

Agenda

September 23, Saturday

09:00 – 20:00 Arrival day, registration and accommodation of the
conference participants

September 24, Sunday

09:00 – 10:00 Breakfast
09:00 – 18:00 Registration of the conference participants
11:00 – 13:00 Cultural program
13:00 – 14:00 Lunch
15:00 – 18:00 Cultural program
19:00 – 22:00 Welcome party

September 25, Monday

08:00 – 09:30 Breakfast
10:00 – 10:30 Opening speech of Prof. V. Lopota
10:30 – 11:30 Invited lectures
11:30 – 12:00 Coffee break
12:00 – 13:30 Invited lectures
13:30 – 14:30 Lunch
14:30 – 15:50 Invited lectures
15:50 – 16:30 Coffee break
16:30 – 17:30 Invited lectures
18:00 – 19:00 Dinner

September 26, Tuesday

08:00 – 09:00	Breakfast
09:30 – 11:00	Oral contributed papers
11:00 – 11:30	Coffee break
11:30 – 13:00	Oral contributed papers
13:00 – 14:00	Lunch
14:00 – 15:40	Oral contributed papers
15:40 – 16:00	Coffee break
16:00 – 18:00	Oral contributed papers
19:00 – 22:00	Banquet

September 27, Wednesday

08:00 – 09:00	Breakfast
09:30 – 10:30	Oral contributed papers
10:30 – 11:00	Coffee break
11:00 – 13:00	Poster contributed papers
13:00 – 14:00	Lunch
14:00 – 15:30	Round table discussion, closing of the conference
15:30 – 18:00	Cultural events
19:00 – 20:00	Dinner

September 28, Thursday

09:00 – 10:00	Breakfast
10:00 – 20:00	Departure

September 25, Monday

Chairmen – Prof. V. Lopota, Prof. G. Turichin

10:00 – 10:30 Opening speech of Prof. V. Lopota «Prospects of Laser Technologies for Russian Industry», State Scientific Center of Russia CR&DI of robotics and technical cybernetics, St.-Petersburg

10:30 – 10:50 U. Dilthey «Industrial Application of Laser-GMA Welding Technology in Automotive and Shipbuilding Industry», Welding and Joining Institute, Aachen, Germany

10:50 – 11:10 D. Schuoecker «Recent Progress and New Applications of Laser Assisted Metal Forming», Vienna University of Technology, Austria

11:10 – 11:30 V. Kovalenko «Laser Micro and Nan Manufacturing», Laser Technology Research Institute of the NTUU, Kiev, Ukraine

11:30 – 12:00 Coffee break

Chairmen – Prof. V. Kovlenko, Prof. U. Dilthey

12:00 – 12:20 I. Shiganov «Metallurgical Peculiarities of Laser Welding of Modern Aluminum Alloys», N. E. Bauman Moscow state technological university, Russia

12:20 – 12:40 I. Smurov «Optical Diagnostics in Industrial Laser Applications», National Engineering School of Saint-Etienne, France

12:40 – 13:00 G. Turichin «Hybrid Laser Welding – Theory, Modeling and Advantages», Institute of Laser and Welding Technologies, St.-Petersburg, Russia

13:00 – 13:20 H.-L. Tsai «Mathematical Modeling of Laser Keyhole Welding», Missouri-Rolla University, USA

13:30 – 14:30 Lunch

Chairmen – Prof. D. Schouecker, Prof. I. Shiganov

14:30 – 14:50 I. Krivtsun «Hybrid Laser-Plasma Processes for Materials Treatment and Integrated Plasmatrons for Their Realization», E.O. Paton Electric Welding Institute of the NASU, Kiev, Ukraine

14:50 – 15:10 P. Seyffarth «The Use of High-Power Fiber Lasers in Shipbuilding and Maritime Technology», GmbH IMG, Rostock, Germany

15:10 – 15:30 J. Ocana «Laser Induced Shock Materials Processing as a Technique for the Improvement of Mechanical Surface Properties of Metallic Alloys», Madrid Polytechnic University, Spain

15:30 – 15:50 A. Kaplan «On Selected Physical Mechanisms of Laser Cladding», Luleå University of Technology, Sweden

15:50 – 16:30 **Coffee break**

Chairmen – Prof. I. Krivtsun, Prof. A. Kaplan

16:30 – 16:50 A. Casal «Laser Cladding of Ceramic Materials», University La-Coruna, Spain

16:50 – 17:10 V. Veiko «Laser Modification of Glass–Ceramics Structure and Properties: the New View on to the Old Materials», St. - Petersburg state university of information technologies, mechanics and optics, Russia

17:10 – 17:30 O. Devoino «Technological Perspectives of Laser Alloying Processes of Powder and Compact Materials», Belarus National technical university, Minsk

September 26, Tuesday

Chairmen – Prof. V. Veiko, Prof. P. Seyffarth

9:30 – 9:50 J. Gedopt «Possibilities and Properties of Hybrid Laser-MIG Welding of Aluminum Alloys», Flemish Institute for Technological Research, Laser Center Flanders, Belgium

9:50 – 10:10 A. Goumenuk «Simulation of the Welding Processes with Concentrated Heat Sources», Welding and Joining Institute, Aachen, Germany

10:10 – 10:30 V. Melyukov «Increase of Liquid Phase Hydrodynamic Stability and Strength Guarantee of Joint during Double-Beam Laser Welding», Vyatka state university, Russia

10:30 – 10:50 F-T. Vollertsen «Welding of Hybrid Joints»,
BIAS, Bremen, Germany

11:00 - 11:30 **Coffee break**

Chairmen – Prof. O. Devoino, Dr. A. Goumenuk

11:30 – 11:50 G. Alekseev «Advantages and Prospect of Application of Laser-Light Treatment Conformably to Motor-Car Industry», Scientific and research institute of motor-car industry, Moscow, Russia

11:50 – 12:10 W. Sokolowski «What Features of High Power Diode Lasers are Most Important for Industrial Applications? »,
Jenoptik Laserdiode GmbH, Jena, Germany

12:10 – 12:30 A. Leonov «Prospect of Laser Marking Mass Application», The State scientific organization «United Institute of Informatics Problems of the National Academy of Sciences of Belarus», Minsk

12:30 -12:50 A. Misyurov «Research of Technological Features of Laser Volumetric Weld Deposition», N.E. Bauman Moscow state university, Russia

13:00 – 14:00 **Lunch**

Chairmen – Prof. V. Melyukov, Dr. W. Sokolowski

14:00 – 14:20 D. Vainshtein «Amorphous Metallic Layers Produced by Laser Surface Engineering», University of Groningen, The Netherlands

14:20 – 14:40 V. Yakunin «High-Power CO₂ Laser with Diffraction Gratings in Stable Resonator for Generation of Radially and Azimuthally Polarized TEM_{pl}* Modes», ILIT RAS, Shatura, Russia

14:40 – 15:00 K. Yugay «Laser Ablation by Ultra-Short Impulses: X-ray emission», Omsk state university, Russia

15:00 – 15:20 A. Rozen «Laser Technology Application for Multilayer Metallic Material Nondestructive Check Obtained during Explosion Welding», Penza state university, Russia

15:20 – 15:40 P. Petrov «Laser Welding Processes for Reconstitution Fracture Mechanics Test Specimens», Institute of Electronics, Bulgarian Academy of Sciences, Sofia

15:40 – 16:00 **Coffee break**

Chairmen - Prof. A. Rozen, Prof. I. Smurov

16:00 - 16:20 E. Borovkov «About Laser Safety Operator of Complex Systems», R&DI industrial and marine medicine of Federal medicobiologic agency, St.-Petersburg, Russia

16:20 – 16:40 B. Chichkov «Novel Laser Technologies at the Laser Zentrum Hannover», Laser Zentrum Hannover, Germany

16:40 – 17:00 M. Schmidt «Lasers in Electronics and Optics Manufacturing – Research at the Bavarian Laser Centre», Bayerisches Laserzentrum GmbH, Erlangen, Germany

17:00 – 17:20 F. Bachmann «The Impact of Laser Diodes on Industrial Solid State Lasers – Technology and Applications»,
Rofin-Sinar Laser GmbH, Hamburg, Germany

17:20 – 17:40 P. von Jan «Laser Technologies In Raylase»,
RAYLASE AG, Wessling, Germany

17:40 – 18:00 A. Lopota «New Equipment and Technology of LTC»,
LTC, St.-Petersburg, Russia

September 27, Wednesday

Chairmen – Prof. G. Turichin, Dr. A. Goumenuk

9:30 – 9:50 A. Beniyash «Non Vacuum Electron Beam Welding of Sheet Metal and Application in Automotive Engineering», Hannover Institute of Material Authority, Germany

9:50 – 10:10 V. Braverman «Problems of Electron-Beam Welding Process Control», Siberian state aerospace university, Krasnoyarsk, Russia

10:10 – 10:30 H. Masny «Potentials of Electron Beam Welding in Atmosphere and Process Optimization by Beam Measurement», Welding and Joining Institute, Aachen, Germany

10:30 – 11:00 Coffee break

Chairmen – Prof. J.L. Ocana, Dr. V. Kirichenko

11:00 – 13:00 Poster session

1. S. Sapogkov, E. Zernin, S. Smirnov, B. Romanov «Laser Welding in Metal-Ceramic Body Technology of Semiconductor Device», Yurga Technological Institute, Russia

2. E. Zernin, S. Sapogkov, S. Smirnov, B. Romanov «Laser Cutting of Brittle Material», Yurga Technological Institute, Russia

3. V. Ocelík «Thick Co and Fe Based Coatings by Laser Cladding – Analysis of Processing Conditions, Microstructure and Properties», University of Groningen, The Netherlands

4. M. Doubenskaia, H. Pinon, Ph. Bertrand, I. Smurov «On-Line Monitoring of Nd-Yag Laser Lap Welding of Zn-Coated Steel Sheets by Pyrometer», Ecole Nationale d'Ingénieurs de Saint-Etienne (ENISE), DIPI Laboratory, France

5. V. Yakunin «Generation and Extra Cavity Transformation of TEM_{01}^* Mode Polarization of Industrial CO_2 Laser with V-Axicon in Resonator», ILIT RAS, Shatura, Russia

- 6.** V. Sysoev, Y. Bulkin, A. Zaharchenko, P. Vyatlev, K. Lezvinsky «Hybrid Laser Technologies for Dielectric Material Treatment», S.A. Lavochkin' scientific production association, Himki, Russia
- 7.** V. Lastovirya «Power Flow Concentrated Distribution Effect on Weld Shape during Electron-Beam Welding», Moscow state industrial university, Russia
- 8.** V. Sysoev, G. Turichin, Y. Bulkin, G. Alekseev «Enhancement of Efficiency of Hybrid Laser-Light Technology of Material Treatment», S.A. Lavochkin' scientific production association, Himki, Russia
- 9.** N. Goloshevsky, V. Bessmeltsev, S. Baev, M. Maksimov «New Technologies of Pin Hole Drilling with Adjusted Obliquity», Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia
- 10.** D. Pavlyak, V. Sudnik, A. Rybakov, O. Sudnik «Mathematical models of keyholes and hydrodynamics of beam and arc welding technologies», Tula state university, Russia
- 11.** A. Saprykin «Models Fragmentation Methods on Layers in Rapid Prototyping Technologies», Urga technological institute, Russia
- 12.** A. Chirkov «Laser – Plasma Methods of Steel and Alloys Surface Treatment», Vyatka state university, Russia
- 13.** S. Yaresko, A. Kozakov «Surface Composition Forming of Plural-Component Alloys during Pulse Laser Impact», Samara branch of the Physical Institute, Russia
- 14.** M. Pronin «Laser Welding of Cold-Resistant Steel Thickness 15 mm. Results of Metallographic Research and Mechanical Test of Welding Joints», Central Research Institute of Structural Materials “Prometey”, St.-Petersburg, Russia
- 15.** D. Repkin, V. Melyukov, V. Korepanov, V. Shishkin «Heating Rate Optimization and Process Control of Ring Weld Electron Beam Thermocyclic Treatment», Vyatka state university, Russia

16. U. Chivell, M. Petrushina «Research of Laser - Induced Destruction of Condensed Matter»,

Institute of Molecular & Atomic Physics NAS Belarus, Minsk

17. A. Banishev «Defect Nan – Microstructure Formation in Silicon on Impact of Laser Pulses in Atmosphere of Different Gases», The Institute on Laser and Information Technologies of the Russian Academy of Sciences, Shatura

18. U. Chivel, A. Uzunbadjakov, D. Zatiagin «Automated Complex for SLS-Process Monitoring»,

Institute of Molecular & Atomic Physics NAS Belarus, Minsk

19. E. Zemlyakov, G. Turichin, A. Grigoriev, E. Pozdeeva «Influence of Volumetric Heat Generation and Partial Vapor Condensation on Plasma Plume Dynamics during Laser and Hybrid Technologies of Material Treatment», Institute of laser and welding technologies, Russia

20. V. Gruzdev, A. Grigoryants, A. Bogdanov «Laser Radiation Impact on Polyethylene Film», N.E. Bauman Moscow state technical university, Russia

21. Yu. Sukhov « Evaluation of Capillary Effects Influence on Gas – Laser Metal and Alloy Cutting Technological Processes Using Technological Complexes Based on CO₂ Lasers», CR&DI of robotics and technical cybernetics, St.-Petersburg, Russia

22. Yu. Sukhov «Analysis, Estimation and Ranking of Pressure and Tension Forces Act on Melt during Gas – Laser Cutting», CR&DI of robotics and technical cybernetics, Saint-Petersburg, Russia

23. O. Devoino, Yu. Devoino, M. Kardapolova, V. Yaroshevich, «Application Ability of Laser Fusing on Worn-Out Parts Reconstruction», Belarus National technical university, Minsk

24. O. Devoino, S. Kukin, A. Kalenik «Optimization of Ultrasound Treatment Parameters for Joint Impact with Laser Radiation», Belarus National technical university, Minsk

- 25.** V. Gorbach, V. Levshakov, N. Steshenkova, A. Borobiyev «Adaptive Self-Powered Head Equipped by Laser-Optical Sensory Block», CR&DI Maritime technology, St.-Petersburg, Russia
- 26.** A. Kravtsov, A. Leonov, S. Ovsyanikov «Laser Digital Signature of Industry Production and Documents», The State scientific organization "United Institute of Informatics Problems of the National Academy of Sciences of Belarus", Minsk
- 27.** E. Egorov, V. Kirichenko, A. Lavrov, A. Fedorov «Study of Possibilities in Design of Beam-Focusing System for the Facility of Precise High-Rate Laser Processing of Materials», CR&DI of Robotics and Technical Cybernetics, St.-Petersburg, Russia
- 28.** A. Grigoriev, N. Gryaznov, E. Egorov, V. Kirichenko, I. Krivtsun, A. Klusov «Design of Experimental Setup for Technological Studies of Hybrid (Laser-Microplasma) Welding», CR&DI of Robotics and Technical Cybernetics, St.-Petersburg, Russia
- 29.** E. Valdaytseva, E. Norman, P. Malkin, E. Zemlyakov «Welding Mode Selection Methods for Laser Welding by Means of LaserCAD», Institute of laser and welding technologies, St. – Petersburg state polytechnic university, Russia
- 30.** A. Abdurachmanov, V. Lopota, V. Sysoev, E. Pozdeeva «Simulation of Laser-Induced Quartz Ablation for Nan Powder Production», Institute of laser and welding technologies, St. – Petersburg state polytechnic university, Russia
- 31.** K. Sizaya, E. Norman, E. Valdaytseva, I. Tsibulsky «Reconstruction, Distribution of Heat Source on Weld Penetration Shape for Laser Welding in Steels», Institute of laser and welding technologies, Russia