. Chairperson, Linnie Edwards, has planned a delicious lunch and a style show featuring models from our GAH membership. Fashions will be from Drapers and Damon's of Town and Country.

"Strangers are just friends waiting to happen" Join us and make a lot of strangers your friends!

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## GAH MEMBERSHIP APPLICATION

Please enclose check in the amount of \$15.00 made out to GAH and Mail to:  
Emilie Fulton, 806 Piedmont, Sugar Land, Texas 77478

NAME \_\_\_\_\_

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HOME PHONE \_\_\_\_\_ WORK PHONE \_\_\_\_\_

SPOUSE NAME and COMPANY \_\_\_\_\_

BIRTHDAY (month and day) \_\_\_\_\_ E-MAIL ADDRESS \_\_\_\_\_

For more information call Marinell Williams at 713-467-4517

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## Data Processing SIG Meeting

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Theme: Seismic modeling  
Date: Wed., December 19th  
Location: PGS  
10550 Richmond Ave  
Time: 4:30pm social,  
5:00pm presentations

Directions: PGS is in the two building on the north side of Richmond just west of Beltway 8. Enter the dark building on the right. The meeting is in Room 172 on the west side of the building.

**Paper 1:** What you see may not be what you get: Reality check with elastic modeling by Chengbin Peng (Advanced Data Solutions, Inc.) and Dave DeMartini (Lone Star Consulting, Inc.)

**Speaker's biography:** Chengbin Peng joined Advanced Data Solutions in 2001

where he is the Director of Technology. Before joining ADS Chengbin was a Senior Research Geophysicist for Shell Exploration Technology Company from 1993 until 2001. He received a BSc in Geology from Beijing University in 1985, MSc geophysics from The Chinese Academy of Science in 1988, and PhD in Geophysics from MIT in 1993.

He is interested in seismic migration, inversion, tomography, anisotropy, wave propagation, borehole geophysics, and reservoir characterization.

**Paper 2:** Pre and Post Acquisition Seismic Modeling for Data Processing Applications by Bill Pramik, Christian Strand, Alope Mathur, and Steve Campbell (PGS).

**Speaker's Biography:** Bill Pramik

joined PGS in 1995. He is a Senior Research Geophysicist with PGS Research and the Geophysical Support Team Leader in Houston. Before joining PGS Research, Bill worked for 16 years with Amoco Production Company. 10 of these years were spent in Amoco's New Orleans Regional office where Bill worked in seismic data processing, interpretation and seismic acquisition technology. His last 6 years at Amoco were spent in Amoco's Tulsa Research Center where Bill specialized in acquisition related seismic data problems. Bill has a BSc in Geophysics from Virginia Polytechnic Institute and State University.

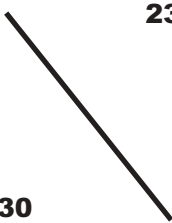
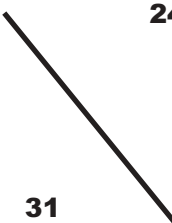
**Host:** PGS. For further details contact Karl Schleicher - karl.schleicher@pgs.com or 281 701 9032 Alan Foley - afoley@geocenter.com



# GSH SHRIMP PEEEL 2001



# DECEMBER 2001

| SUNDAY  | MONDAY   | TUESDAY   | WEDNESDAY  | THURSDAY   | FRIDAY    | SATURDAY  |
|---|--|-----------|--|--|-----------|---|
|   |  |           |  |  |           | <b>1</b><br>Sporting Clays<br>Tournament<br>16500 Westheimer Pkwy |
| <b>2</b>  | <b>3</b>   | <b>4</b>  | <b>5</b>   | <b>6</b>   | <b>7</b>  | <b>8</b>  |
| <b>9</b>  | <b>10</b>  | <b>11</b> | <b>12</b><br>GSH<br>Technical Breakfast<br>501 Westlake Park Blvd. | <b>13</b><br><b>NEWSLETTER<br/>DEADLINE</b><br><br>Potential Fields<br>Christmas Party<br>Library of<br>The University Club<br>The Galleria, Houston | <b>14</b> | <b>15</b>   |
| <b>16</b>   | <b>17</b>  | <b>18</b> | <b>19</b><br>Data Processing SIG<br>PGS<br>10550 Richmond          | <b>20</b>  | <b>21</b> | <b>22</b>   |
| <b>23</b><br> | <b>24</b><br> | <b>25</b> | <b>26</b>  | <b>27</b>  | <b>28</b> | <b>29</b>   |
| <b>30</b>   | <b>31</b>  |           |  |  |           |   |

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