HYPERVELOCITY IMPACT SOCIETY

Message from the President

Dear Colleagues and Society Members,

Welcome to our Summer 2004 newsletter!
As the new HVIS President, I would like to address you with a few words of greeting, inform you about some organizational news, and extend my sincere and heartfelt thanks to several very active and successful society officers whose contributions have been highly beneficial for our Society. Here is what you will find in this newsletter:

- a) Who are the BoD members and officers through HVIS2005
- b) Who are the Committee Chairs through HVIS2005 and what have they been up to since HVIS2003
- c) Some interesting information about HVIS2003
- d) Some information about the next Symposium, HVIS2005
- e) A list of the Alex Charters Student Scholars from HVIS2003
- f) Information about the next ACSS competition

I would also like to express my special appreciation and sincere thanks to **Charlie Anderson** for being the Society Newsletter's first editor. In the words of **Norman Jones**, Editor-in-Chief of the International Journal of Impact Engineering, Charlie's "splendid" efforts as the Society Newsletter Editor, Publications Committee Chair, and as Guest Editor-in-Chief of the IJIE volumes containing the proceedings of the eight most recent hypervelocity impact symposia, "have put HVIS securely in a good position for someone else to take over." That someone else is **Bill Schonberg** who has in the past served as Chair of the 1998 Hypervelocity Impact Symposium, Secretary-Treasurer of the Society from 1998 to 2000, and is the current Past-President having served as President of the Society from 2000 to 2003. Also to him many thanks and good wishes of success as our new Publications Committee Chair.

As you all saw for yourselves, **Michel Lambert** from ESA-ESTEC and his team, guided by **Gonnie Elfering**, did an excellent job in chairing and organizing the HVIS2003 Symposium in Noordwijk, The Netherlands, last December. Besides the high quality of presentations, I would like to point out the fantastic organization, and the exceptional Symposium dinner. Thanks again to all who helped making the Symposium such a great event. We are grateful to all HVIS members who — even in difficult times — were able to attend HVIS2003, and are looking forward to seeing you all next year for HVIS2005 in Squaw Valley. We would appreciate hearing from you, the Members of the Society, any HVI-related news out of your personal research activities as well as from throughout the international hypervelocity impact community. **Bill Schonberg** will also be happy to receive your comments and suggestions concerning HVIS matters. You can reach him via email at wschon@umr.edu.

With my best wishes for an interesting and successful HVIS term, I remain Sincerely yours!

Eberhard Schneider



HVIS BoD Members and Officers

HVIS2005
Plans and Organizing
Committee

Committee Activities Since HVIS2003

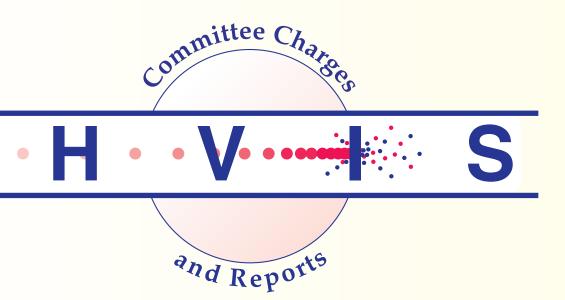
Interesting Info
About HVIS2003

Alex Charters
Student Scholars

Calls for Nominations

We want to hear from you regarding HVIrelated news in your life.

Send news to our new Publications Committee Chair, Bill Schonberg, at wschon@umr.edu



The **AWARDS COMMITTEE** administers awards on behalf of the Society in recognition of distinguished service and activity in the field of hypervelocity impact. In general, a Best Paper Award and the Distinguished Scientist Award are presented at every Hypervelocity Impact Symposium.

The Distinguished Scientist Award is given to a single individual or to a research team of two or more individuals for significant and lasting contributions to the field of hypervelocity science. The award consists of a plaque citing the accomplishments of the award winner and a monetary remuneration set by the Board of Directors.

Formal letters of nomination for the next Distinguished Scientist Award are now invited from the HVIS Membership and anyone who has been involved in hypervelocity impact science and engineering. In preparing the letter of nomination, nominators should include supporting information about the candidate, address the candidate's technical recognition within the community, the importance of his or her work and its contribution to hypervelocity science, and his or her personal contribution and service to the Society.

Previous recipients of this award are:

1989: Alexander C. Charters

1992: Alois J. Stilp and Volker Hohler

1994: James R. Asay

1996: Burton G. Cour-Palais

1998: Hallock F. Swift

2000: Charles E. Anderson, Jr.

2003: Dennis Orphal

Written nominations can be emailed at anytime to the following members of the Society who make up the Awards Committee:

Ian Cullis (Chair) — igcullis@qinetiq.com
Gene Hertel — esherte@sandia.gov
Dennis Orphal — dorphal@aol.com
Tim Homquist — tjholm@networkcs.com
Tony McDonnell — t.a.m.mcdonnell@open.ac.uk

The Committee would like to see the widest participation from the membership in nominating the Distinguished Scientist that recognizes the talents of researchers across the world. The closing date for nominations will be May 30, 2005.

The Best Paper Award recognizes the best paper presented at a Hypervelocity Impact Symposium and is given at the start of the meeting.



The selection criteria are:
Originality of Research
Difficulty of Research
Importance of Research
Excellence of the Written Paper

The selection of the best paper will be made at the HVIS2005 manuscript review meeting. If you have any queries please do not hesitate to contact any of the Awards Committee members listed above.

EDUCATIONAL OUTREACH COMMITTEE The administers the HVIS Alex Charters Student Scholar Program, whose purpose is to provide travel reimbursement support for students to attend the Hypervelocity Impact Symposia. Reimbursement is provided for transportation and lodging during attendance at Symposia up to a limit specified by the Board of Directors. Alex Charters Student Scholars are provided complimentary registration and a copy of the proceedings, and are scheduled for a short introductory meeting with the HVIS Board of Directors and the Educational Outreach Committee members at the Symposium. This program is aimed primarily at graduate students who are enrolled in an academic institution at the time of the conference, although currently enrolled undergraduate students may also apply. The nomination consists of a letter of recommendation, on University letterhead, from the student's academic advisor. A Call for Nominations has been prepared and can be found elsewhere in this newsletter.

The current Committee members are Roberto Destefanis (Alenia Aerospazio), Eric Fahrenthold (University of Texas), Don Grosch (Southwest Research Institute), Colin Hayhurst (Century Dynamics), Stefan Hiermaier (Fraunhofer

Institut für Kurzzeitdynamik), and **Joel**

Williamsen (Institute for Defense Analysis). The Committee is currently soliciting nominations for the HVIS2005 Alex Charters Student Scholars program.

Society members are invited to tear out and post the enclosed call

for nominations and to encourage eligible students to apply, through their academic advisors, as detailed in the call for nominations.

The primary responsibility of the **MEMBERSHIP COMMITTEE** is promoting membership in the Society. The Committee also has responsibility for ensuring that membership dues are collected each year and for keeping the Secretary-Treasurer informed of the current membership of the Society. In recent months, the Committee has been working on a detailed statistical analysis of previous conference attendances. The Committee plans to work closely with the HVIS2005 Organizing Committee to better gather membership data.

The **NOMINATIONS COMMITTEE** is responsible for nominating candidates for election to the Board of Directors of the Society. Diversity on the Board of Directors is encouraged with respect to such criteria as country of origin, organization or employment, gender, race or ethnicity, and area of specialization in the general area of hypervelocity impact (i.e., space shielding, high pressure equation of state measurements, launcher technology, etc.). It is desired that the Board of Directors reflect and represent the membership and interests of the Society to as great a degree as possible with a limited number of members.

The **PUBLICATIONS COMMITTEE** assists in the preparation and dissemination of materials for the benefit of the Society. The Publications Committee Chair serves as editor and publisher of the HVIS Newsletter and is responsible for compiling the proceedings of the Symposia.

GET INVOLVED!

If you would like to
participate on any of these
Committees, please contact the
appropriate Committee Chair as
listed on the following page. This
is your Society... we welcome
and encourage your
participation!

the site selection committee is charged with developing prospective hosts for future Symposia. If you or your organization is interested in hosting a Symposium, please contact the Committee Chair. We are always on the lookout for

new locations and organizations

to host our Symposia!



HVIS 2003 Alex Charters Student Scholars

The following is a list of students who were selected as Alex Charters Student Scholars for the 2003 Hypervelocity Impact Symposium.



Tim Beno	. University of Texas at Austin	USA
Thomas Berning	. University of Dayton	USA
Jose Cruz-Banuelos	. Rice University	USA
Michael Dalzell	. Cranfield University	UK
Kouji Furukawa	. Kyushu Institute of Technology	JAPAN
Motoki Kaji	. Kyushu Institute of Technology	JAPAN
Chihiro Kitamoto	. Kyushu Institute of Technology	JAPAN
Pavel Lavrukhov	. Novosibirsk State University	RUSSIA
Tatsumi Moritoh	. Tokyo Institute of Technology	JAPAN
Brooke Myers	. University of Denver	USA
Youn-Keun Park	. University of Texas at Austin	USA
Helen Prentice	. University of Cambridge	UK
Andrew Ruggiero	. University of Cassino	ITALY
James Schwanethal	. Open University	UK
Andrew Smith	. Cranfield University	UK
Ravi Subramamian	. University of Texas at Austin	USA
James Van De Wal	. Rensselaer Polytechnic Institute	USA

Please remember that these students and others like them are the future of our profession and our society. The Board of Directors and the Program Selection Committee works very hard to send as many deserving students as possible to our Symposia. If you or your organization wish to get

involved by sponsoring qualified students or if you know about funding opportunities that can be leveraged to secure additional support for deserving students, please contact the Educational Outreach Committee Chair. The Society can always use additional financial support for this program!

Board of Directors, Members & Officers

PRESIDENT Eberhard Schneider Schneider@emi.fhg.de PAST-PRESIDENT Bill Schonberg wschon@umr.edu

SECRETARY/TREASURER Tim Holmquist tjholm@networks.com

Bill Gooch	wagooch@comcast.net
Stephan Bless	. Stephan_bless@iat.utexas.edu
Charlie Anderson	canderson@swri.edu
Michel Lambert	michel lambert@esa int

MEMBERS

HVIS Committee Chairs

AWARDS		
Ian Cullis	igcullis@qinetiq.com	
	EDUCATIONAL OUTREACH	
Eric Fahre	nthold epfahren@mail.utexas.edu	
MEMBERSHIP		
Emma Tay	lor e.a.taylor@open.ac.edu	
	NOMINATIONS	
Jerry Yatte	au jyatteau@ara.com	
PUBLICATIONS		
Bill Schonl	pergwschon@umr.edu	
	SITE SELECTION	
Lalit Chha	bildaslcchab@sandia.gov	



HYPERVELOCITY IMPACT SOCIETY

CALL FOR NOMINATIONS Alex Charters Student Scholars Program

The Hypervelocity Impact Society is pleased to announce a call for nominations for the Alex Charters Student Scholars Program. This program provides travel reimbursement support to selected students for attendance at the 2005 Hypervelocity Impact Symposium. Students are selected through a competitive evaluation of nominations submitted by their academic advisors. The symposium will be held the week of October 10–14, 2005 at the Resort at Squaw Creek, Lake Tahoe, California, USA.

ELIGIBILITY

Students enrolled in an academic institution at the time of the conference and interested in hypervelocity impact phenomena are eligible for nomination to the Alex Charters Student Scholars Program. This program is aimed primarily at graduate students, although undergraduate students may apply.

AWARD PACKAGE

Students selected as Alex Charters Student Scholars will receive travel reimbursement support for attendance at HVIS2005 (transportation and lodging expenses only), up to a limit of one thousand dollars (US) per student. Alex Charters Student Scholars will receive complementary conference registration and a copy of the conference proceedings.

NOMINATION PROCEDURE

The nomination must be submitted by the student's academic advisor, on the letterhead of the academic institution, by mail to the postal address shown at the right under "Schedule."

The nomination is limited to a maximum of three pages, and must include the following items:

- (1) name, address, email address, and telephone number of both the student and the advisor,
- (2) a brief overview of the student's academic background and record,
- (3) a description of future academic work to be pursued by the student, and
- (4) a discussion of why the symposium would be helpful to the student.

Nominations submitted by electronic mail or exceeding the three page limit will not be considered.

SCHEDULE

The nominations must be received no later than January 1, 2005, at the mailing address below. Announcement of the Alex Charters Student Scholars for HVIS2005 is expected to occur six months prior to the start of the conference.

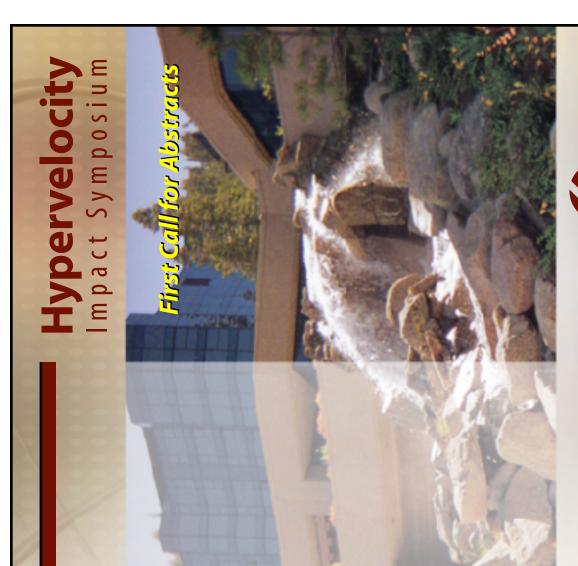
Professor Eric Fahrenthold
Department of Mechanical Engineering
University of Texas
1 University Station C2200
Austin, TX 78712
USA

Alex Charters Student Scholars will be selected based on a review of the nominations by the HVIS Educational Outreach Committee. Questions on the program may be directed to the committee chair, Eric Fahrenthold (epfahren@mail.utexas.edu).

Hypervelocity Impact Symposium

October 10-14, 2005 Resort at Squaw Creek Lake Tahoe, California The Hypervelocity Impact
Symposium is a biennial event
that is dedicated to enabling and
promoting an understanding of
the basic physics of high velocity
impact and related technical
areas. This international event
provides a forum for researchers
to share and exchange a wealth
of knowledge through oral and
poster presentations, and
commercial exhibits.

HVIS 2005 will be the ninth symposium in the series and will be held at the Resort at Squaw Creek. The Technical Sessions will be held at the Resort at Squaw Creek.



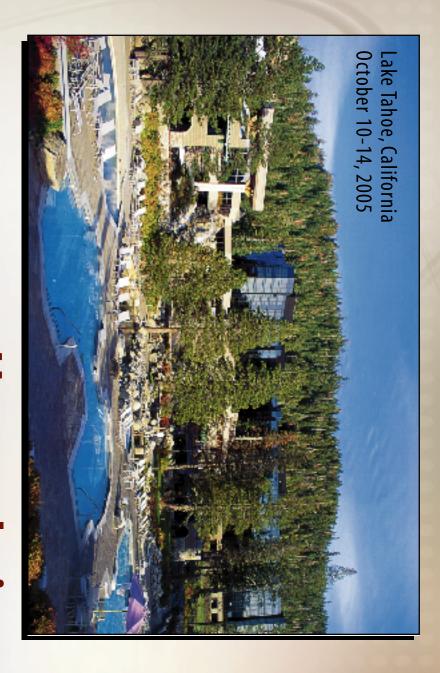
HVIS 2005 Lawrence Livermore National Laborate 7000 East Ave. Livermore, CA 94550

October 10-14, 200

October 10-14, 2005 at the Resort at Squaw Creek

Hosted by

wrence Livermore National Laboratory



Contacts

Glenn Pomykal (925) 422-4728 pomykal1@llnl.gov

Doug Faux (925) 423-9705 faux1@llnl.gov

Tarabay Antoun (925) 422-1848 antoun1@linl.gov

Hypervelocity Impact Symposium 2005



RESORT AT SQUAW CREEK

SUBMISSION of ABSTRACTS

Abstracts of proposed papers are solicited from those interested and involved in hypervelocity impact. The preferred method of submitting abstracts is using e-mail. This could be done through the Society web site at www.hvis.org, by direct e-mail to hvis2005@llnl.gov, or US mail to:

HVIS 2005

Lawrence Livermore National Laboratory
Attn: Mary Gualco L-183
7000 East Ave.
Livermore, CA 94550

ABSTRACT GUIDELINES

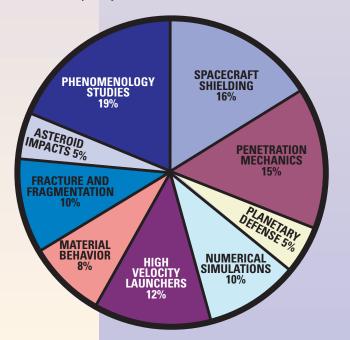
- Abstracts should be limited to 1,000 words plus figures and references.
- The official language is English.
- Abstracts must be unclassified and cleared for public release with unlimited distribution.
- Include name, address, affiliation, phone number, fax number, and e-mail address of primary author.
- Indicate author's preference for oral or poster presentation.
- Abstracts due January 2005

REPORT ON HVIS2003

HVIS2003 was truly an international conference. The Symposium was the 8th in the most recent series of meetings devoted to the study of hypervelocity impact phenomena, and was hosted by the European Space Agency. Approximately 140 individuals attended the conference in Noordwijk in December 2003 from 17 countries from around the world. There were a total of 56 oral presentations, 11 poster papers, and 3 invited talks. The following is a country-by-country breakdown of the attendance.

COUNTRY	ATTENDEES
USA	43
United Kingdom	19
Germany	18
Russia	10
Japan	8
France	
Italy	6
The Netherlands	6
Sweden	5
Israel	5
Ukraine	4
Canada	
South Korea	
Belgium	
Serbia-Montenegro	
Spain	
Turkey	1
TOTAL	137

The following is a breakdown of the papers presented at the conference by subject area:





The delightful Symposium dinner was held at ESTEC and included a visit to the Noordwijk Space Exposition Center. Those interested in learning more about the many activities underway at ESTEC enjoyed a tour of its spacecraft testing facilities at the end of the conference. The Symposium also featured a keynote address entitled, "Cosmic Projectiles" by H. Krueger of the Max-Planck-Institut fur Kernphysik. Several industry members gave their support to the Symposium by providing interesting displays of their services and products.

The following is a list of the commercial exhibitors at HVIS2003:

Another highlight of the conference was a special presentation by Dr. James Walker of the Southwest Research Institute the analysis on performed by SwRI and the Johnson Space Center in of the Columbia support Accident Investigation Board's investigation to determine the underlying causes for the breakup of the orbiter Columbia in February 2003. Dennis Orphal received the Society's Distinguished Scientist Award in

Continued on page 12



SOCIETY AWARDS

According to the Society's Constitution,

"The Board of Directors may establish an Awards Committee to administer awards and recognition for service to the field of hypervelocity impact. In general, an award for best paper and the Distinguished Scientist Award are presented every two to three years at an HVIS meeting."

Here is some more information about these two important awards and how they are determined and administered.

Distinguished Scientist Award

This award is given to a single individual or to a research team of two or more individuals for significant and lasting contributions to the field of hypervelocity science. The award consists of a plaque citing the accomplishments of the award winner and a monetary remuneration set by the Board of Directors. The recipient also receives free registration at future meetings of the HVIS.

The process for selection is based on a list of candidates that has been generated by members of the Board of Directors and by the Awards Committee. The Chair of the Awards Committee

also solicits input from the HVIS membership at large. This can be done through a formal mailing or through the HVIS Newsletter and is typically done about a year before the award is made. Each nomination must consist of a formal letter of nomination with supporting information about the candidate.

Once a complete set of candidates is identified, the Awards Committee goes through several rounds of voting to identify the winner. The selection of the Distinguished Science Award recipient is typically completed at least three months prior to the next HVIS meeting in order to give the recipient sufficient time to prepare an acceptance keynote speech at the Symposium.

Best Paper Award

An award for the best paper presented at the Hypervelocity Impact Symposium and published in the proceedings is also given at each Hypervelocity Impact Symposium. Candidates for the Best Paper Award are nominated by the Chairs of the technical sessions to be held at the upcoming Symposium. This is typically done at the manuscript review meeting. The nominations are presented to the Awards Committee for final selection. The Committee members rank each of the nominees and identify a final selection for the Best Paper Award. Once a selection is made, the Society President is notified for concurrence, but the authors of the paper are not notified until the Award is actually announced at the Symposium.



See You in Lake Tahoe in 2005!

The next HVIS is scheduled for October 10-14, 2005 at the Squaw Creek Resort in Lake Tahoe. The resort is a short 45 minutes drive from the Reno, Nevada airport, approx. 2 hrs away from Sacramento, CA, and nearly 3.5 hours from San Francisco. The host for the Symposium is the Lawrence Livermore National Laboratory. The Symposium Chairs are Glenn Pomykal, Doug Faux, and Tarabay Antoun. Current plans call for a welcome reception on Sunday night, 3.5 days of technical presentations, keynote speakers and plenary lectures, several evening activities, a symposium banquet, and a business luncheon. A companion's program is also being planned. The weather in the Lake Tahoe area is cool and crisp at this time of year, and the scenery particularly spectacular! You can visit the resort's website (http://www.squawcreek.com) to learn more about it and the surrounding area.

Here is the preliminary schedule of events between now and October, 2005.

	First Call for Abstracts (look for it elsewhere in this Newsletter!)
Fall 2004	Second Call for Abstracts
January 2005	Abstracts Due
February 2005	Abstracts Reviewed Authors Notified
May 2005	Manuscripts Due
June 2005 Mai	nuscripts Reviewed and Authors Notified
September 2005	Final Manuscripts Due Hotel information provided
October 2005	HVIS2005!

At this time we are investigating several possible enhancements to the Symposium registration and proceedings production processes. Stay tuned for news as it happens!





recognition and in honor of his research to investigate "direct hit" missile defense concepts, which led to his conceiving and developing the kinetic energy kill enhancement devices used in two major Ballistic Missile Defense Office (BMDO) experimental programs. The Symposium's Best Paper Award

was presented to L.C. Chhabildas,

W. D. Reinhart, and D. E. Grady for their paper, "Fragmentation of Materials in Expanding Tube Experiments." The Society and HVIS community again congratulate Denny, Lalit, Bill, and Dennis for their hard work and many efforts on behalf of the Society and the hypervelocity impact community at large.

The Society wishes to express its gratitude to Michel Lambert and Eberhard Schneider (Conference Co-Chairs), Peter Buchwald and Frank Shafer (Technical Program Co-Chairs), the Conference Organizing Committee, its Session Chairs, and the ESTEC staff that



worked many long hours to produce a well planned, excellent symposium.

On behalf of the Society, well done and THANK YOU!



Hypervelocity Impact Society
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