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Conference Attire
Attire for the HPLA/BEP Conference is business casual.

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<td>1030 – 1200</td>
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<td>1200 – 1630</td>
<td>Poster Set-up</td>
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<td>Thu, 24 April 2014</td>
<td>Fri, 25 April 2014</td>
<td>1030 – 1135</td>
<td>Track One: HP04, continued Track Two: BE06, continued</td>
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<td>1220</td>
<td>Symposium Adjourns</td>
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### Detailed Agenda

**Monday, 21 April 2014**

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<tr>
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<td>Session Introduction Dr. Leonid Zhigilei, University of Virginia</td>
<td>Session Introduction Dr. Kevin Parkin, Carnegie Mellon University</td>
<td>Session Introduction Dr. Patrick Schelling, University of Central Florida [Invited]</td>
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<td>1200–1300</td>
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<td>Discussion with Authors</td>
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<tr>
<td>1330–1400</td>
<td>Dynamics of Ultrafast Laser Induced Liquid Spallation Dr. Steven Yalisove, University of Michigan</td>
<td>Review on Laser Lightcraft Research at DLR Stuttgart Dr. Stefan Scharring, Institute of Technical Physics, German Aerospace Center (DLR) [Invited]</td>
<td>Review on Laser Lightcraft Research at DLR Stuttgart Dr. Stefan Scharring, Institute of Technical Physics, German Aerospace Center (DLR) [Invited]</td>
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<tr>
<td>1415–1500</td>
<td>Modeling the Intra-Film and Interface Removal Dynamics of a Thin Nickel Film on Glass Dr. Ben Torralva, University of Michigan</td>
<td>Development of Energetic Propellant for Laser Microthrusters Dr. Keisuke Kondo, Tokai University [Invited]</td>
<td>Development of Energetic Propellant for Laser Microthrusters Dr. Keisuke Kondo, Tokai University [Invited]</td>
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<tr>
<td>1430–1445</td>
<td>Plasmon-Mediated Ultimate Femtosecond Laser Nanostructuring of Solid Surfaces Prof. Andrey Ionin, Lebedev Physical Institute of Russian Academy of Sciences</td>
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**Tuesday, 22 April 2014**

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<td>0700–1700</td>
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<td>0800–0825</td>
<td>Welcome &amp; Keynote Dr. Wolfgang and Solid of Andrey Prof. Boris Zentrum Dr. Hannover Chichkov, Laser</td>
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<td>0825–0910</td>
<td>Keynote Introduction Dr. Leonid Zhigilei, University of Virginia</td>
<td>Keynote: Review on Laser-Induced Plasma Spectroscopy: From Basic Science to Industrial Applications Dr. Johannes Pedarnig, Johannes Kepler University Linz [Invited]</td>
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<td>1055–1120</td>
<td>Modeling of Laser Ablation of LiF - Influence of Defects Dr. Herbert Urbassek, University of Kaiserslautern [Invited]</td>
<td>Microwave Rocket with Quasi-Optical Microwave Power Transmission System and Flight Demonstration Mr. Masafumi Fukunari, The University of Tokyo</td>
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<td>1145–1200</td>
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<td>1515 - 1530</td>
<td>Atomic Simulation Study of Short Pulse Laser Interactions with Metal Targets under Conditions of Spatial Confinement Ms. Eamam Abdul Karim, University of Virginia</td>
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<td>HP03: Biological Applications</td>
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<td>Session Introduction Prof. Jack Yoh, Seoul National University</td>
<td>Session Introduction Dr. Hans-Albert Eckel, DLR Institute of Technical Physics</td>
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<td>1555 - 1610</td>
<td>Enhancement in Drug Deliverance for Laser Generated Microjet Injector Mr. Hunjae Jang, Seoul National University</td>
<td>A Fundamental Study of Laser Propulsion: Plasma Diagnostics and Role of Ionization Waves On Propagation of Laser Supported Detonation, Mr. Kohei Shimamura, University of Tokyo</td>
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<tr>
<td>1610 - 1635</td>
<td>Bio-Interfaces Engineering using Laser Based Methods for Biomedical Applications Dr. Valentina Dinca, National Institute for Lasers [Invited]</td>
<td>Laser Propulsion Research Facilities at DLR Stuttgart Ms. Stephanie Karg, German Aerospace Center (DLR) [Invited]</td>
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<td>1700 - 1720</td>
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<tr>
<td>1720 - 1830</td>
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<td>0700 - 1700</td>
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<tr>
<td>0800 - 0805</td>
<td>Administrative Announcements, &amp; Keynote Introduction Dr. Thierry Sarnet, Harvard University &amp; Aix-Marseille University</td>
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<td>0845 - 0850</td>
<td>Session Introduction Dr. Thierry Sarnet, Harvard University &amp; Aix-Marseille University</td>
<td>HP04: Promoting New Laser and Optical Technologies</td>
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<td>0850 - 0915</td>
<td>When Light Plays with Metal Nanoparticles in Optical Waveguides and Creates Spontaneously Active Color Filters Prof. Nathalie Destouches, University of Lyon [Invited]</td>
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<td>0915 - 0940</td>
<td>Laser Microprinting of Liquids: Analysis of the Jetting Dynamics Dr. Pere Serra, University of Barcelona [Invited]</td>
<td>HP10: Advanced BEP Concepts</td>
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<td>0940 - 0955</td>
<td>Picosecond-Laser Texturing of Solar Cells Using Laser Beam Interference Dr. Gediminas Raciukaitis, Center for Physical Sciences and Technology</td>
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<td>0955 - 1030</td>
<td>Break</td>
<td>HP11: Laser Direct Writing</td>
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<tr>
<td>1030 - 1045</td>
<td>Genesis of Femtosecond-Induced Nanostructures on Solid Surfaces Dr. Juergen Reif, Brandenburg Technical University (BTU)</td>
<td>Pulsed Laser Interactions with Reactive Foils Dr. Ryan Murphy, Sandia National Laboratories [Invited]</td>
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<tr>
<td>1045 - 1110</td>
<td>Laser Processing of 2D &amp; 3D Metamaterial Structures Dr. Alberto Pique, Naval Research Laboratory [Invited]</td>
<td>Impulse Control for Stable Flight of Beamed Energy Vehicle Dr. Naofumi Ohnishi, Tohoku University [Invited]</td>
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<tr>
<td>1110 - 1125</td>
<td>Discussion with Authors</td>
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<td>1135 - 1300</td>
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<td>HP05: Fundamentals &amp; Simulations Session</td>
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<td>Session Introduction Dr. Beate-Maria Kesternich, Technical University of Kaiserslautern</td>
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<tr>
<td>1300 - 1305</td>
<td>Session Introduction Prof. Craig Arnold, Princeton University</td>
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| 1305 - 1330 | Simulations of Nonthermal Structural Phenomena with CHIVES  
Dr. Eeuwe Zijlstra, University of Kassel [Invited] | Laser-Induced Transfer of Nanoparticles for Gas-Phase Analysis  
Dr. Alexander Bulgakov, University of Edinburgh [Invited] |
| 1330 - 1355 | AC Conductivity in Non-Equilibrium Warm Dense Gold  
Prof. Andrew Ng, University of British Columbia [Invited] | Pulsed Laser Deposition (PLD) of Dielectrics – Is Femtosecond Laser Ablation Better Than Nanosecond Ablation?  
Dr. Jørgen Schou, DTU Fotonik, Technical University of Denmark [Invited] |
| 1355 - 1420 | Warm Dense Matter Properties for the Modeling of Laser-Ablation  
Dr. Dirk Gericke, University of Warwick [Invited] | Copper Vapor Laser for Direct Writing, Cutting, Drilling Materials  
Mr. Mishik Kazaryan, Lebedev Physical Institute |
| 1420 - 1435 | Molecular Dynamics Simulations of Silicon: The Influence of Electron-Temperature Dependent Interactions  
Dr. Johannes Roth, University of Stuttgart | Acoustic Effects in High Repetition Rate Laser Direct Write Printing  
Prof. Craig Arnold, Princeton University [Invited] |
| 1435 - 1450 | Excitation and Relaxation Dynamics in Dielectrics Irradiated by Intense, Ultrashort Laser Pulses  
Mr. Nils Brouwer, Technical University of Kaiserslautern | Discussion with Authors |
| 1450 - 1510 | Discussion with Authors | |
| 1455 - 1530 | Break | |
| 1530 - 1535 | Session Introduction  
Prof. Andrey Ionin, Lebedev Physical Institute of Russian Academy of Sciences | Session Introduction  
Prof. Willy Bohn, BohnLaser Consult |
| 1535 - 1550 | Hybrid CO Laser System Emitting in the Spectral Band of 2.5-8.3 Micron  
Prof. Andrey Ionin, Lebedev Physical Institute of Russian Academy of Sciences | Space Demonstration Experiment of Laser-Assisted Space Debris De-Orbiting  
Prof. Akhiro Sasoh, Nagoya University [Invited] |
| 1550 - 1615 | Optical Pumped Oxygen – Iodine Laser  
Prof. Oleg Danilov, Vavilov State Optical Institute | Phase Conjugate Light Generation for Space Debris Removal  
Ms. Kotomi Kawakami, University of Tokyo |
| 1615 - 1700 | Discussion with Authors | 1615 - 1630 | Impacts of Tug and Debris Sizes on Electrostatic Tractor Beam Performance  
Mr. Erik Hogan, University of Colorado |
| 1630 - 1645 | Discussion with Authors | 1630 - 1645 | Laser Ablation for Orbital Debris Reduction: Opportunities and Issues  
Mr. Joseph Carroll, Tether Applications, Inc. |
| 1645 - 1705 | Discussion with Authors | 1645 - 1705 | |

### Thursday, 24 April 2014

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| 0800 - 0805 | Administrative Announcements, & Keynote Introduction  
Prof. Willy Bohn, BohnLaser Consult | |
| 0805 - 0845 | Keynote: CLEANSPACE - Space Debris Removal by Ground Based Laser: Progress of the European Project  
Dr. Bruno Esmiller, Astrium Space Transportation | |
| 0845 - 0850 | Session Introduction  
Dr. Klaus Sokolowski-Tinten, University of Duisburg-Essen | Session Introduction  
Prof. Hideyuki Horisawa, Tokai University |
| 0850 - 0905 | Evidence of New High-Pressure Silicon Phases in Fs-Laser Induced Confined Microexplosion  
Prof. Andrei Rode, Australian National University | Overview of Laser Propulsion Research Activities at Tokai University  
Prof. Hideyuki Horisawa, Tokai University [Invited] |
| 0905 - 0920 | Propagation and Self-Focusing of Intense Femtosecond Shaped Beams and Applications to Laser Material Processing  
Dr. Pavel Polynkin, University of Arizona | Overview of Laser Ablation Micropropulsion Research Activities at DLR Stuttgart  
Dr. Hans-Albert Eckel, DRL-German Aerospace Center [Invited] |
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<td>0920 - 0945</td>
<td>Opportunities for Laboratory Astro- and Planetary Physics at the Matter in Extreme Conditions End Station at LCSL Dr. Bob Nagler, SLAC National Accelerator Laboratory [Invited]</td>
<td>Short-Pulse Laser-Optical System Requirements for Reducing the Space Debris Threat Dr. Claude Phipps, Photonic Associates, LLC</td>
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<td>0945 - 1000</td>
<td>Physics and Material Dynamics Resulting From Sequenced Multipulse Femtosecond Laser Interactions with Metallic Surface Dr. Dennis Alexander, University of Nebraska-Lincoln</td>
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<td>0955 - 1030</td>
<td>Break</td>
<td>Laser Ablation Propulsion with High Frequency Repetitive Pulsed-Laser at Various Atmospheric Pressures Dr. Bin Wang, Nagoya University</td>
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<td>1030 - 1055</td>
<td>Femtosecond Microscopy of Laser-Produced Plasmas in Dielectrics: A Tool for Optimized fs Laser Processing Dr. Jan Siegel, Instituto de Optica, CSIC [Invited]</td>
<td>Experimental Study on Laser Micropulsion Dr. Long Jiao, University of Science and Technology of China</td>
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<td>1055 - 1120</td>
<td>Transient Optical Properties of a Dielectric Excited By Intense Ultra-Short Laser Pulse Prof. Eugene Gamaly, Australian National University [Invited]</td>
<td>Laser Chemical Propulsion and Its Preliminary Experimental Study Prof. Zhiping Tang, University of Science and Technology of China [Invited]</td>
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<tr>
<td>1120 - 1140</td>
<td>Discussion with Authors</td>
<td>Discussion with Authors</td>
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<td>1140 - 1300</td>
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**Lunch Break - On Your Own**

**Track One (Lumpkins Ballroom North)**

- **THURSDAY**
  - 1300 - 1305: Session Introduction Prof. Andrei Kanaev, University of Paris 13
  - 1305 - 1330: Ultrafast Laser-Induced Processes and Processing on Surfaces at the Micro/Nano-Scale by Temporally Shaped fs Laser Pulses Dr. Panagiotis Loukakos, Foundation for Research & Technology - Hellas [Invited]
  - 1330 - 1355: Ultralong Standing Frozen Threads Forming Rim around an Ablation Crater Created by Femtosecond Laser Dr. Nial Inogamov, Landau Institute for Theoretical Physics, RAS
  - 1355 - 1410: Real Time Reflectivity Changes during Periodic Surface Structures Formation on Copper Thin Films by Nano and Picosecond UV Lasers Dr. Nadibj Semmar, CNRS-University Orleans
  - 1410 - 1425: Mass Spectrometry Imaging at the Nanoscale by Extreme Ultraviolet Laser Ablation Prof. Carmen Menoni, Colorado State University
  - 1425 - 1440: Short Pulse Laser-Induced Switching of Phase Change Materials Studied by Time-Resolved X-Ray Scattering Dr. Klaud Sokolowski-Tinten, University of Duisburg-Essen
  - 1440 - 1500: Discussion with Authors
  - 1455 - 1525: Break

**Track Two (Lumpkins Ballroom South)**

- **THURSDAY**
  - 1300 - 1305: Session Introduction Prof. Willy Bohn, BohnLaser Consult
  - 1305 - 1330: Elastic Waves Related to Pulsed Laser Propulsion Dr. Janz Možina, University of Ljubljana [Invited]
  - 1330 - 1355: A Space-Based Laser System for the Deflection and Manipulation of Asteroids Dr. Alison Gibbings, University of Strathclyde [Invited]
  - 1355 - 1420: DE-STAR - A Planetary Defense and Exploration System Prof. Philip Lubin, University of California-Santa Barbara [Invited]

**Friday, 25 April 2014**

- **FRIDAY**
  - 0700 - 0800: Light Continental Breakfast
  - 0700 - 1200: Registration
  - 0800 - 0805: Administrative Announcements, Keynote Introduction Dr. Claude Phipps, Photonic Associates, LLC
  - 1700 - 1800: Final Poster Viewing & Voting
  - 1800 - 1815: Poster Award Winner Announcements
  - 1815 - 2100: Dinner with Entertainment
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| 0805 - 0845 | **Keynote:** Advanced, Diode-Pumped, High Average Power Lasers for Orbital Debris Removal and Other Applications  
Prof. David Neely, STFC Rutherford Appleton Laboratory, Didcot (UK) | **Track Two**                                                                 |
|        | **Track One**                                             | **Track Two**                                                                 |
|        | **Lumpkins Ballroom North**                                   | **Lumpkins Ballroom South**                                                |
| HP10: MAPLE, PLD and Processing of Advanced Materials | BE08: Breakthrough Propulsion/Postdeadline |
| 0845 - 0850 | **Session Introduction**                                      | **Session Introduction**                                                   |
|        | Prof. Adrienne Still-Roberts, Duke University                    | Dr. Young Bae, Y.K. Bae Corporation                                         |
| 0850 - 0915 | **Modification of ZnO Thin Films Induced by High-Density Electronic Excitation**  
Dr. Andrei Kanaev, CNRS-LSPM [Invited] | **Past, Present and Future of Photon Propulsion**                          |
|        | **Electronic Excitation**                                      | Dr. Young Bae, Y.K. Bae Corporation                                         |
| 0915 - 0940 | **Matrix Assisted Pulsed Laser Evaporation of Thin Films for Biomedical Applications**  
Dr. Roger Narayan, UNC/NC State Joint Department of Biomedical Engineering [Invited] | **Space Photonic Laser Thruster**                                           |
|        | **Matrix Assisted Pulsed Laser Evaporation of Thin Films for Biomedical Applications**  
Dr. Roger Narayan, UNC/NC State Joint Department of Biomedical Engineering [Invited] | Prof. John Sinko, Saint Cloud State University                                |
| 0940 - 0955 | **Coarse-Grained Molecular Dynamics Simulations of Matrix-Assisted Pulsed Laser Evaporation (MAPLE) with Minimum Amounts of Matrix**  
Dr. Leonid Zhigilei, University of Virginia | **Melt Dynamics and Melt-Through Time in Continuous Wave Laser Ablation: Comparative Analysis of Contributions from the Recoil Vapor Pressure and Marangoni Effect**  
Dr. Alexey Volkov, University of Alabama [Invited] |
| 0955 - 1010 | **MAPLE for Functional Coatings with Applications in Tissue Engineering**  
Dr. Flavio Stokker-Cheregi, National Institute for Lasers, Plasma and Radiation Physics | **Epitaxial Growth of 3C-SiC Thin Films on Si by Pulsed Laser deposition**  
Ms. Elena Pavlova, National Research Nuclear University MEPhI |
| 1010 - 1040 | **Break**                                                      | **Break**                                                                  |
|        | **Track One**                                             | **Track Two**                                                                 |
|        | **Lumpkins Ballroom North**                                   | **Lumpkins Ballroom South**                                                |
|        | **Engineering Morphology in Thin Films via Laser Ablation**    | BE08: Breakthrough Propulsion/Postdeadline, cntd.                           |
|        | Prof. Rodney Priestley, Princeton University [Invited]         | **Track Two**                                                                 |
| 1040 - 1105 | **Nanoscale Domains in Blended Organic Thin Films Deposited by RIR-MAPLE**  
Mr. Ryan McCormick, Duke University | **Generating and Characterizing Secondary Graphite Debris using High-Power Laser-Driven Shocks and Various Laser Diagnostics**  
Mr. Gabriel Seisson, CEA CESTA |
| 1105 - 1120 | **Laser Deposition of Catalysts for Carbon Nanotube Growth: From First Steps to Technological Applications**  
Prof. Chantal Boullier-LeBorgne, CNRS-University Orleans | **Isocoric Heating using Proton Beams and Shock Compression Generated by UHI Lasers**  
Prof. Markus Roth, Technische Universität Darmstadt [Invited] |
| 1135 - 1155 | **Discussion with Authors**                                   | **Discussion with Authors**                                                |
| 1220   | **Symposia Adjourn**                                         | **Symposia Adjourn**                                                       |
| 1230   | **Canyon Road Tour & Lunch on the Town**                      | **Canyon Road Tour & Lunch on the Town**                                  |

### Lunch & Dinner Suggestions

**Geronimo**  
724 Canyon Rd., 505-982-1500  
Website: [http://chrissharvey.wix.com/geronimo](http://chrissharvey.wix.com/geronimo)

**The Compound Restaurant**  
653 Canyon Rd., 505-982-4533  
Website: [www.compoundrestaurant.com](http://www.compoundrestaurant.com)

**Galisteo Bistro**  
227 Galisteo Street, 505-982-3700  

**Jinja Asian Café**  
North DeVargas Mall Across from Albertsons’s 510 N. Guadalupe St., 505-982-4321  
Website: [http://jinjabistro.com/index.html](http://jinjabistro.com/index.html)

**Old House Restaurant**  
309 West San Francisco St., 505-995-4530  
Website: [http://www.elrodadohotel.com/old_house_restaurant/](http://www.elrodadohotel.com/old_house_restaurant/)

**Cleopatra Café**  
418 Cerrillos Road, 505-820-7381  
Website: [http://www.bumblebeesbajagrill.com](http://www.bumblebeesbajagrill.com)

**Bumble Bee’s Baja Grill**  
301 Jefferson, 505-820-2862  
Website: [http://www.bumblebeesbajagrill.com](http://www.bumblebeesbajagrill.com)

**The Pantry Restaurant**  
1820 Cerrillos Rd., 505-986-0022  
Website: [http://www.pantraysantafe.com](http://www.pantraysantafe.com)

**Marisco’s Costa Azul**  
2875 Cerrillos Rd., 505-473-4594  
Website: [http://www.marisocostaazul.com](http://www.marisocostaazul.com)

**Cowgirl BBQ**  
319 S Guadalupe, 505-982-2565  
Website: [http://www.cowgirlsantafe.com/menus](http://www.cowgirlsantafe.com/menus)

**El Farol**  
808 Canyon Road, 505-983-9912  
Website: [http://www.elfarolsf.com](http://www.elfarolsf.com)

**The Teashouse**  
821 Canyon Road, 505-992-0972,  
Website: [http://teahousesantafe.com](http://teahousesantafe.com)
Please take time to view the array of technical poster papers in the Mexico Room. Authors will be available throughout the week for discussion. The posters will be available for viewing on Tuesday from 1730 - 1830, Wednesday from 0730 - 1700, and Thursday from 0730 - 1800.

- **Electronic Non-Equilibrium in UV Laser Induced Plasma from a Metal Sample**, Miss Amina Ait Oumeziane, Aboubekr Belkaid University Tlemcen Algeria
- **High Repetition Rate P-P Lasers for Space Debris Elimination**, Prof. Victor Apollonov, General Physics Institute
- **CO Laser for Production of Nuclear Fuel from Tailings**, Prof. Igor Baranov, Baltic State Technical University
- **Investigation of Ultrashort Pulsed Laser Induced Ablation Process in CZTS Thin-Films**, Dr. Paulius Gecys, Center for Physical Sciences and Technology
- **A Space-Based Laser System for the Deflection and Manipulation of Asteroids**, Ms. Alison Gibbings, University of Strathclyde
- **An Optimized Protocol for Femtosecond Ablation of Dielectric Films**, Mr. Gabe Guss, Lawrence Livermore National Laboratory
- **Demonstration of Enhanced Surface Mobility of Adsorbate Cluster Species by Surface Acoustic Wave Excitation Induced by a Pulsed Laser**, Dr. Henry Helvajian, The Aerospace Corporation
- **Induction Phenomena of a Laser-Assisted Pulsed Plasma Thruster**, Prof. Hideyuki Horisawa, Tokai University
- **First Principal Calculations of Metals with Excited Electron Subsystem**, Dr. Nail Inogamov, Landau Institute for Theoretical Physics, RAS
- **Research on Application of Rectangular Beam in Micro Laser Propulsion**, Dr. Long Jiao, University of Science and Technology of China
• Research on Discrete Meso-Dynamic Simulation of Micro Laser Propulsion, Dr. Long Jiao, University of Science and Technology of China
• Microwave Propulsion Combustion Chamber Design, Dr. Donald Johansen, EMF Kinetics
• Plasma Filaments and Shock Wave Formation in Microwave Thruster, Mr. Yoshiaki Kageyama, Tohoku University
• Laser Micro Cutting of Thin Substrates, Mr. Sostaine Kaya-Boussougou, GREMI
• A Laser Thermal Microthruster with a Novel Fiber Tip Heat Source, Mr. Keisuke Kondo, Tokai University
• Experimental Investigation and Atomistic Simulation of Short Pulse Laser Interactions with Spatially Confined Metal Targets, Dr. Zhibin Lin, Electro Scientific Industries, Inc.
• Intense Pulsed Neutron Source Using a Petawatt Laser Irradiation of Deuterium Cluster Foils, Dr. George Miley, University of Illinois
• Structural Profiling of Laser-Absorption Layer in Laser-Produced Plasma of Different Gas Media using 2-wavelength Mach-Zehnder Interferometry, Mr. Joseph Ofosu, The University of Tokyo
• Numerical Study of Nano-Sized Cluster Formation in Femtosecond Laser Ablation, Dr. Naofumi Ohnishi, Tohoku University
• Impulse Vector Characteristics of a Laser Ablation Vehicles for Atmospheric Flight Applications, Mr. Takumi Oyama, Tokai University
• Gas Sensing by Single Walled Carbon Nanotube Chemiresistors Fabricated by Laser-Induced Forward Transfer, Dr. Alexandra Papavlu, Paul Scherrer Institut
• Numerical Analysis of Ultrashort Laser Ablation: Application for Fabrication of Nanoparticles and Nanostructures, Dr. Mikhail Povarnitsyn, Joint Institute for High Temperatures RAS
• Mobile Laser Technological Systems for Industrial Application, Prof. Anatoly Rodin, SRC RF TRINITI
• Laser Acceleration of Small Projectiles for Hypervelocity Impact Experiments, Prof. Markus Roth, Technische Universität Darmstadt
• Impulse Generation of Pulsed Laser Ablation of Polyacetal, Prof. Takeharu Sakai, Nagoya University
• Effects of Confinement on Planar Laser Ablation Propulsion, Prof. Akihiro Sasoh, Nagoya University
• Supersonic Aerodynamics Control using Repetitive Laser Pulses, Prof. Akihiro Sasoh, Nagoya University
• Beam-Riding Simulation and Diagnostics for Beamed-Energy Vehicles, Dr. Stefan Scharry, Institute of Technical Physics, German Aerospace Center (DLR)
• Open Access Tools for the Simulation of Ultrashort-Pulse Laser Ablation, Dr. Stefan Scharring, Institute of Technical Physics, German Aerospace Center (DLR)
• Pulsed Laser Deposition (PLD) of Chalcogenide Films by Nanosecond Lasers, Dr. Jørgen Schou, Technical University of Denmark, DTU Fotonik
• Characterization of Thermophysical Phenomena Generated by a Pulsed Laser on Metal Alloy Surface: Experimentation and Modeling, Dr. Nadib Semmar, CNRS-University Orleans
• Atomistic Simulations and Experimental Study of Nanoparticle Generation in Femtosecond Laser Ablation of Thin Metal Films, Mr. Cheng-Yu Shih, University of Virginia
• One-Dimensional Control Volume Analysis and Limit of Laser-Supported Detonation for High Propulsive Efficiency, Mr. Kohei Shimamura, University of Tokyo
• Time-Resolved Microscopy Studies at fs Laser-Irradiated Surfaces, Dr. Klaus Sokolowski-Tinten, University of Duisburg-Essen
• Rapid Small Package Delivery Service to Mars via Beamed Energy, Prof. Grover Swartzlander, Jr., Rochester Institute of Technology
• Microwave Plasma Filaments Supported by Magnetic Field at Lower Pressure, Mr. Masayuki Takahashi, Tohoku University
• Experimental Study on Laser Chemical Propulsion and its Mechanism, Prof. Zhiping Tang, University of Science and Technology of China
• Repetitive Pulse Impulse Performance with 1-µ Laser Ablation, Mr. Hisashi Tsuruta, Nagoya University
• Laser Propulsion and Laser Electric Propulsion, Pros and Cons for Spacecrafts, Dr. Vjatcheslav Tugaenko, Rocket and Space Corporation “Energia”
• Ablation of a Nanostructured Metal Surface by Ultrashort X-Ray Pulses, Dr. Herbert Urbassek, University of Kaiserslautern
Group Tours

Bradbury Science Museum
Monday, 21 April 2014, 1330

Join fellow HPLA/BEP attendees on a tour of the Bradbury Science. The museum is located at 15th and Central in downtown Los Alamos, the home of Los Alamos National Laboratory. The museum serves as a bridge between the Laboratory and the community, helping to improve science education and science literacy. The museum also serves as a window to the Laboratory, interpreting the Laboratory’s history and current research. The museum’s 40 interactive exhibits trace the history of the WWII Manhattan Project, highlight the Laboratory’s current and historic research projects related to defense and technology, and focus on Laboratory research related to national and international economic, environmental, political, and social concerns. These exhibits together with extensive educational and community programs draw nearly 80,000 visitors a year.

The museum is 45 minutes away from La Fonda on the Plaza Hotel. Transportation will not be provided, but if you are interested in ride sharing please meet in the hotel lobby at 1230. The group will then meet in the museum lobby at 1330 for a guided tour.

Canyon Road Lunch & Tour
Friday, 25 April 2014, 1215

Over a Hundred Galleries, Boutiques and Restaurants in one half mile. Since its early Native American and Spanish roots, Canyon Road has been a trail of abundance – initially as a farming community, later as the site of an art colony, and today as one of the country’s top shopping experiences. While gracious adobe architecture gives Canyon Road its Old World charm, diversity is its claim to fame. Whether you prefer Contemporary, Traditional, or Native American fine art, it’s all here, including paintings, indoor and outdoor sculptures, glass, jewelry, clothing, accessories, home furnishings, gifts, antiques, rugs, folk art and crafts. The array of specialty shops, boutiques, and galleries is vast. Make time for Canyon Road’s other inspired experiences: From El Zaguán’s huge chestnut trees, which have shaded the trail since the mid-19th century, to hidden courtyards, musical fountains, benches with a view, spring lilacs, summer hollyhocks, glorious fall foliage, and winter’s hot cider and bonfires.

Please join fellow HPLA/BEP attendees in the hotel lobby at 1215 on Friday, April 25th for this one mile walk to Canyon Road. HPLA founder, and local expert, Dr. Claude Phipps will lead this walking tour. There are many restaurants along Canyon Road and close to La Fonda, so plan to catch lunch along the way and then head back at your own pace.

For more information visit: http://visitcanyonroad.com/about.html or http://www.canyonroadarts.com/index.html.

Thursday Dinner Entertainment

Please plan to join your colleagues for dinner and entertainment on Thursday, April 24th, 2014 at 1800. The event will kick off with Poster Paper Awards Ceremony and will be followed by dinner, entertainment and dancing. Dinner tickets are included with the registration fee. Guest tickets can be purchased for $70 in advance. Entertainment includes Flamenco entertainment by Esther Marion and Company & music by The Jimmy Stadler Band, Winner of the New Mexico Music Awards “Best CD Of The Year.”
We dedicate HPLA/BEP 2014 to Dr. Ray Kidder, a retired scientist, Lawrence Livermore National Laboratory, Laser Research Program Leader (1962-1972) estimated an ignition energy of 500 kilojoules (1964 simulation) followed by a four-fold increase to 2 mega-joules (1980) to account for indirect drive, the value now on target at the National Ignition Facility; and derived the seminal sixth-power relation between ignition energy and fuel convergence ratio (1991). He was our lead keynote speaker for the very first HPLA meeting in 1998. He is still very active and working on various controlled fusion concepts at age 90 years.