Message from the Chair

The alternate years between the biennial conferences seem quiet, but quite a lot occurs behind the scenes. Organization for the 20th Conference on Shock Compression of Condensed Matter is gearing up, and a lot of work remains to be done before the St. Louis meeting. This is also the time for initial planning of the following conference in 2019. A formal call for conference proposal follows, and I encourage our members to submit proposals before March 2017.

An unusually high fraction of the members in our topical group work for the United States government or through a government contractor. This has traditionally been a source of strength for the group and the shock conference, but it also makes us very sensitive to federal policy changes. Differing interpretations of that policy have created significant confusion about conference hosting. Potential hosts for future conferences should carefully read suggestions in the proposal call. More information is available by contacting any officer from the executive committee.

I want to thank the organizers for the 2017 conference — Marcus Knudson, Eric Brown, and John Eggert — for their efforts. These individuals have worked very hard against substantial gridlock to make this conference possible.

Proposals for 2019 Shock Compression Conference

Proposals to organize the 2019 Biennial Conference on Shock Compression of Condensed Matter are now being solicited. Potential hosts should submit a brief description of the intended local along with the names, qualifications, and duties of the organizing team. Proposals should be sent to any officer of the topical group (listed in the side bar on this page) before March 2017.

Conference teams typically have three or more members. Diverse organization teams are strongly encouraged, particularly those with at least one academic member. Teams should avoid using more than one employee from a particular federal agency, such as the Department of Energy, and certainly no more than two.

The 2017 meeting will be held in St. Louis, Missouri. Successive meetings traditionally move around the continental United States, so a site outside the Midwest would be preferred.

Dan Dolan
William H. (Bill) Holt, Navy civilian shock wave physicist, passed away on October 19, 2015, in Fredericksburg, VA at the age 76.

Bill was born on August 5, 1939, in San Antonio, TX. He received a B.S. degree in Physics cum laude from St. Mary’s University in San Antonio, TX in 1960. Bill received M.A. and Ph.D. degrees in Physics from the University of Texas at Austin in 1962 and 1967, respectively. The theses were completed under Professor Walter E. Milet and were in the area of angular correlation of positron annihilation radiation in nickel-zinc ferrites and ammonia. From 1967 to 1969, he was a Post-doctoral Research Fellow and Lecturer at the University of Manitoba, Winnipeg, Manitoba, Canada, under Physics Professor Benjamin G. Hogg. Bill performed research on positron interactions in solids and liquids, and worked on improvements to a large high-resolution mass spectrometer for precision measurements of nuclear masses. While in Canada, Bill published papers with friend and fellow post-doc Shu Yuen Chuang, and Professor Hogg.

In 1969, Bill joined a research group of new physics PhDs at the Naval Surface Warfare Center, Dahlgren, VA. There he started and equipped a laboratory using positron annihilation techniques for nondestructive testing of mechanical fatigue in metals, and moisture effects in polymers and other non-metals. He collaborated for many years in this area with Jag J. Singh of NASA/Langley Research Center in Hampton, VA. Bill has joint publications with Jag and other coworkers in the above research area, and is the coauthor of a patent for mechanical fatigue detection using positron probes.

In addition to remaining active in positron spectroscopy, Bill began working in 1970 with Dahlgren colleague Willis Mock, Jr. in the area of shock wave physics in solids. They designed and built a gas gun facility for studying the impact properties of materials under shock loading. Bill is the coauthor of over 20 patents, patent applications, and Navy invention disclosures, and over 60 publications and reports in the areas of shock wave propagation in solids, fracture and fragmentation of materials, shock-induced chemistry of polymers, shock depoling of ferroelectrics, and new experimental techniques for gas gun research.

Bill received the Dahlgren Division’s Science and Engineering Excellence Award in 1994. In 2001, he was awarded the John A. Dahlgren Award, the highest award offered by the Dahlgren Division, for his scientific achievements in shock wave physics. He received the Dahlgren Division’s Independent Research Excellence Award in 2004. Bill was the recipient of the Navy’s Distinguished Achievement in Science Award in 2005, the Navy’s highest scientific award, for his co-discovery of reactive materials.

He served as a session chairperson for many meetings of the APS Topical Group on the Shock Compression of Condensed Matter. He served on the Technical Program Committee for the 11th APS Topical Conference on Shock Compression of Condensed Matter, Snowbird, Utah, 1999. He also served as the NSWC Dahlgren Division’s representative to the Aeroballistics Range Association. He is biographically listed in Marquis Who’s Who in Science and Engineering, Who’s Who in America, and Who’s Who in the World. Bill was a member of the American Physical Society, the Canadian Association of Physicists, Sigma Xi, Sigma Pi Sigma, and the Materials Research Society.

He retired from Dahlgren in 2006, and was a senior scientist at Energy Technology Center in La Plata, MD from 2008 to 2011 before retiring completely.

Bill was very active in church and community affairs. He and wife Margaret joined a local Methodist church in 1970 shortly after moving to Fredericksburg, VA. He served as
a local Lay Leader, and represented his church at the Ash-
land District and Virginia Conference. In addition, he was
a committee member of the Virginia Interfaith Committee
on Mental Illness Ministries.

He is survived by his wife Margaret of 52 years, two
sons, daughter-in-law, and two grandchildren. He was a
devoted and loving person to his family and is missed by
his many friends and colleagues.

Willis Mock, Jr.
Kratos Defense & Rocket Support Services,
Inc., King George, VA

Susan L. Bartyczak
Naval Surface Warfare Center Dahlgren
Division, Dahlgren VA

14th Hypervelocity Impact Symposium
Monday 24th - Friday 28th April, 2017
University of Kent, Canterbury, UK

The Board of Directors of the Hypervelocity Impact So-
ciety is pleased to announce that the 14th Hypervelocity
Impact Symposium will be held April 24th – 28th, 2017
in Canterbury, UK. This Symposium serves as the princi-
pal forum for the discussion, interchange and presentation
of the physics of high- and hypervelocity impact and
related technical areas. It is intended for scientists, engi-
neers, and technical managers from academia, industry,
government and defense programs.

The HVIS Symposia have a long-standing international
reputation as a catalyst for stimulating research in this
area through a wealth of oral and poster presentations,
and commercial exhibits. The Symposium’s proceedings
are the major archival source of papers published in this
field. Oral and poster presentations will be made in the
following technical areas:

• Hypervelocity Phenomenology Studies
• High-Velocity Launchers and Diagnostics
• Spacecraft Meteoroid/Debris Shielding and Failure-
  Analyses
• Material Response (including EOS)
• Fracture and Fragmentation
• High-Velocity Penetration Mechanics and Target-
  Response
• Armor/Anti-Armor and BallisticTechnology
• Analytical and Numerical Methodologies
• Theoretical/Applied Mechanics Relevant to Hyperve-
  locity Impact
• Asteroid Impact and Planetary DefenseTechnology

A special session in the topical area of Impacts in the So-
lar System is also being planned. This special session will
include a full afternoon of papers devoted to this topic,
including a plenary speaker. We encourage those studying
impacts in the solar system via experiments and model-
ling to submit abstracts.

Companies are also invited to exhibit during the Sympo-
sium. Space is limited, so make your plans early!

The Symposium venue is the University of Kent, Canter-
bury (https://www.kent.ac.uk/http://www.canterbury.co.uk/).
For those who are not familiar with Canterbury, the city is
home to Canterbury Cathedral (where Thomas Beckett was
famously murdered for King Henry II), a huge number of
quaint shops and restaurants and a plethora of pubs!

The Symposium local organising committee Co-Chairs
are Prof. Mark Burchell, Dr. Mark Price and Dr. Penny
Wozniakiewicz More information on the Symposium, in-
cluding contact information, hotel reservations, schedules,
commercial exhibits, and timelines can be found at the
Symposium website: http://astro.kent.ac.uk/HVIS2017/
or by contacting the organising committee’s email:
HVIS2017@star.kent.ac.uk.

We are looking forward to seeing you all in Canterbury
next year!
14th International Conference on Fracture (ICF14)  
Rhodes, Greece  
June 18-23, 2017  

Dear colleague,

It is with great pleasure that I extend to you this cordial invitation to the 14th International Conference on Fracture (ICF14) in Rhodes, Greece, during June 18-23, 2017 (webpage: http://www.icf14.org). The conference is organized under the auspices of the International Congress on Fracture.

ICF14 will comprise of invited lectures by eminent academics together with contributed presentations covering all aspect of fracture mechanics. During the conference, special symposia in major areas of research activity as well as honoring individuals will be organized by members of the Scientific Advisory Board.

The attendees of ICF14 will have the opportunity to interact with the world leaders of fracture mechanics and get acquainted with the latest developments. ICF14 will be a forum where academia, industry, and government interact and exchange ideas in an area of utmost scientific and technological importance.

I am sure that besides the superb technical program, you will enjoy the majestic island of Rhodes with its unique beaches and scenic beauty, the medieval town and castle, many areas of historical interest and archeological importance, the delicious local cuisine, and the traditional Greek hospitality. ICF14 will be an unforgettable event: scientifically, socially and recreationally.

I look forward to welcoming you in Rhodes in 2017.

Best wishes,

Emmanuel E. Gdoutos  
ICF14 Chairman

Conference Tracks

Track 1 Nanomaterials and Nanostructures
- Fracture and fatigue of nanostructured materials
- Failure mechanisms
- Fatigue and fracture of MEMS and NEMS
- Failure analysis of nanodevices
- Fatigue and fracture at atomistic and molecular scales

Track 2 Engineering Materials and Structures
- Physical aspects of fracture
- Micromechanisms in fracture and fatigue
- Brittle fracture
- Ductile fracture
- Nonlinear fracture mechanics
- Fatigue and fracture
- High temperature fracture
- Fretting fatigue
- Polymers and composites
- Ceramics
- Fracture mechanics analysis
- Surface treatment technologies
- Probabilistic approaches to fracture mechanics
- Computational fracture mechanics
- Experimental; fracture mechanics
- Creep fracture
- Environment assisted fracture
- Dynamic, high strain rate, or impact fracture
- Damage mechanics
- Residual stress effects
- Concrete and rock
- Sandwich structures
- Novel testing and evaluation techniques
- NDE
- Mixed-mode fracture
- Structural integrity
- Scaling and size effects
- Mesofracture mechanics
- Smart materials and structures
- Fracture of biological materials
- Geophysical and tectonic problems
- Restoration engineering

Mini-Symposium Announcement:

High Temperature Fracture Mechanics Based Component Life Assessment Considering: Air and Environmentally assisted Creep and Creep/Fatigue and Load History Effects  
Organised by  
Prof. Kamran Nikbin*, Dr Catrin Davies*, Prof David Dean  
*Imperial College, London, EDF Energy, UK
With an increasing need to operate plants under varying loading cycles and possibly more corrosive and higher temperature environmental conditions there is a need to assess the present state of the art in fracture mechanics based methods in order to improve design and lifing methods for these components. This mini symposium will accept papers that can highlight the following areas of multidisciplinary research to shed more light on the new problems facing industry:

Materials: Development and Metallurgical Assessment of High Temperature and Fatigue Resistant Advanced Steels, Specific Work on 316 Stainless, 9 Cr Steels

Mechanisms of Crack Growth: Brittle Fracture, Ductile Rupture, Creep and Fatigue Crack Growth Models, Crack Path and Rate Simulation, Statistical Models, Micromechanical Models, Constraint Effects, Weldment Models

Modelling: Empirical and Continuum Damage Models, Multiaxial Fracture Mechanics, Multi-Scale Modelling Creep and Fatigue Crack Growth Models, Crack Path and Rate Simulation, Statistical Models, Micromechanical Models, Constraint Effects, Weldment Models

Loading History Effects: Pre-Damaged or Pre-Strained Material Testing and Their Subsequent Response to Creep and Fatigue Cracking Behaviour, Effects of Frequency on Creep/Fatigue Interaction

Residual Stress Measurement and Modelling

Environmental Assisted Damage: Fracture Initiation and Cracking testing and modelling in corrosive, oxidising and Unusual High Temperature environments

Methods: Analytical Solutions, Finite Element Modelling, Laboratory Experiments, Full Scale Experiments, Failure Analysis

Industrial Applications: Example Assessment in Conventional Plant, Nuclear and Chemical Engineering Plan, Modelling of Components Using Fracture Mechanics Based FFS Methods

Selected papers will be published in special issues of the journals: “Theoretical and Applied Fracture Mechanics” and/or “Fatigue and Fracture of Engineering Materials and Structures”. Please send by email your expression of interest with a tentative title of your presentation together with the name, affiliation and email address of the corresponding author and the names of co-authors before 10th Sept. 2016 (QUOTING on the Subject line ICF14-MS) to:

K.Nikbin@imperial.ac.uk
V.Crawford@Imperial.ac.uk

Mini-Symposium Fracture under High Rate and Impact Loading
Chair: Prof. Yuri Petrov
St. Petersburg State University, St Petersburg, Russia
Co-chair: Prof. Vadim Silberschmidt
Loughborough University, Loughborough, UK

You are cordially invited to submit an abstract to the Mini-Symposium “Fracture under High Rate and Impact Loading”, which is organised within the framework of the ICF 14 to be held in Rhodes, Greece on June 18-23, 2017 (see http://www.icf14.org/).

The topics of the Symposium include, but are not limited to, the following:

- high-strain rate loading
- dynamic fracture
- impact and blast loading
- high-speed penetration
- impact fatigue
- stress waves in microstructured materials
- simulation of failure and damage in materials under dynamic loading

The materials of interest range from traditional ones such as metals, alloys, ceramics, polymers and composites to advanced and emerging materials as well as bio- and biomedical materials.

Selected papers will be published in special issues of journals: “Engineering Fracture Mechanics” and/or “Mechanics of Advanced materials and Modern Processes”. Please send your expression of interest with a tentative title of your presentation together with the name, affiliation and email address of the corresponding author and the names of co-authors before 15 September 2016 (quoting ICF14-MS in the Subject line) to:

yp@yp1004.spb.edu
v.silberschmidt@lboro.ac.uk
First Announcement

20th American Physical Society Topical Conference on Shock Compression of Condensed Matter
July 9-14, 2017
Hyatt Regency at the Arch
St. Louis, Missouri, USA

We are excited to announce that the 20th Biennial APS Shock Compression of Condensed Matter Conference will be held in St. Louis, Missouri, on July 9-14, 2017 at the Hyatt Regency St. Louis at the Arch. The conference hotel is situated in the heart of downtown St. Louis at the base of the Gateway Arch, immediately adjacent to the newly renovated Gateway Arch National Park.

St. Louis, located on the Mississippi River, is known as the Gateway to the West. Home to the St. Louis Cardinals and Anheuser-Busch, St. Louis offers the greatest number of free attractions, including their World-class Zoo, many museums, the Muny (St. Louis’ outdoor amphitheater), and much more. Easily accessible by airplane and centrally located in the U.S., St. Louis will be a great venue for this Conference.

The scientific focus of the Conference will be on fundamental and applied research topics related to dynamic compression of condensed matter. This multidisciplinary field of research encompasses areas of physics, chemistry, materials science, mechanics, geophysics, planetary science, and applied mathematics.

The conference will include both oral and poster presentations. In addition, a day-long student symposium will take place on Sunday, July 9, 2017.

Abstracts will be solicited for the following technical areas:
- Detonation and shock-induced chemistry
- Energetic and reactive materials
- Equations of state
- Experimental developments; diagnostics and loading techniques
- First-principles and molecular dynamics
- Geophysics and planetary science
- Grain-scale to continuum modeling
- High energy density physics / warm dense matter
- Inelastic deformations, fracture, and spall
- Materials science
- Particulate, porous, and composite materials
- Phase transitions
- Soft matter
- Ballistics studies
- Spectroscopy and optical studies
- Additional Focus Areas

We are currently soliciting ideas for Focus Areas; please forward your ideas to the Conference Co-Chairs.

Calendar of Events
- December 12, 2016 – 2nd Announcement and Call for Abstracts
- January 1, 2017 – Reservation, Registration, and Activity Information
- February 24, 2017 – Abstracts Deadline
- June 12, 2017 – Hotel Reservation Deadline and Early Registration Deadline
- July 9-14, 2017 – Conference

We invite you to save these dates, and next summer.

Join Us in St. Louis!

SCCM-2017 Co-Chairs
Eric Brown, Marcus Knudson, and Jon Eggert
en_brown@lanl.gov
mknudson@wsu.edu
eggert1@llnl.gov

8th International Conference on Fracture of Polymers, Composites and Adhesives
10-14 September 2017
Euroltel Victoria
Les Diablerets, Switzerland
http://www.esistc4conference.com/

This will be the 8th International Conference in the series organised by the European Structural Integrity Society-Technical Committee 4 on Fracture Mechanics related to Polymers, Polymeric Composites and Adhesives. We are
again inviting papers in the areas reflecting the current and future interests of TC4 as listed below. New developments and innovative applications are especially welcome. Both experimental and theoretical work is sought in order to give a balanced view of the subject areas:

**Polymers:** Low rate properties, $K_c$, $G_c$ and $J_c$. Essential work of fracture. Impact and high rate properties. Ductile energy dissipation and notching effects. Environmental effects. Fracture in soft materials. Cutting, machining and scratching.

**Composites:** Delamination in continuous fibre composites including cross-ply and 3-D reinforcement. Impact and high rate properties. Fatigue and thermal properties. Toughness of short fibre and particulate composites. Nano and micro-scale composites. Mixed-mode and mode II fracture. Peeling of flexible laminates.

**Adhesives:** Structural adhesives toughness evaluation. Geometry and thickness effects on $G_c$. Toughening mechanisms, including nano-scale additives. Impact and high rate behaviour. Peeling of flexible laminates.

**Application of fracture mechanics:** Service life prediction models, including cyclic fatigue loads and environmental ageing effects. Data for FE design codes. Applications in electronics, pipelines and layered structures. Crash simulations

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**2016 Meetings**

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<th>2ND WOUND BALLISTICS INTERNATIONAL CONGRESS 2016</th>
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**Wound Ballistic Congress**

**June 6-7, 2016**

**Terrorism and Firearms Program**

Université Lyon 1 – Laennec
7 rue Guillaume PARADIN – 69008 Lyon
Metro D – stop LAENNEC
www.congres-balistique-lesionnelle.fr

Dear colleagues, ladies and gentlemen,

In 2015, Europe was marked by a succession of attacks or attempted attacks by firearms, mobilizing strong skills in ballistics and wound ballistics.

Therefore, the next edition of the Congress, regularly held to deal with these issues, could only grant a large place to the preponderance of firearms in the contemporary manifestation of terrorism.

Organized by the French National Forensic Science Institute (Institut National de Police scientifique – INPS) with the support of Euroballistics ® and the European society of wound ballistics (JONJACK), this year’s session will be held on Monday 6 and Tuesday 7 June at the “Université Lyon 1 – Laennec”. Internationally minded, this congress (with presentations given in English and French) is aimed at all professionals working on the use of firearms and its consequences: judges, investigators, ballisticians, doctors, psychologists, psychiatrists, lawyers, etc.

The first day will be entirely dedicated to reflections related to the attacks, from a medical and a technical point of view, but also from a historical and a criminological perspective. We will be particularly pleased to open this meeting with an introductory lecture of Alain Bauer, Professor of Criminology at the “Conservatoire National des Arts et Métiers” and at the Universities of New York, Beijing and Shanghai.

The second day, while carrying on with the terrorist approach, including in terms of the psychological sequelae, will be devoted to the free presentations. Abstracts for oral or displayed presentations may be submitted through the following link: call for abstract available on the website. Deadline for abstract submission: April 30, 2016.

**The date limit for the submission of abstracts is April 30, 2016.**

The diversity of topics, the multiple professional origins of the delegates and speakers will undoubtedly enrich the exchanges. We would really appreciate sharing this event with you and would be very happy to count you among our attendees. We remain at your disposal for any further information.

**Frederic Dupuch**
Director INPS
F.DUPUCH_Site

**Alain Miras**
Forensic pathologist,
Congress Chairperson
11th International Conference on Advances in Experimental Mechanics
5th to 7th September 2016
University of Exeter, UK
www.bssm.org/conf2016

Call for Papers
The 11th in a series of conferences showcasing novel and innovative research in Experimental Mechanics.

The conference is organised by the British Society for Strain Measurement and chaired by Professor Chris Smith from the University of Exeter. The conference will bring together internationally leading researchers across a wide range of disciplines in both academia and industry to exchange ideas and discuss new research.

Conference Highlights
• An interactive exhibition of state of the art instrumentation.
• See the brightest early career researchers take part in the Young Stress Analyst Competition which is sponsored by industry.
• Enjoy all the conference social activities along with the glorious sights of Exeter.
• Reception at the University of Exeter and Conference Banquet at Exeter Castle.

11th International Conference on Fracture and Damage Mechanics
Melia Hotel – Alicante, Spain
14-16 September, 2016

The conference series has the support of the experts in the field of fracture and damage mechanics and has become established as a leading international forum for presenting latest research. The high quality researches presented at the previous meetings are archived in conference proceedings published in book form. In addition, special issues in leading journals such as International Journal of Fracture, Engineering Fracture Mechanics and Key Engineering Materials have been devoted to the work presented at the meeting.

The proceedings of the 15th international conference will be published in the Journal of Key Engineering Materials and distributed to the delegates at the conference.

IMPLAST 2016
The 11th International Symposium on Plasticity and Impact Mechanics
Indian Institute of Technology Delhi
December 11 - 14, 2016

Message from the Conference Chairman
On behalf of the Organizing Committee and the Indian Institute of Technology (IIT) Delhi, it is my pleasure to cordially invite you to participate in IMPLAST 2016, the 11th International Symposium on Plasticity and Impact Mechanics, being held in New Delhi, one of India’s most historic and culturally rich cities.

IMPLAST series began in 1973, seven of these have been held in India and three, the 7th, 9th and 10th Symposia, were held in Melbourne, Australia in 2000, Bochum, Germany in 2007, and Rhode Island, USA in 2010.

IMPLAST Symposia are attended by the scientists, engineers and researchers from the universities, scientific laboratories, and industries across the globe to share their latest research findings in fundamental and applied aspects of large deformation and failure of materials and structures resulting from quasi-static, earthquake, fire, impact or blast loading.

In addition to providing a platform for sharing the latest developments in plasticity and impact mechanics, these symposia have proven instrumental in building and
Feeling the force between sand grains

For the first time, Lawrence Livermore National Laboratory (LLNL) researchers have measured how forces move through 3D granular materials, determining how this important class of materials might pack and behave in processes throughout nature and industry.

Granular materials such as sand, soil and rice exist everywhere around us. However, scientists and engineers do not yet fully understand how external forces move through these materials. The ability to quantify that force transmission is missing, yet critical in efforts to predict material behavior.

Using X-ray diffraction, computed tomography and new mathematical analysis, the team measured how forces move through a slowly compressed, opaque 3D granular material. The new technique confirmed that forces move spatially through granular materials in patterns that agree with theory and simulations, and tend to behave more uniformly as load is increased.

“Understanding how forces move through granular materials is important for building models and predicting the behavior of geologic materials such as sands and soils (e.g., when they fracture and flow during hydraulic fracturing and when they are penetrated to defeat buried enemy targets),” said Ryan Hurley, a LLNL scientist and lead author of the study Physical Review Letters.

Hurley also said that the research is relevant to the packing properties of everything from pharmaceutical pills, food grains in silos and additive manufacturing powders.

In their experiments, the researchers found that the various mathematical tools scientists use to understand these patterns are incomplete and often conflicting.

“The research sets the stage for further characterizing forces in larger 3D granular systems under more varied loading conditions,” Hurley said. “This characterization will enable more predictive modeling of processes throughout nature and industry.”

Anne M. Stark
Sr. Public Information Officer
Lawrence Livermore National Laboratory
(925) 422-9799
**Bookshelf**

**Books and Proceedings**

*Combustion Waves and Fronts in Flows*  
*Flames, Shocks, Detonations, Ablation Fronts and Explosion of Stars*  
Authors: Paul Clavin and Geoff Searby  
ISBN: 9781107098688

*Computational Thermodynamics of Materials*  
Authors: Zi-Kui Liu and Yi Wang  
ISBN: 9780521198967

*Dynamic Behavior of Materials*  
*Volume 1: Proceedings of the 2016 Annual Conference on Experimental and Applied Mechanics*  
Editors: Dan Casem, Leslie Lamberson and Jamie Kimberley  
ISBN: 9783319411323

*Dynamic Behavior of Materials at High Strain Rates: Experiments, Modeling and Simulation*  
Editors: E. Cadoni, H. Couque and S. Hiermaier  
*The European Physical Journal Special Topics (EPJ ST)*  
Vol. 225, Number 2, April 2016

*Experimental Methods of Shock Wave Research*  
*Shock Waves Science and Technology Reference Library, Vol. 9*  
Editors: Ozer Igra and Friedrich Seiler  
ISBN: 9783319237459

*Fibrous Materials*  
Author: Krishan Chawla  
ISBN: 9781107029729

*Hypervelocity Launchers*  
*Shock Wave Science and Technology Reference Library, Vol. 10*  
Editors: Friedrich Seiler and Ozer Igra  
ISBN: 9783319260181

*Impactful Times*  
*Memories of 60 Years of Shock Wave Research at Sandia National Laboratories*  
Authors: James R. Asay, Lalit C. Chhabildas, R. Jeffery Lawrence and Mary Ann Sweeney  
ISBN: 9783319333472

*Imperfections in Crystalline Solids*  
*(Part of MRS-Cambridge Materials Fundamentals)*  
Authors: Wei Cai and William D. Nix  
ISBN: 9781107123137

*Response of Structures Under Extreme Loading*  
*Proceedings of the Fifth International Workshop on Performance, Protection & Strengthening of Structures Under Extreme Loading (PROTECT 2015), June 28-30, 2015*  
Editors: Venkatesh K. R. Kodur and Nemkumar Banthia  
ISBN: 9781605952277

*The Gas Dynamics of Explosions*  
Author: John H. S. Lee  
ISBN: 9781107106307

*The Physics of the Manhattan Project*  
Author: Bruce Cameron Reed  
ISBN: 9783642147081

*Terminal Ballistics*  
Authors: Zvi Rosenberg and Erez Dekel  
ISBN: 9789811003936
The APS Topical Group on Shock Compression of Condensed Matter (GSCCM) was founded in 1984 to promote the development and exchange of information on the dynamic high-pressure properties of materials. The Topical Group sponsors biennial technical meetings on shock compression and detonation physics research, including experimental, theoretical and computational studies, and new experimental methods and developments.