

## **Technical Program**

**Sunday, July 17, 2022**

Welcome Reception at the Club Room of the Georgia Tech Hotel and Conference Center (18:00 – 20:00)

**Monday, July 18, 2022**

Session: Welcome Remarks (08:30 – 09:10)

*Introduction and Welcome, Praveen Ramaprabhu, Devesh Ranjan  
Presiding remarks, Chaouki Abdallah, Executive Vice-President for  
Research, Georgia Tech*

Session: Plenary Lecture (09:10 – 09:50)

Chair: Bruce Remington (LLNL)

09:10 – 09:50      *Advancing High-Energy-Density (HED) Science with Short-Pulse, High-Intensity Lasers*  
Tammy Ma, LLNL (ma8@llnl.gov)

Session: High Energy Density Physics I (09:50 – 10:50)

Chair: Bruce Remington (LLNL)

09:50 – 10:10      *Hydrodynamic instabilities and mixing in high energy density settings*  
Bruce A. Remington (remington2@llnl.gov)

10:10 – 10:30      *Accessible Turbulent HED Plasma Experimental Platforms for Studying  
Heterogeneous Mix on ICF Fusion Reactions*  
K. A. Flippo, H. Li, A. S. Liao, S.T. Li, A. Rasmus, Y. C. Lu, S. R. Kline, J. M. Levesque, C. Kuranz and C. K. Li (kflippo@lanl.gov)

10:30 – 10:50      *Asymptotic Rayleigh-Taylor Instability Experiments on the National Ignition Facility*  
Asaf Shimony, Dov Shvarts, Yonatan Elbaz, Kirk A. Flippo, Channing H. Huntington, Stephan A. MacLaren and Guy Malamud (shimonya@gmail.com)

Coffee Break (10:50 – 11:10)

Session: Turbulence Modeling I (11:10 – 12:30)

Chair: Oleg Schilling (LLNL)

- 11:10 – 11:30      *A multispecies turbulence model for restabilized mixing layers*  
N. O. Braun, R. A. Gore (nbraun@lanl.gov)
- 11:30 – 11:50      *Advection vs. Diffusion in Richtmyer-Meshkov and Rayleigh-Taylor Mixing*  
Forrest W. Doss (fdoss@lanl.gov)
- 11:50 – 12:10      *On the Assessment of Two-Level Simulation Model for Numerical Study of Compressible Turbulent Scalar Mixing*  
H. Chandrasekhar, R. Ranjan and S. Menon (reetesh-ranjan@utc.edu)
- 12:10 – 12:30      *Derivation and evaluation of a Reynolds stress model designed to simulate reacting mixing layers*  
Denis Souffland, Olivier Souldard and Jérôme Griffond  
(denis.souffland@cea.fr)

Lunch (12:30 – 13:40)

Session: Plenary Lecture (13:40 – 14:20)

Chair: Robin Williams (AWE)

- 13:40 – 14:20      *Turbulent mixing in flows with large density variations*  
Daniel Livescu, LANL (livescu@lanl.gov)

Session: Richtmyer-Meshkov Simulations & Theory I (14:20 – 15:40)

Chair: Robin Williams (AWE)

- 14:20 – 14:40      *Buoyancy-Drag modelling and spike-to-bubble ratios for single-shock Richtmyer-Meshkov mixing*  
David Youngs, Michael Groom and Ben Thornber  
(david.l.youngs.uk@gmail.com)
- 14:40 – 15:00      *Numerical Simulation of the Broadband Richtmyer-Meshkov Instability and Comparison with Shocktube Experiments*  
Michael Groom and Ben Thornber (michael.groom@sydney.edu.au)
- 15:00 – 15:20      *The Effect of Axial Strain on the Richtmyer-Meshkov Instability*  
Bradley Pascoe, Michael Groom, Ben Thornber  
(b.thornber@sydney.uni.edu.au)
- 15:20 – 15:40      *A study of modal interaction between different scales of the turbulent Richtmyer-Meshkov instability using high-resolution three-dimensional FLASH simulations*  
Mohammad Mohaghar, Jacob McFarland and Devesh Ranjan  
(mohaghar@gatech.edu)

Coffee Break (15:40 – 16:00)

Session: Discussion (16:00 – 16:40)

Chair: Oleg Schilling (LLNL), Asaf Shimony (U. Michigan)

Banquet at the Fox Theatre (19:00 – 22:00)

**Tuesday, July 19, 2022**

Session: Plenary Lecture (8:30 – 9:10)

Chair: Fernando Grinstein (LANL)

08:30 – 09:10      *The Validity of MILES Simulations*  
Robin Williams, AWE (Robin.Williams@awe.co.uk)

Session: Rayleigh-Taylor Simulations & Theory (09:10 – 10:50)

Chair: Fernando Grinstein (LANL)

09:10 – 09:30      *Rayleigh-Taylor instability with variable acceleration reversal(s)*  
Denis Aslangil, Andrew G.W. Lawrie and Arindam Banerjee  
(arb612@lehigh.edu)

09:30 – 09:50      *Numerical Study of Plasma Rayleigh-Taylor Instability with Realistic  
Transport Phenomena*  
Zhaorui Li and Daniel Livescu (zhaorui.li@tamucc.edu)

09:50 – 10:10      *Heat Transfer and Variable Transport Property Effects on the Compressible  
Rayleigh-Taylor Instability*  
K. Cherng, S. K. Lele and D. Livescu (kcherng@stanford.edu)

10:10 – 10:30      *Direct numerical simulations of 2D multi-mode compressible Rayleigh-Taylor  
instability to explore the effects of different iso-thermal stratification strengths*  
Man Long Wong and Denis Aslangil (denis.aslangil@ua.edu)

10:30 – 10:50      *Energy Pathways of Rayleigh-Taylor driven Mixing and Implications on  
Implosion Modeling*  
Dongxiao Zhao, Riccardo Betti and Hussein Aluie (hussein@rochester.edu)

Coffee Break (10:50 – 11:10)

Session: Plenary Lecture (11:10 – 11:50)

Chair: John Choronko (LANL)

11:10 – 11:50      *Molecular dynamics simulations as a helpful tool to understand the  
phenomenology of formation and fragmentation of shock-induced  
hydrodynamic instabilities*  
Olivier Durand, CEA (olivier.durand@cea.fr)

Session: Ejecta EOS & Strength I (11:50 – 12:30)

Chair: John Choronko (LANL)

11:50 – 12:10      *Modeling the Shell Growth and Breakup of Hydrating Ejecta Particles*  
Frederick Ouellet, Alan K. Harrison and Jonathan D. Regele  
(f.ouellet@lanl.gov)

12:10 – 12:30      *LES of ejecta from irregular surfaces*  
M. A. Brown, R. J. R. Williams (matthew.a.brown@awe.co.uk)

Lunch and Scientific Committee Meeting (12:30 – 13:40)

Session: Richtmyer-Meshkov Simulations & Theory II (13:40 – 15:40)

Chair: Michael Groom (U. Sydney)

- 13:40 – 14:00      *Dependence of Enstrophy Transport and Mixed Mass on Dimensionality and Initial Conditions in the Richtmyer–Meshkov Instability Induced Flows*  
Ye Zhou, Michael Groom and Ben Thornber  
(michael.groom@sydney.edu.au)
- 14:00 – 14:20      *Study of turbulence statistics and transport for Richtmyer-Meshkov instability with re-shock*  
Man Long Wong, Jon R. Baltzer, Daniel Livescu, and Sanjiva K. Lele  
(mlwong@alumni.stanford.edu)
- 14:20 – 14:40      *Permanence of large eddies in variable-density Richtmyer-Meshkov turbulent mixing zones*  
O. Soulard and J. Griffond (olivier.soulard@cea.fr)
- 14:40 – 15:00      *Linear stability investigations of the Richtmyer-Meshkov instability in an ideal two-fluid plasma*  
Yuan Li, Abeer Bakhsh, Ravi Samtaney (ravi.samtaney@kaust.edu.sa)
- 15:00 – 15:20      *Numerical Simulations of a Perturbed Diffuse Interface Subjected to the Richtmyer-Meshkov Instability: Early Time and Transition to Turbulence*  
Sam Pellone, Tiffany Desjardins, Carlos Di Stefano, John Charonko, Forrest Dos (sampellone@lanl.gov)
- 15:20 – 15:40      *Linear Stability Simulations of Magnetohydrodynamic Richtmyer-Meshkov Instability of Double Interfaces in Cylindrical Geometry*  
Abeer Bakhsh, Ravi Samtaney (ahbaksh@uqu.edu.sa)

Coffee Break (15:40 – 16:00)

Session: Ejecta, EOS & Strength II (16:00 – 17:00)

Chair: Olivier Durand (CEA)

- 16:00 – 16:20      *A high-order, localized artificial diffusivity method for Eulerian simulation of multi-material elastic-plastic deformation with strain hardening*  
Jacob R. West, Michael C. Adler and Sanjiva K. Lele (jrwest@stanford.edu)
- 16:20 – 16:40      *Ejecta physics induced by a downward impinging supersonic jet*  
Juan Sebastian Rubio, Miguel X. Diaz Lopez, Matt Gorman and Rui Ni  
(rui.ni@jhu.edu)
- 16:40 – 17:00      *Transition to Stable Plastic Regime of Rayleigh-Taylor Instability in Elastic-Plastic Solids*  
Aren Boyaci and Arindam Banerjee (arb612@lehigh.edu)

Session: Discussion (17:00 – 17:40)

Chair: Olivier Durand (CEA), Brandon Morgan (LLNL)

**Wednesday, July 20, 2022**

Session: Plenary Lecture (08:30 – 09:10)

Chair: Devesh Ranjan (Georgia Tech)

08:30 – 09:10      *The RM Instability After Reshock*  
Riccardo Bonazza, U. Wisconsin, Madison (riccardo.bonazza@wisc.edu)

Session: General Instability & Mixing (09:10 – 10:50)

Chair: Denis Aslangil (U. Alabama)

09:10 – 09:30      *Diagnostics in extreme environments: a methodology for coupled velocity and scalar measurement*  
A. G. W. Lawrie, J. T. Horne, R. J. R. Williams (andrew.lawrie@bristol.ac.uk)

09:30 – 09:50      *Recent Progress on Coarse Grained Simulations of Turbulent Mixing*  
Fernando F. Grinstein (fgrinstein@lanl.gov)

09:50 – 10:10      *The subcritical transition to turbulence of Faraday waves in miscible fluids*  
M. Cavelier, B.-J. Gréa, A. Briard and L. Gostiaux  
(benoit-joseph.grea@cea.fr)

10:10 – 10:30      *Experimental 3D turbulent statistics in non-Boussinesq jet flows*  
D. Fratantonio, E. G. Connor, A. Martinez, J. J. Charonko  
(dfratantonio@lanl.gov)

10:30 – 10:50      *Different initial composition ratio effects on variable-density turbulent mixing*  
Denis Aslangil, Daniel Livescu and Arindam Banerjee  
(denis.aslangil@ua.edu)

Coffee Break (10:50 – 11:10)

Session: High Energy Density Physics II (11:10 – 12:30)

Chair: Guy Malamud (NRCN)

11:10 – 11:30      *The impact of temperature and material mixing heterogeneities on thermonuclear reactions*  
Brian M. Haines, B. J. Albright, T. J. Murphy, M. R. Douglas, J. H. Cooley, T. H. Day, N. A. Denissen, C. Di Stefano, P. Donovan, S. L. Edwards, J. Fincke, C. Forrest, V. Yu. Glebov, L. M. Green, L. Goodwin, R. A. Gore, M. A. Gunderson, J. R. Haack, C. E. Hamilton, E.P. Hartouni, K. C. Henderson, N. V. Kabadi, S. Khan, P. M. Kozlowski, Y. Kim, M. N. Lee, R. Lester, T. Morrow, J. A. Oertel, R. E. Olson, B. M. Patterson, T. Quintana, R. B. Randolph, D. W. Schmidt, R. C. Shah, J. M. Smidt, A. Strickland, C. Wilson, and L. Yin (bmhaines@lanl.gov)

11:30 – 11:50      *Transition to Turbulence and Multiphysics in 3D ICF Capsule Implosions*  
F.F. Grinstein, V. Chiravalle and B.M. Haines (fgrinstein@lanl.gov)

11:50 – 12:10      *Computational study of shock-induced instability growth and mixing at high energy density*  
Jason D. Bender, Oleg Schilling, Kumar S. Raman, Robert A. Managan, Britton J. Olson, and Shon T. Prisbrey (jbender73@gmail.com)

12:10 – 12:30      *Code Validation of Radiative Shock Propagation through a Porous Foam*  
Lauren M. Green, Brian M. Haines, Yong Ho Kim, Pawel M. Kozlowski, Thomas J. Murphy, Brian J. Albright (lgreen@lanl.gov)

Lunch (12:30 – 13:40)

Session: Poster Presentations (13:40 – 15:00)

*Miscible Experiments on the Rayleigh-Taylor Instability in the Linear Induction Motor Drop Tower*

C. J. Withers, M. J. Mokler and J. W. Jacobs  
(claytonwithers@email.arizona.edu)

*Single-mode Richtmyer-Meshkov Instability*

R. J. R. Williams, M. G. Probyn, B. Thornber, D. Drikakis, D. L. Youngs  
(robin.williams@awe.co.uk)

*Plasma transport dissipation in turbulent instability mixing*

Erik Vold, Jan Velechovsky and Susan Kurien (elv@lanl.gov)

*Experimental investigation of Rayleigh-Taylor mixing in gases using simultaneous PIV-LIF*

Prasoon Suchandra, Mark Mikhaeil, Gokul Pathikonda, Devesh Ranjan  
(prasoon.suchandra@gmail.com)

*Simulations of Multimode Perturbations Driven by Same-Sided Successive Shocks*

R.F. Sacks, F.W. Doss, C.A. Di Stefano, E.C. Merritt, H. Robey  
(rsacks@lanl.gov)

*A density fluctuation analysis for HED Richtmyer-Meshkov experiments*

E.C. Merritt, F.W. Doss, J.M. Levesque, T. Desjardins, C.A. Di Stefano, K.A. Flippo, H. F. Robey, R. Sacks, D.W. Schmidt, L. Kot and T. Perry  
(emerritt@lanl.gov)

*Wall Vortices Induced by Re-Shock in RMI Shock Tube Experiments*

Raymond McConnell, Chris Noble, Alex Ames, Jason Oakley, David Rothamer and Riccardo Bonazza (rmcconnell2@wisc.edu)

*Simulation of shock-tube experiments using a well-characterised initial gas separation*

Jérôme Griffond, Marta Rasteiro dos Santos, Yannick Bury, Stéphane Jamme and Denis Souffland (jerome.griffond@cea.fr)

*Exploring Shock and Interface Physics to Measure Viscosity*

Sonya Dick, Tyler Perez, June Wicks, Marius Millot and Eric Johnsen  
(scdick@umich.edu)

*Numerical investigation of compressibility and Atwood number effects on the single-mode iso-thermally stratified Rayleigh-Taylor Instability*

Tyler Prine, Denis Aslangil and Man Long Wong (denis.aslangil@ua.edu)

Session: Turbulence Modeling II (15:00 – 15:40)

Chair: Ismael Boureima (LANL)

- 15:00 – 15:20 *Novel PANS model for variable density turbulence*  
Filipe S. Pereira, Fernando Grinstein and Daniel Israel  
(fmsoarespereira@gmail.com)
- 15:20 – 15:40 *Learning closure models for turbulence*  
Ismael Boureima, Vitaliy Gyrya, Juan Saenz, Susan Kurien, and Marianne Francois (iboureima@lanl.gov)

Coffee Break (15:40 – 16:00)

Session: Richtmyer-Meshkov Simulations & Theory III (16:00 – 17:00)

Chair: Britton Olson (LLNL)

- 16:00 – 16:20 *High-Resolution Simulations of Transitional Triple-Point Shock Interactions*  
Alboreno Voci, Sanjiva Lele, Fernando Grinstein, Vincent Chiravalle and Jonathan Regele (albovoci@stanford.edu)
- 16:20 – 16:40 *Implicit large Eddy Simulations and Analytical Modelling of Shock-Induced Turbulent Mixing in Spherical Implosions*  
Moutassem El Rafei and Ben Thornber (ben.thornber@sydney.edu.au)
- 16:40 – 17:00 *High-resolution front tracking simulations of single-mode Richtmyer-Meshkov Instability*  
Tulin Kaman (tkaman@uark.edu)

Session: Discussion (17:00 – 17:40)

Chair: Britton Olson (LLNL) and Riccardo Bonazza (U. Wisconsin)

**Thursday, July 21, 2022**

Session: Richtmyer-Meshkov Simulations & Theory IV (08:30 – 09:30)

Chair: Ben Thornber (U. Sydney)

- 08:30 – 08:50 *Ejection of vortex rings from shock-accelerated interfaces*  
Michael Wadas and Eric Johnsen (mwadas@umich.edu)
- 08:50 – 09:10 *On the stability of non-isolated steady shock waves*  
Andrés Calvo-Rivera, César Huete, Gustavo Wouchuk, and Alexander L. Velikovich (chuete@ing.uc3m.es)
- 09:10 – 09:30 *Shock Acceleration of a Multifluid Vortex Ring*  
Alex Ames, Chris Noble, Ray McConnell, Jason Oakley, David Rothamer, and Riccardo Bonazza (aames@wisc.edu)

Session: Richtmyer-Meshkov Experiments (09:30 – 10:50)

Chair: Tiffany Desjardins (LANL)

- 09:30 – 09:50 *Investigating high-speed velocity measurements in the Blast-Driven Instability*  
Samuel J. Petter, Dr. Benjamin C. Musci, Dr. Gokul Pathikonda, and Dr. Devesh Ranjan (devesh.ranjan@me.gatech.edu)
- 09:50 – 10:10 *Influence of the Shock-To-Reshock Time on the Richtmyer-Meshkov Instability in a Dual-Driver Vertical Shock Tube*  
K. J. Ferguson and J. W. Jacobs (kjfergus@email.arizona.edu)
- 10:10 – 10:30 *Shocked Variable-Density Turbulence Studies*  
Tiffany Desjardins, Erin Connor, Adam Martinez and John Charonko (tif\_des@lanl.gov)
- 10:30 – 10:50 *Experimental study of the Richtmyer-Meshkov instability in spherical geometry*  
M. Brasseur, C. Mariani, D.C. Barros, G. Jourdan, M. Vandenboomgaerde, D. Souffland (mathieu.brasseur@univ-amu.fr)

Coffee Break (10:50 – 11:10)

Session: Turbulence Modeling III (11:10 – 12:30)

Chair: Tulin Kaman (U. Arkansas)

- 11:10 – 11:30 *Local Wavenumber Model for Inhomogeneous Two-Fluid Mixing*  
Nairita Pal, Ismael Boureima, Noah Braun, Susan Kurien, Praveen Ramaprabhu, Andrew Lawrie (nairita@lanl.gov)
- 11:30 – 11:50 *Advances in Reynolds-averaged Navier-Stokes modeling for reacting turbulent mixing*  
Brandon E. Morgan (morgan65@llnl.gov)
- 11:50 – 12:10 *Calibration of Local Wave-Number Turbulence Model using Machine Learning Techniques*  
Ismael Boureima, Vitaliy Gyrya, Juan Saenz, Susan Kurien (vitaliy\_gyrya@lanl.gov)
- 12:10 – 12:30 *Multi-fidelity validation of variable-density turbulent mixing models*  
Britton Olson, Benjamin Musci and Devesh Ranjan (olson45@llnl.gov)

Lunch and Student Networking Event (12:30 – 13:40)

Session: High Energy Density Physics III (13:40 – 15:00)

Chair: Brian Haines (LANL)

- 13:40 – 14:00 *Plasma kinetic effects on the deceleration Rayleigh-Taylor instability*  
Jan Velechovsky, Erik Vold and Susan Kurien (jan@lanl.gov)
- 14:00 – 14:20 *Analysis of Mix Using the Method of Separated Reactants on Indirect Drive Gas-Fill Implosions at the National Ignition Facility*  
A.R. Vazsonyi, J.E. Pino, B.E. Morgan, and K.K. Mackay (vazsonyi1@llnl.gov)
- 14:20 – 14:40 *Demonstration of a Divergent Shock-Bubble Interaction in a High Energy Density Plasma*  
Pawel M. Kozlowski, Yongho Kim, Brian M. Haines, Joseph M. Smidt, Tana Morrow, Shaun G. Newman, Thomas J. Murphy, Melissa R. Douglas, Brian J. Albright (pkozlowski@lanl.gov)



14:40 – 15:00      *The Impact of Fill Tube Geometry on Recent High Yield Implosions on the National Ignition Facility*  
John Kuczek, Brian M. Haines (jkuczek@lanl.gov)

Session: Rayleigh-Taylor Experiments (15:00 – 15:40)

Chair: Andrew Lawrie (U. Bristol)

15:00 – 15:20      *Experimental investigation of the multilayer Rayleigh-Taylor instability*  
Prasoon Suchandra, Devesh Ranjan (prasoon.suchandra@gmail.com)

15:20 – 15:40      *Stratified flows under variable global acceleration*  
J. T. Horne, A. G. W. Lawrie (jonathan.horne@bristol.ac.uk)

Coffee Break (15:40 – 16:00)

Session: Discussion (16:00 – 16:40)

Chair: Jeff Jacobs (U. Arizona), Andrew Lawrie (U. Bristol)

## **Friday, July 22, 2022**

Session: Plenary Lecture (08:30 – 09:10)

Chair: Jacob McFarland (Texas A&M)

08:30 – 09:10      *Shock-Particle Interaction and Explosive Dispersal of Particles*  
Sivaramakrishnan Balachandar, U. Florida (bala1s@ufl.edu)

Session: Shock Particle Interactions & Multiphase Flows I (09:10 – 10:50)

Chair: Jacob McFarland (Texas A&M)

09:10 – 09:30      *Numerical investigation of drag and turbulence in compressible flows through particle suspensions*  
Archana Sridhar, Mehdi Khalloufi and Jesse Capecelatro  
(arsridha@umich.edu)

09:30 – 09:50      *An Euler--Lagrange Approach for Turbulent Particle-laden Compressible Flows*  
Meet Patel and Jesse Capecelatro (meetm@umich.edu)

09:50 – 10:10      *Comparisons of Explosive Dispersal in Static and Supersonic Conditions*  
Bradford Durant, Frederick Ouellet, S. Balachandar and T. Jackson  
(neoncrash@ufl.edu)

10:10 – 10:30      *Break up and Evaporation in Shock Driven Multiphase Mixing*  
Vasco O. Duke W., Calvin J. Young, Jacob A. McFarland  
(mcfarlandja@tamu.edu)

10:30 – 10:50      *Modeling of Droplet Breakup and Impact in Supersonic Flight*  
Sam Briney, S. Balachandar (bala1s@ufl.edu)

Coffee Break (10:50 – 11:10)

Session: Shock Particle Interactions & Multiphase Flows II (11:10 – 12:30)

Chair: Jesse Capecelatro (U. Michigan)

- 11:10 – 11:30      *Multiphase Phenomena in Heterogeneous Detonations*  
Calvin J. Young, Vasco O.D. Walker, Jacob A. McFarland  
(mcfarlandja@tamu.edu)
- 11:30 – 11:50      *Jet initiation from shock wave-induced microbubble collapse*  
Guillaume T. Bokman, Luc Biasiori-Poulanges, Daniel W. Meyer and Outi  
Supponen (bokmang@ethz.ch)
- 11:50 – 12:10      *Shock-induced release of a gas-encapsulated droplet*  
Luc Biasiori-Poulanges, Guillaume Bokman, Enea Baumann and Outi  
Supponen (lbiasiori@ethz.ch)
- 12:10 – 12:30      *Effect of surface instabilities on evaporation rates of shock-driven droplets*  
Prashant Tarey, Praveen Ramaprabhu and Jacob McFarland  
(pramapra@uncc.edu)

Lunch (12:30 – 13:40)

Session: Turbulence Modeling IV (13:40 – 14:40)

Chair: Zhaorui Li (Texas A&M University – Corpus Christi)

- 13:40 – 14:00      *Buoyancy–Shear–Drag–Scalar-Based Turbulence Modeling for Rayleigh–  
Taylor, Reshocked Richtmyer–Meshkov, and Kelvin–Helmholtz Mixing:  
Applications*  
Oleg Schilling (schilling1@lnl.gov)
- 14:00 – 14:20      *Three- and Four-Equation Reynolds-Averaged Navier–Stokes Modeling of a  
Small Atwood Number, Transitional Rayleigh–Taylor Mixing Experiment*  
N. J. Mueschke and Oleg Schilling (schilling1@lnl.gov)
- 14:20 – 14:40      *Convergence problem of Reynolds-averaged Navier-Stokes modeling in case  
of shock waves*  
Maksim Igorevich Boldyrev, I.V. Glazyrin and N.A. Mikhailov  
(boldyrevmi@vniitf.ru)

Concluding Remarks (14:40 – 15:00)