Conference program

September 16, Sunday

09:00 – 18:00	Arrival day, registration and accommodation of conference participants
13:00 – 15:00	Lunch
15:30 – 17:30	Cultural program: walking tour to Catherine Park
19:00 – 22:00	Welcome party

September 17, Monday

08:15 – 09:15	Breakfast
09:30 – 10:00	Opening Ceremony of the Conference
10:00 – 11:30	Invited lectures
11:30 – 12:00	Coffee break
12:00 – 13:30	Invited lectures
13:30 – 14:30	Lunch
14:30 – 16:00	Invited lectures
16:00 – 16:30	Coffee break
16:30 – 18:00	Invited lectures
18:30 – 19:30	Dinner
19:30 – 20:30	Tour of the Kochybey's residence (English version)
20:30 – 22:00	Tour of the Kochybey's residence (Russian version)

September 18, Tuesday

08:15 – 09:15	Breakfast
09:30 – 11:10	Parallel sessions **Equipment and technology of welding, cladding and heat treatment** (Conference hall) **Physical fundamentals and mathematic simulation of beam technologies. CAD-CAM-CAE systems.** (White hall)
11:10 – 11:30	Coffee break
11:30 – 13:10	Parallel sessions **Equipment and technology of welding, cladding and heat treatment** (Conference hall) **Physical fundamentals and mathematic simulation of beam technologies. CAD-CAM-CAE systems.**

	Equipment and technology of cutting, drilling and surface treatment. (White hall)
13:15 – 14:00	Lunch
14:00 – 16:00	Parallel sessions
	Equipment and technology of welding, cladding and heat treatment (Conference hall)
	Metrology, measuring systems and testing. (White hall)
16:00 – 16:20	Coffee break
16:20 – 18:00	Parallel sessions
	Equipment and technology of welding, cladding and heat treatment (Conference hall)
	Beam technologies for industry 4.0. (White hall)
18:30 – 19:30	Dinner

September 19, Wednesday

08:15 – 09:15	Breakfast
09:30 – 11:10	Oral contributed papers
11:10 – 11:30	Coffee break
11:30 – 13:10	Oral contributed papers
13:15 – 14:00	Lunch
14:00 – 14:40	Oral contributed papers
15:00 – 15:30	Coffee break
16:00 – 17:30	Poster session
17:30 – 18:00	Closing of the Conference
18:30 – 23:00	Ceremonial dinner

September 20, Thursday

09:00 – 10:00	Breakfast
10:00 – 12:00	Departure

September 17, Monday

Plenary session

Chairmen – Prof. Turichin G.A., Prof. Hoffmann P.	
10:00 – 10:30	**Dr. Kolodyazhnyy D.Yu., «**The state and prospects of the application of beam technologies in the USC Group», United Shipbuilding Corporation, Russia
10:30 – 11:00	**Prof. Turichin G.A., «**High productive technology of direct laser deposition of light alloys structures», Saint-Petersburg state marine technical university, Russia
11:00 – 11:30	**Kim A.A.,** «The main directions of development of additive and laser technologies in the aviation industry», Association «Technological platform» Aviation Mobility and Aviation Technologies», Russia
11:30 – 12:00 Coffee break	
Chairmen – Dr. Kolodyazhnyy D.Yu., Prof. Rethmeier M.	
12:00 – 12:30	**Tarasov Yu.M.** «Development of beam technologies in PJSC «UAC», PJSC «United Aircraft Corporation», Russia
12:30 – 13:00	**Bautmans L.**, «Additive Manufacturing is the Driver for Industry 4.0», Oerlikon Metco, Netherlands
13:00 – 13:30	**Delaini M.** «World trends in the development of industrial robotics. Implementation of the concept Industry 4.0», FANUC Russia
13:30 – 14:30 Lunch	
Chairmen –Delaini M., Prof. Shiganov I.N.	
14:30 – 15:00	**Prof. Rethmeier M., «**Full penetration hybrid laser arc welding of up to 28 mm thick S355 plates using electromagnetic weld pool support», Federal institute for materials research and testing, Germany
15:00 – 15:30	**Prof. Hoffmann P., «**Flexible laser system technology for welding applications», Erlas, Germany
15:30 – 16:00	**Dr. Hassel T., «**Beam extraction using non vacuum electron beam by reduced acceleration voltage», Leibniz University Hannover, Germany

16:00 – 16:30 Coffee break	
Chairmen – Bautmans L., Kim A.A.	
16:30 – 17:00	**Prof. Trushnikov D.N.,** «Digital hybrid production of large metal parts by plasma welding using wire materials», Perm National Research Polytechnic University, Russia
17:00 – 17:30	**Prof. Shiganov I.N., «**The effects of laser shock processing of welded connections», Bauman Moscow State Technical University, Russia
17:30 – 18:00	**Prof. Travyanov A.Y.,** «Research of the effect of laser beam power and scanning speed on the structure and properties of items made of titanium alloys for aircraft engine building», NUST MISIS, Russia
18:30 – 19:30 Dinner	

September 18, Tuesday

Physical fundamentals and mathematic simulation of beam technologies. CAD-CAM-CAE systems.		**Equipment and technology of welding, cladding and heat treatment.**	
Chairmen – Prof. Rethmeier M., Prof. Turichin G.		**Chairmen – Prof. Trushnikov D.N., Dr. Hassel T.**	
09:30 – 09:50	**Ilyasov V.V.** «Physics of surface carbon ceramics by laser nanosrucrturization with 5d-metal componentry», Don State Technical University, Russia	09:30 – 09:50	**Völkers S. «**Porosity reduction in the laser beam welding of aluminum die cast alloys through the overlapping of mechanically induced sound waves», University of Kassel, Germany
09:50 – 10:10	**Dubrov A.V.** «Phase-field simulation of dendrite evolution during powder-based laser metal deposition», Institute on laser and information technologies, Russia	09:50 – 10:10	**Kurynsev S.V.** «Laser welding of dissimilar metals», Kazan National Research Technical University, Russia
10:10 – 10:30	**Savin V.V.,** «Mathematical modeling of continuous laser welding and local heat treatment of welding seam of stainless and heat-resistant chromium-nickel steel pipes», Immanuel Kant Baltic Federal University, Russia	10:10 – 10:30	**Misurov A.I.** «Weldpool shape investigation in fiber laser welding of Cr-Ni-Mn-N austenitic steel», Moscow state technical university, Russia
10:30 – 10:50	**Khomenko M.D. «**On verification of numerical hydrodynamic model of powder-based laser metal deposition process», Institute on laser and information technologies, Russia	10:30 – 10:50	**Kuznetsov M.V.** «Research of technological possibility of increasing erosion resistance rotor blade using laser cladding», Saint Petersburg State Marine Technical University, Russia
10:50 – 11:10	**Chulkov I. S.,** «Mathematical modeling of the splitting of electron beam for welding in narrow cutting», National Research University «MPEI», Russia	10:50 – 11:10	**Shanchurov S.**, «Development of laser welding technology of titanium VST2B alloy», Regional Center of Laser Technologies, Russia
11:10 – 11:30 Coffee break			

Physical fundamentals and mathematic simulation of beam technologies. CAD-CAM-CAE systems.		Equipment and technology of welding, cladding and heat treatment.	
Chairmen – Prof. Ilyasov V.V., Dr. Gumenyuk A.		**Chairmen – Prof. Shiganov I.N., Prof. Travyanov A.Y.**	
11:30 – 11:50	**Ivanov S.Yu.** «Simplified model for numerical simulation of laser metal deposition process with beam oscillation», St. Petersburg State Marine Technical University, Russia	11:30 – 11:50	**Fominych M.V.** «Laser cladding titanium blades of gas turbine engines», Ural Federal University, Russia
11:50 – 12:10	**Rodionov D.V.,** «The project of CAM-systems for modern laser robotic systems», Vladimir State University, Russia	11:50 – 12:10	**Chulkova A.V.** «Investigation of weldability of high-temperature nickel alloy ВВ751П», National Research University «MPEI», Russia
12:10 – 12:30	**Stankevich S.L.** «Study of metallic powder flow in discrete coaxial nozzles», St. Petersburg State Marine Technical University, Russia	12:10 – 12:30	**Kharitonov I.A.** «Electron beam welding features of cermet membranes», National Research University «MPEI», Russia
Equipment and technology of cutting, drilling and surface treatment.			
12:30 – 12:50	**Nasedkin Yu.V., «**Laser cutting of carbon fiber-reinforced plastic thin sheets», JSC Obninsk Research and Production Enterprise «Technologiya», Russia	12:30 – 12:50	**Korsmik R.S.** «Development of laser powder cladding technology for the restoration of heat-resistant nickel alloys turbine blades», Peter the Great St. Petersburg Polytechnic University, Russia
12:50 – 13:10	**Martianov S.** «Portal laser cutting- decisions from ESAB», ESAB, Russia	12:50 – 13:10	**Klimov G.** «Fluxless brazing of aluminum alloys using non vacuum electron beam by 60kV acceleration voltage», Leibniz University Hannover, Germany
13:15 – 14:00 Lunch			

Metrology, measuring systems and testing.		Equipment and technology of welding, cladding and heat treatment.	
Chairmen – Prof. Savin V.V., Dr. Zemlyakov E.V.		**Chairmen – Prof. Hoffmann P., Dr. Kurynsev S.V.**	
14:00 – 14:20	**Em V.T.** «Characterization of residual stresses by neutron diffraction at the research reactor IR-8 of NRC «Kurchatov Institute», National Research Center «Kurchatov Institute», Russia	14:00 – 14:20	**Shamov E.M.,** «Technology and equipment for laser position annular pipe-welding of pipelines», IPG IRE-Polus, Russia
14:20 – 14:40	**Gumenyuk A.,** Novel metrology to determine the critical strain conditions required for solidification cracking during laser welding of thin sheets, BAM-Federal Institute for Material Research and Testing, Germany	14:20 – 14:40	**Karimov Kh., «**Introduction to inner surface treatment using IxunClad®- inner cladding optics», IXUN Lasertechnik GmbH, Germany
14:40 – 15:00	**Loktionov E.Yu.,** «Working medium supply systems for laser plasma generators», Bauman Moscow State Technical University, Russia	14:40 – 15:00	**Rausch N.** «Advanced real-time optical laser welding monitor systems. Coaxial wire feed technology for additive manufacturing», Precitec GmbH & Co.KG, Germany
15:00 – 15:20	**Sytnik I. D.** «Analysis of biological fluids by the method of correlation of digital speckle patterns», Tomsk Polytechnic University, Russia	15:00 – 15:20	**Shakhverdova I.** «Coaxial Laser Wire Deposition», Fraunhofer Institute Material and Beam Technology IWS, Germany
15:20 – 15:40	**Karpov I. «**Residual stress measurement of laser metal deposited Ti-6Al-4V parts using neutron diffraction», National Research Center «Kurchatov Institute», Russia	15:20 – 15:40	**Kästner S.** «Wear-resistant-materials, customized with the computer and manufactured by laser"- the R:LM² technology and its components», RLM² UG, Germany

15:40 - 16:00	**Lednev V. N.** Laser induced breakdown spectroscopy for in-situ multielemental analysis during additive manufacturing process, Prokhorov General Physics Institute, Russia	15:40 - 16:00	**Scherbakov S.I.,** Development of LMD – technology of repair a gas-turbine engines with using national equipment, JSC «NPC of gas turbine construction «Salut», Russia
16:00 – 16:20 Coffee break			
Beam technologies for industry 4.0.		**Equipment and technology of welding, cladding and heat treatment.**	
Chairmen – Dr. Nikuschenko D., Bautmans L.		**Chairmen – Prof. Magerramova L.A., Prof. Nagulin K.Yu.**	
16:20 – 16:40	**Turichin G.A.,** «Laser technology and laser-based technological equipment for numeric transformation of shipyards», St. Petersburg state maritime technical university, Russia	16:20 – 16:40	**Aksenov A.** «Experience in the application of laser technologies in aircraft engine manufacturing», JSC «UEC-Aviadvigatel», Russia
16:40 – 17:00	**Gogolukhina M.E.,** «Feasibility study of hybrid laser welding application in shipbuilding», St. Petersburg state maritime technical university, Russia	16:40 – 17:00	**Petrovskiy P.V.,** «Research of the laser treatment effect on the items structure obtained by the method of cold gas-dynamic spraying», NUST MISIS
17:00 – 17:20	**Yashkin A.** «FANUC. Factory Automation with Laser technologies», Fanuc, Russia	17:00 – 17:20	**Grigorev A.M.** «Laser recrystallization of the IGBT silicon wafer», Laser technology center, Russia
17:20 – 17:40	**Lipis A.V.** «The impact of digital and additive technologies on supply chain management», St. Petersburg state maritime technical university, Russia		
17:40 - 18:00	**Podkolzin I.O.** «Innovative solutions of Dassault Systemes for additive technologies», Dassault Systemes		
18:30 – 19:30 Dinner			

September 19, Wednesday

Equipment and technology for additive manufacturing.	
Chairmen – Prof. Turichin G.A., Dr. Alikin P.	
09:30 – 09:50	**Magerramova L.A., «**Features of application of additive technologies in the production of parts of gas turbine engines», Central Institute Aviation Motors, Russia
09:50 – 10:10	**Babkin K.D.** «A quest for high-performance laser metal deposition technology», Saint Petersburg State Marine Technical University, Russia
10:10 – 10:30	**Daubarayte D.K.** «Development of new generation aluminum alloys for additive technologies», Light Materials and Technologies Institute, Russia
10:30 – 10:50	**Nagulin K.Yu. «**Radio-frequency plasma spheroidization of zirconium oxide powder», Kazan National Research Technical University named after A.N. Tupolev – KAI, Russia
10:50 – 11:10	**Gilmutdinov A.,** «Plasma processing of Inconel 718 gase atomized powders for laser additive technologies», Kazan National Research Technical University named after A.N. Tupolev – KAI, Russia
11:10 – 11:30 Coffee break	
Equipment and technology for additive manufacturing.	
Chairmen – Dr. Zemlyakov E.V., Scherbakov S.I.	
11:30 – 11:50	**Bazaleeva K.O.** «Structure features of the composite material INCONEL 625/TIC, produced by LMD method», High-Technology Scientific Research Institute of Inorganic Materials named after Academician A.A. Bochvar, Russia
11:50 – 12:10	**Promakhov V.V.** «Metal matrix composite for additive technology of direct metal deposition», National Research Tomsk State University, Russia
12:10 – 12:30	**Tsvetkova E.V.,** Bazaleeva K.O., Smirnov A.E., Chekin I. S., «Nitridation of steel Fe-13%Cr-2%Ni-0.25%C, produced by LMD method», High-Technology Scientific Research Institute of Inorganic Materials named after Academician A.A. Bochvar, Russia

12:30 – 12:50	**Gorunov A.I.** «Laser-acoustic method of processing for non-ferrous and ferrous metals», Kazan National Research Technical University named after A.N. Tupolev – KAI, Russia
13:00 – 14:00 Lunch	
Equipment and technology for additive manufacturing.	
Chairmen – Dr. Lipis A.V., Dr. Zemlyakov E.V.	
14:00 – 14:20	**Ragulin A.E.,** «CAD/CAM – system for additive manufacturing», JSC «Delcam-m», Russia
14:20 – 14:40	**Sentyurina Zh.A.** «Effect of hot isostatic pressing and heat treatment on microstructure and mechanical properties of nickel-based alloy EP741NP fabricated by selective laser melting» JSC Kompozit, Russia
14:40 – 15:00	**Tiumentsev G.A.,** «The prospects of application of a method of direct laser deposition for decrease in labor input of production of details of ship pipeline fittings», JSC «Shipbuilding & Shiprepair Technology Center», Russia
15:00 – 15:30 Coffee break	
Poster session **16:00 – 17:30**	
17:30 – 18:00 Closing of the Conference	
18:30 – 23:00 Ceremonial Dinner	

Poster session

1. Xin Wen; Guo Jin «Underwater wet laser cladding technology for repairing metal components: a protective material-assisted method», Harbin Engineering University, China
2. Vasyukov I.V., Pavlenko A.V., Puzin V.S., Zhivodernikov A.V., Batyukov A.V. «High voltage switching mode power supply for electron beam technology with minimum load breakdown energy», Platov South-Russian State Polytechnic University (NPI), Russia
3. Belavin A.I. «The use of laser welding in the manufacture of parts of liquid rocket engines», NPO «Technomash», Russia
4. Zvezdin V.V., Rakhimov R.R., Israfilov I. H., Saubanov R.R. «Laser technology of purchasing», Kazan Federal University, Russia
5. Perestoronin A.V., Grigoryants A.G., Tretyakov R.S., Misiurov A.I., Asyutin R.D. «The features of surface composite layer formation by laser-powder treatment of steel with tungsten carbide particles», BMSTU, Russia
6. Voronov M., Nagulin K., Nazarov R., Gilmutdinov A., «Modeling of the powder particles behaviour in a technoligical ICP», Kazan National Research Technical University, Russia
7. Letyagin I.Yu., Belenkiy V.Ya., Trushnikov D.N., «Estimation of the parameters of penetration in laser welding in vacuum using parameters of secondary emission signals from the weld zone», Perm National Research Polytechnic University, Russia
8. Voronov M., Nagulin K., Kudimov O., Gilmutdinov A., «Electromagnetic nature of vortexes in technological ICP», Kazan National Research Technical University, Russia
9. Krivonosova E.A., Schitsin Yu.D., Trushnikov D.N., Myshkina A.V., Akulova S.N., Neulibin S.D., Dushina A.Yu. «Peculiarities of formation of the structure and properties of chromium- nickel alloy by plasma, laser and TIG surfacing», Perm National Research Polytechnic University, Russia
10. Deulina A.S., Grigorev A.M., Cherkesova E.V., «Processing of aluminum oxide with the fiber laser», Laser technology center, Russia
11. Novikov R.S., Krasavin A.S., «Production engineering of gas turbine blades repair technology by laser cladding», CJSC «Plackart», Russia
12. Mirzade F.H., «A coupled diffusion-deformational phase field formulation for precipitate growth during laser-aided additive manufacturing process», Institute on laser and information technologies, Russia

13. A.A. Voznesenskaya, D.A. Kochuev, A.V. Zhdanov, V.V. Morozov Laser melting of powder materials with developed morphology of granules, Vladimir State University, Russia
14. Zadykyan G.G., Korsmik R.S., Sklyar M.O., Zhukov A.S., Promakhov V.V. «Research and development of technology for obtaining small-scale GTE parts from ceramic composite materials by 3D printing», Peter the Great St. Petersburg Polytechnic University, Russia
15. Valdaytseva E., Udin I., Determination of the heat source parameters for the case of simultaneous two-sided laser-arc welding of extended T-joints, Peter the Great St. Petersburg Polytechnic University, Russia
16. Drokonov D.A., Zadykyan G.G., Korsmik R.S., «Investigation of the influence of nickel-based alloy powder EP648, obtained by plasma rotating electrode process, on the capture coefficient, structure and chemical composition, applied to direct laser deposition», Peter the Great Saint-Petersburg polytechnic university, Russia
17. Chkalov R.V., Khorkov K.S., Kochuev D.A., Davydov N.N., Prokoshev V.G., «Thin film elements design: software and possibilities of femtosecond laser techniques», Vladimir State University, Russia
18. Voiteshonok V.S., Golovin A.I., Turkin A.V., Shloydo A.I. «Runaway electrons beams in stationary open discharge for technological applications», SSC FSUE Keldysh Research Centre, Russia
19. Tsibulskiy I.A., A.D. Akhmetov, N. Kislov, A.D. Eremeev, V.V. Somonov «The influence of technological parameters on the structure formation of steel and copper-nickel alloys during direct deposition of wire», Peter the Great Saint-Petersburg Polytechnic University, Russia
20. Gorunov A.I., Gaysina A.R., Nikiforov S.A., Mukhamedov A.N., Gilmutdinov A.Kh., «Prospects for the application of the laser-acoustic method of additive production for non-ferrous and ferrous metals», Kazan National Research Technical University
21. Giliazov M.R., Nagulin K.Yu., Gilmutdinov A.Kh., «Design of angle sensor for galvo scanner», Kazan National Research Technical University, Russia
22. Yun N.G., Arkhipov A.V., Kovchik A.Y., Stankevich S.L., «Design and optimization of discrete powder nozzle for laser metal deposition», Saint-Petersburg State Marine Technical University, Russia
23. Tsibulskiy I.A., Somonov V.V., R. S. Korsmik, M.O. Sklyar, A. A. Voropaev, «The influence of technological parameters on the structure formation of aluminum alloys during direct deposition of wire», Saint-Petersburg State Marine Technical University, Russia

24. Tsibulskiy I.A., A.D. Akhmetov, A.A. Voropaev, O.G. Klimova-Korsmic, A.D. Eremeev, «The influence of gap size on the formation of a welded joint in hybrid laser-arc welding of angular and T-joints», Saint Petersburg State Marine Technical University, Russia
25. Tarasova M.A., A.S. Raznoschikov, N.N. Davydov, K.S. Khorkov, D.A. Kochuev, «Investigation of the influence of various exposure modes of laser radiation on physico-mechanical characteristics of alloy samples», Vladimir State University named after A. G. and N. G. Stoletovs, Russia
26. Ivashchenko A.V., Voznesenskaya A.A., Davidov N.N., Khorkov K.S., Kochuev D.A., «Localization of antifriction alloys on the metal materials surface», Vladimir State University named after A. G. and N. G. Stoletovs, Russia
27. Smetannıkov O., Bushuev L., Dongauzer K., Dubrovskaia A., «Numerical Simulation of Additive Manufacturing Process», JSC «UEC-Aviadvigatel», Russia
28. Ivanov S., Vildanov A., Valdaytseva E., Stankevich S., «Optimization of process parameters for the laser cladding with beam oscillation», Saint Petersburg State Marine Technical University, Russia
29. Ivanov S., Vildanov A., Golovin P., Topalov I., «Influence of process parameters on distortion and residual stresses for laser metal deposition», Saint Petersburg State Marine Technical University, Russia
30. Galimov M.I. «Effect of nanopowders on the structure formation of the weld metal», Yurga Institute of Technology (Affiliate) National Research Tomsk Polytechnic University, Russia
31. Sadykov I.D. «Increase of efficiency of transition of chemical elements from electrode to weld metal», Yurga Institute of Technology (Affiliate) National Research Tomsk Polytechnic University, Russia
32. Klimova-Korsmik O.G., Gushchina M.O., Vildanov A.M., Shalnova S.A., Tataru A.S., «Influence of the protective atmosphere on the structure and properties parts from titanium alloy Ti-6Al-4V produced by direct laser deposition», St. Petersburg State Marine Technical University, St. Petersburg, Russia
33. Larin M.V., Pevzner Y.B., Grinin O.I., Lasota I.T. «The use of single-mode fiber laser for welding of stainless steel thin thickness», Peter the Great Saint-Petersburg Polytechnic University, Russia
34. Turichin G.A., Klimova-Korsmik O.G., Kislov N.G., Korsmik R.S., Ivanov S.Yu. «The influence of the pause time between the passages, during the deposition of the Stellite 6 on the turbine wheel blades of the MAR-M200 alloy, on the structure of the surfacing and the heat-affected zone obtained by laser cladding», St. Petersburg State Marine Technical University, Russia

35. Permyakov G.L., Trushnikov D.N. «Modeling of electron-beam welding with beam oscillations using the experimentally determined beam parameters and the shape of keyhole», Perm National Research Polytechnic University, Russia
36. Klimova-Korsmik O.G., Shalnova S.A., Turichin G.A., Gushchina M.O., Cheverikin V.V., «Investigation of the effect of heat treatment on the structure and properties of the products made from titanium alloy ti-6al-4v produced by direct laser deposition», Peter the Great Saint-Petersburg Polytechnic University, Saint Petersburg, Russia
37. Chernikov A.S., A.A. Voznesenskaya, N.N. Davydov, K.S. Khorkov, D.A. Kochuev, «Gradient materials formation by laser cladding of powder compositions», Vladimir State University, Russia
38. Kalinichenko A.S., Devoino O.G., Komarov A.I., Meshkova V.V., «Influence of laser surface treatment on structure and properties of micro-arc oxidated coatings developed on aluminum alloys», Belarusian National Technical University, Republic of Belarus
39. Kolmakov S.V., Koitov S.A. «The development of additive technologies for production of ceramic components and parts of a new type by means of selective laser melting», JSC EMBD Novator, Russia
40. Locs S., Tamanis E., Drozdovs P., Dovoreckis J., Devoyno O. «HSS coatings with keyhole in penetration produced using laser cladding process», Daugavpils University, Latvia
41. Mendagaliyev R.V., Klimova-Korsmik O.G., Petrova S.G., Firsov A.M. «Investigation of the possibilities of using various methods of flaw detection in shipbuilding details, produced by direct laser deposition», St. Petersburg state maritime technical university, Russia
42. Mendagaliyev R.V., Medvedeva K.D., Voropayev A.A., Eremeev A.D., Klimova-Korsmik O.G., Tsibulskiy I.A. «Features of structure formation and properties at laser and arc welding of steel wire», St. Petersburg state maritime technical university, Russia
43. Smirnov A.A., Klimova-Korsmik O.G., Gluhov P.A. «Investigation of the microstructure of samples of the 08ХН53МБТЮ nickel-base alloy obtained by selective laser melting», Peter the Great Saint-Petersburg Polytechnic University, Russia
44. Kiryanova A.N., Sentyurina Zh.A., Logachev I.A., Samodurova M.N., Dzhigun N.S. «Combined SLM and DMD additive technologies for production of complex shaped parts», JSC Kompozit, Russia
45. Kuznetsov M.V., Kurakin A.I., «Laser hardening of cutter knifes», Saint Petersburg State Marine Technical University, Russia

46. Gudenko A.V., Sliva A.P. «Influence of electron beam oscillation parameters on the formation of details by electron beam metal wire deposition method», The National Research University Moscow Power Engineering Institute, Russia
47. Kuznetsov M.V., Turichin G.A., Zemlyakov E.V. «Hybrid laser-arc welding high-strength cold resistance and nanostructured steels», Saint Petersburg State Marine Technical University, Russia
48. Topalov I.K. Babkin K.D., Vildanov A.M., «Producing a vertical wall with a variable width using scanning beam by direct laser deposition», Peter the Great Saint-Petersburg Polytechnic University, Russia
49. Vildanov A.M. «Effects of beam oscillation on quality of laser metal deposited parts», Saint Petersburg State Marine Technical University, Russia
50. Golovin P. «Distortion prevention of axisymmetric parts during laser metal deposition», Peter the Great St. Petersburg Polytechnic University, Russia
51. Kuznetsov M., Zemlyakov E., Toporkova E., Pozdnyakov A., Kurakin A. «Laser welding microassembly housing from titanium alloys in inert atmosphere with eexcess pressure», Saint Petersburg State Marine Technical University, Russia
52. Zaitsev A., Polyanskiy T., Gurin A., Gulyaev I., «Numerical and experimental investigation of two phase flow for direct metal deposition», Institute of Theoretical and Applied Mechanics, Russia
53. Zaitsev A., Ermolaev G., Gurin A., «Calculation of intrinsic absorption coefficient in high power laser material processing», Institute of Theoretical and Applied Mechanics
54. Grinin O.I., Kuznetsov A.V., Pevzner Ya.B., Tsibulskiy I.A., Turichin G.A., Steshenkova N.A., Bukato V.K., Afanasev N.A., Nosyrev N.A., Zhmurenkov A.G., Krivogubets S.K. «Self-contained complex of equipment for welding of large curvilinear metal structures», Saint Petersburg State Marine Technical University, Russia
55. Steshenkova N.A., Afanasiev N.A., «Application of system of geometrical and technological adaptation of process laser-arc hybrid welding for production in the minimum tolerances of hull designs of means of marine engineering», JSC «Shipbuilding & Shiprepair Technology Center», Russia
56. Bukato V.K., Afanasiev N.A., Nosyrev N.A., Krivogubets S.K. «Technology of double-sided laser-arc hybrid welding for production of T-beams», JSC «Shipbuilding & Shiprepair Technology Center», Russia
57. Lyashenko A.I., Dmitriev I.V., Polschikova O.V., Machikhin A.S., Ramazanova A.G., Perfilov A.M., «Parametric-light-generator-based Laser System for Pulsed Three-wavelength Illumination», Bauman Moscow State Technical University (BMSTU), Moscow, Russia

58. Grinin O.I., Larin M.V., Lasota I.T., Novoselova N.V., Pevzner Ya.B., «Laser-arc module for hybrid welding», Peter the Great Saint-Petersburg Polytechnic University
59. Sdvizhenskii P.A., Lednev V.N., Grishin M.Ya., Cheverikin V.V., Stavertiy A.Ya., Tretyakov R.S., Asyutin R.D., Pershin S.M., « Laser induced breakdown spectrometry for elemental mapping of wear resistant coatings synthesized by laser cladding», NUST MISiS, Russia