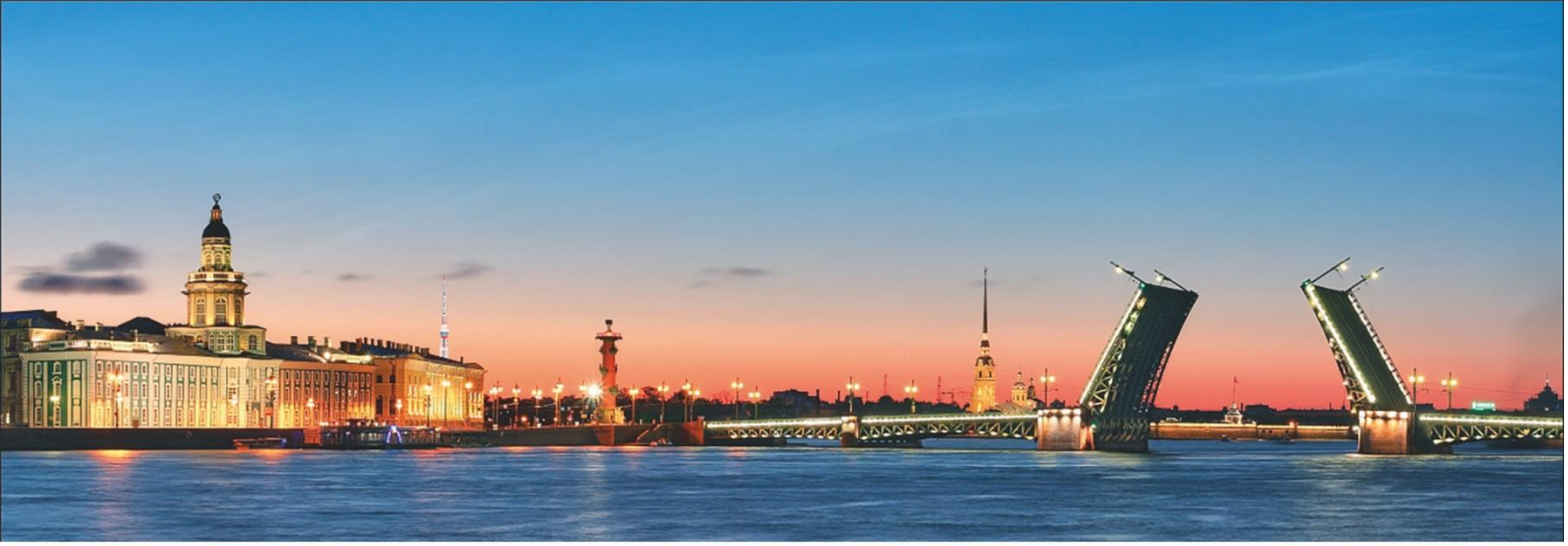

13th International Conference on Superplasticity in Advanced Materials

ICSAM 2018

Program

August 19-22, 2018
St. Petersburg, Russia

НИУ БелГУ
BELGOROD STATE UNIVERSITY (BSU)

ICSAM 2018
St. Petersburg, Russia

http://icsam.bsu.edu.ru/

13th International Conference on Superplasticity in Advanced Materials

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Federal State Autonomous Educational Institution of Higher Education
«Belgorod National Research University»

http://icsam.bsu.edu.ru /

CONTENT

CONFERENCE ORGANIZATION

Chief Organization:

Federal State Autonomous Educational Institution of Higher Education *«Belgorod National Research University»*

Co-Organization:

- Federal State Budgetary Educational Institution of Higher Education *«Saint-Petersburg State University»*
- Federal State Autonomous Educational Institution of Higher Education «*Saint Petersburg National Research University of Information Technologies, Mechanics and Optics»*
- Limited Liability Company «Armalit31»

International Committee

Prof. Goroh Itoh	Japan
Prof. Gèrard Bernhart	France
Mr. Werner Beck	Germany
Prof. Richard Dashwood	UK
Mr. Larry D. Hefti	USA
Prof. Koichi Kitazono	Japan
Prof. Koji Morita	Japan
Prof. Rustam Kaibyshev	Russia
Prof. Megumi Kawasaki	USA
Prof. Zhi Qiang Li	China
Dr. Teresa Perez Prado	Spain
Prof. Eric M. Taleff	USA
Dr. Mike Wallis	UK
Prof. Guofeng Wang	China
Dr. Alexander P.Zhilyaev	Russia

National Program Committee

Prof. R. Kaibyshev	Belgorod National Research University, Belgorod
Dr. A.P. Zhilyaev	Institute for Metals Superplasticity Problems, RAS, Ufa / Magnitogorsk State Technical University, Magnitogorsk
Prof. R.Z. Valiev	Saint Petersburg State University, Saint Petersburg /Ufa State Aviation Technical University, Ufa
Prof. A.A. Zisman	NRC "Kurchatov Institute" - CRISM "Prometey", Saint Petersburg
Dr. S.V. Zherebtsov	Belgorod National Research University, Belgorod
Prof. A.E. Romanov	Saint Petersburg National Research University of Information Technologies, Mechanics and Optics, Saint Petersburg
Prof. B.B. Straumal	National Research University “MISIS”/ Institute of Solid State Physics RAS, Moscow
Prof. A.M. Glezer,	National Research University “MISIS”, Moscow

Local Committee

Prof. R. Kaibyshev	Chairman
Dr. M. Tikhonova	Conference Coordinator
D. Magomedova	Representative of Saint-Petersburg State University
D. Tagirov	Representative of the Partner Company Armalit31

Keynote Speakers

Fernando Carreño	Centro Nacional de Investigaciones Metalúrgicas (CENIM), Madrid, Spain
Ming Wang Fu	Department of Mechanical Engineering, The Hong Kong Polytechnic University, Hong Kong, China
Kenji Higashi	Osaka Prefecture University, Osaka, Japan
Megumi Kawasaki	Oregon State University, USA
Eiich Sato	JAXA Institute of Space and Astronautical Science, Sagamihara, Japan

Invited Speakers

Elena Astafurova	Laboratory of physics of structural transformations, Institute of Strength Physics and Materials Science, Siberian Branch of Russian Academy of Sciences, Russia
Jose Maria Cabrera	Departamento de Ciencia de los Materiales e Ingeniería Metalúrgica, EEBE – Universitat Politècnica de Catalunya, Spain
Atul H. Chokshi	Department of Materials Engineering, Indian Institute of Science, Bangalore 560 012, India
Kaveh Edalati	WPI, International Institute for Carbon-Neutral Energy Research (WPI-I2CNER), Kyushu University, Japan
Roberto B. Figueiredo	Department of Materials Engineering and Civil Construction, Universidade Federal de Minas Gerais, Brazil
Hyoung Seop Kim	Department of Materials Science and Engineering, Pohang University of Science and Technology (POSTECH), Republic of Korea
Terence G. Langdon	Materials Research Group, Department of Mechanical Engineering, University of Southampton, U.K.
Toshiji Mukai	Department of Mechanical Engineering, KOBE University, Japan
Anantha K. Padmanabhan	Member (Physical Sciences), Research and Innovation Advisory Board, Tata Consultancy Services (TCS) & Research Advisor, TCS & Aditya Birla S&T Company, IIT-Madras Research Park, India
Gencaga Purcek	Department of Mechanical Engineering, Karadeniz Technical University, Turkey
Alexey E. Romanov	ITMO University, St. Petersburg, 197101, Russia
Laszlo S. Toth	Laboratory of Excellence on Design of Alloy Metals for low-mAss Structures ('DAMAS') and the Laboratoire d'Eudes des Microstructures et de Mécanique des Matériaux ('LEM3') of the Lorraine University, France
Ruslan Z. Valiev	Ufa State Aviation Technical University, Institute of Physics of Advanced Materials, / Saint Petersburg State University, Russia
Guofeng Wang	National Key Laboratory of Precision Hot Processing of Metals, Harbin Institute of Technology, Harbin, 150001, China
Sergey Zherebtsov	Department of Materials Science and Nanotechnology, Belgorod State University, Russia
Alexander P. Zhilyaev	Institute for Metals Superplasticity Problems, RAS, Ufa / Magnitogorsk State Technical University, Magnitogorsk, Russia

CONFERENCE TOPICS

Superplastic materials and mechanisms of superplasticity

- Superplasticity in Metals and Alloys, Ceramics and Intermetallics
- Superplasticity in Novel Materials: Bulk Metallic Glasses, TRIP/TWIP steels, High-Entropy Alloys and Metallic Heterostructures
- High Strain Rate / Low Temperature Superplasticity
- Mechanisms of Grain Boundary Sliding
- Microstructural Evolution during Superplastic Deformation
- Cavitation and Fracture

Superplasticity-relating processing and phenomena

- Innovative Processing
- Die Materials and Technologies
- Sintering Phenomena and Mechanisms
- Sinter-Forging

Grain refinement by Severe Plastic Deformation

- Severe Plastic Deformation Techniques
- Friction Stir Processing
- Thermomechanical Processing
- Other Grain Refinement Technologies
- Mechanisms of Grain Refinement

Mechanical and functional properties of ultrafine-grained materials

- Static Mechanical Properties
- Low- and High Cycle Fatigue
- Fracture Toughness and Creep Resistance
- Strengthening Mechanisms
- Functional Properties (wear and corrosion resistance, electrical conductivity, etc.)

Design, testing and modeling

- Numerical Simulations and Modeling
- Integrated Structure Design
- Design using SPF/DB
- Modeling of Material Behavior and Microstructure
- Evaluation and its Standartization

Industrial applications

- Superplastic Forming
- Diffusion Bounding
- Manufacturing Technologies
- Other Industrial Applications

CONFERENCE INFORMATION

ICSAM 2018 will be held in St. Petersburg, located in the north-west of the Russian Federation, on the coast of the Gulf of Finland and at the mouth of the Neva River.

The cultural capital of Russia, northern Venice, the offspring of Peter - St. Petersburg is often called so, the second largest city in Russia with a population of five millions people. Not many cities in the world can be proud of so many attractions, museum collections, opera and drama theaters, manors and palaces, parks and monuments. St. Petersburg is included in the UNESCO list as well as Paris, Rome and Venice. All the historical center of St. Petersburg is under UNESCO patronage.

The participants of the conference can visit the cultural and historical sights of the city such as the Hermitage, the Mariinsky Theater, the Russian National Library, the Russian Museum, the Peter and Paul Fortress, St. Isaac's Cathedral, etc.

Oral and Poster Presentation Guidelines

1. Oral Presentations

The presentations should be prepared in PPT, PPTX (Microsoft PowerPoint) or PDF format. Authors are requested to upload and check their presentations before the section starts working. The conference staff will be ready to help you with uploading and checking procedure. The preferred option is to bring your presentation on a USB; CD or DVD media are also accepted. Guidelines for presentation preparation are mainly clearness and good readability from distance.

Plan your presentation length to fit the time slot and leave about 5 minutes for discussion, i.e. recommended scheme for invited and standard talk 15+5 minutes and keynote talk 35+5 minutes.

2. Poster Presentation

Maximum Allowable Poster size: A0 size (841 mm wide × 1189 mm high).

The local committee provides the poster panel and pins for the display.

All the poster presenters should keep the poster on the panl during all day 20 August. The poster remaining after the duration will be discarded.

Please be noted that poster cannot be printed at the venue.

History of the ICSAM

ICSAM 2018 is the 13th International Conference on Superplasticity in Advanced Materials.

The ICSAM series of conferences (http://icsam.info) have been held every three years since the first conference was organized and subsequently held in San Diego in 1982.
Thereafter, eleven conferences were held consecutively in Grenoble, Blaine, Osaka, Moscow, Bangalore, Orlando, Oxford, Chengdu, Seattle, Albi rounding America, Europe and Asia. The last, i.e., 12th, ICSAM was held in 2015 in Tokyo, Japan, attaining more than 140 participants.

- 1st, 1982, San Diego, http://www.icsam.info/1982.html
- 2nd, 1985, Grenoble, http://www.icsam.info/1985.html
- 3rd, 1988, Washington, http://www.icsam.info/1988.html
- 4th, 1991, Osaka, http://www.icsam.info/1991.html
- 5th, 1994, Moscow, http://www.icsam.info/1994.html
- 6th, 1997, Bangalore, http://www.icsam.info/1997.html
- 7th, 2000, Orlando, http://www.icsam.info/2000.html
- 8th, 2003, Oxford, http://www.icsam.info/icsam2003/
- 9th, 2006, Chengdu, http://www.icsam.info/icsam2006/
- 10th, 2009, Seattle, http://www.icsam.info/icsam2009/
- 11th, 2012, Albi, http://www.icsam.info/icsam2012/
- 12th, 2015, Tokyo http://www.icsam.info/icsam2015/

Conference web

The information about the conference can be found on the conference web pages http://icsam.bsu.edu.ru. The website is being updated regularly.

Currency

The official currency of the Russia is the rubles (RUB). Exchange of foreign currency is available at most hotels, banks and exchange offices throughout the city of St. Petersburg. International credit cards are accepted for payments in hotels, restaurants and shops.
You can find the official exchange rates on the website of the Central Bank of the Russian Federation http://www.cbr.ru/eng/.

Important Telephone Numbers

- 101: Fire
- 102: Police
- 103: Ambulance
- 112: General Emergency

How to get to St. Petersburg by plane

Airport in Saint Petersburg

Pulkovo International Airport in St. Petersburg is ready to receive guests and provide them the full range of services, which passengers are accustomed to use in airports of major European cities. You can get to the airport Pulkovo by public transport, taxi or car. Details can be found at https://www.pulkovoairport.ru/en/

Airports in Moscow

Domodedovo International Airport Regular flights from Domodedovo are offered to 175 destinations, 72 of which are unique to the Moscow region in having connections with Domodedovo only. Details can be found at http://www.domodedovo.ru/en/

Sheremetyevo International Airport is the largest Russian airport handling scheduled international flights. The Airport's network of routes includes more than 300 destinations. Details can be found at http://www.svo.aero/en/

Aeroexpress provides rail services between Moscow city and all the airports of the Moscow. Details can be found at https://aeroexpress.ru/en/aero.html

How to get to St. Petersburg by train

Trains connect St. Petersburg with Moscow regularly several times a day.

The Sapsan train is a modern high-speed train of the Russian Railways (RZD), which provides connection between Moscow and Saint Petersburg. Duration of this trip is about 4 hours. The Sapsan train departs from Moscow Oktyabrskaya that is **Leningradskiy railway station** (near "**Komsomolskaya**" metro station) and arrives to Saint Petersburg Glavnyi that is **Moskovskyi railway station** (near "**Ploshchad Vosstaniya**" metro station).

Other trains from Moscow to St. Petersburg are also available with departure from Kurskyi and Leningradskyi railway stations.

There is a high speed train service **Allegro** between Helsinki (Finnland) and St. Petersburg. The journey time is 3.5 hours. The train arrives to **Finlyandskiy station** in St. Petersburg.

Venue

Hotel Holiday Inn Moskovskye Vorota, Moskovskiy prospect, 97A, Saint-Petersburg, 196084, Russia. The hotel is located in a peaceful small district in the central part of St. Petersburg.

How to get to the Conference place from Airport

From the **Pulkovo International Airport** in St. Petersburg to the conference venue (distance 10 km)

- **by the taxi**: charge (one way) - approximately **RUR 1150**
- **by bys** №39, 39Э get out stop **Moskovskaya** then by metro from **Moskovskaya** get out **Moskovskye Vorota** Line 2 (blue)

How to get to the Conference place from railway stations

From the **Moskovskyi railway station** to the conference venue by public transport (distance 5 km)

- **by the taxi**: charge (one way) - approximately **RUR 1150**
- **by bus**: 1) take bus №26, 2) get off on the bus stop **Ploschad Moskovskye Vorota**
- **by metro**: make an interchange and get to **Moskovskye Vorota** metro station. Line 2 (blue)

From **Finlyandsky railway station** to the conference venue by public transport (distance 8 km)

- **by the taxi**: charge (one way) - approximately **RUR 1400**
- **by metro**: 1) get to **Tekhnologichesky Institut** metro station. Line 1 (red); 2) make an interchange and get to **Moskovskye Vorota** metro station. Line 2 (blue)

Metro in St. Petersburg

The cost of a single trip on the subway - **45 RUR**.

Single ticket for 90 minutes (underground (1 trip) + bus, tram, trolley) is available – cost is **70 RUR**.

Also daily single ticket (tram, trolley, bus, subway) is available for 1-7 days.

- for 1 day – 180 RUR
- for 2 days – 255 RUR
- for 3 days – 340 RUR
- for 4 days – 425 RUR
- for 5 days – 510 RUR
- for 6 days – 595 RUR
- for 7 days – 680 RUR

The registration fee

For regular participants and junior researchers

- Admission to all conference sessions
- Admission to coffee breaks, lunches
- Admission to the welcome party and conference dinner
- A conference tour
- Conference bag with the book of abstracts and other materials
- Publication of the manuscript in the periodical/proceedings
- Official invitation for a visa to Russia and mailing

For Accompanying person

- Admission to the welcome party and conference dinner
- A conference tour
- Conference bag with the book of abstracts and other materials
- Official invitation for a visa to Russia and mailing

Attention: All fees in Euro

Conference fees	**Early bird Before April 15, 2018**	**Standard**
Regular participant, Listener	550 Euro	650 Euro
Junior reseacher	300 Euro	350 Euro
Accompanying person	150 Euro	150 Euro
Optional	Early bird Before April 15, 2018	Standard
Additional excursion tour	100 Euro	100 Euro

SOCIAL PROGRAM

Welcome party

Date: Monday, August 19, 16:00 – 19:00

Location: Hotel Holiday Inn Moskovskye Vorota, Moskovskiy prospect, 97A, Saint-Petersburg, 196084, Russia

Conference dinner

Date: Tuesday, August 21, 19:00 – 23:00

Location: Hotel Ambassador, 5-7, Rimsky-Korsakov av., St.Petersburg, 190068, Russia

Conference Tour

Date: Wednesday, August 22, 15:00 – 18:00

Location: City tour around Saint Petersburg with visit to Peter and Paul fortress and Peter and Paul cathedral

Additional Tour (is not included in registration fee)

Date: Thursday, August 23

Additional payment is 100 Euro, which includes:
- English-speaking guide services according to the program,
- driver services in comfortable bus,
- admissions to Catherine`s Palace and Park, Pavlovsk Palace and Park,
- lunch in “Podvorye” restaurant.

09:00 – Meet Your guide in the hotel lobby of Holiday Inn Moskovskye Vorota
09:00-10:30 – Depart to Pavlovsk. Excursion on the way
10:30-12:30 – Excursion to Pavlovsk Palace and Park
13:00-14:00 – Lunch in “Podvorye” restaurant (included)
14:30-17:00 – Excursion to Catherine`s Palace and Park
17:00-18:00– Drive back to to the hotel lobby of Holiday Inn Moskovskye Vorota

Driver: 09:00 – 18:00
Guide: 09:00 – 18:00

Program for Accompanying Persons

August 20, 2018 Monday – Private canal boat tour
09:30-13:30

09:30 – Meet your guide in the hotel lobby of Holiday Inn Moskovskye Vorota
10:30-12:30 – Excursion to the rivers and canals of Saint Petersburg
12:30-13:30– Drive back to the hotel lobby of Holiday Inn Moskovskye Vorota

Guide: 09:30 – 13:30
The language of the tour is English.

An excursion along the rivers and canals of Saint Petersburg offers a fascinating journey through 'the Venice of the North' on comfortable ships and boats! You will dive head-first into the magnificence and brilliance of Saint Petersburg.

August 21, 2018 Tuesday - Excursion to the Hermitage (the Winter Palace)

09:30 – Meet your guide in the hotel lobby of Holiday Inn Moskovskye Vorota
11:00-13:30 – Excursion to the Hermitage
13:30-14:30– Drive back to the hotel lobby of Holiday Inn Moskovskye Vorota

Guide: 09:30 – 14:30
The language of the tour is English.

The Hermitage is Saint Petersburg's treasure, the biggest museum in Russia and one of the grandest in the world.

TRANSFER

Participants can use the transfer.

Special buses will be delivered to participants at the conference venue according to the schedule:

From Hotel Ambasador to Hotel Holiday Inn Moskovskye Vorota

Every morning from 20 to 22 August:

8:15 am a meeting at the reception of the Hotel Ambasador;

8:20 am departure of the bus to the venue of the conference (Hotel Holiday Inn Moskovskye Vorota).

From Tourist Hotel to Hotel Holiday Inn Moskovskye Vorota

Every morning from 20 to 22 August:

8:25 am a meeting at the reception of the Tourist Hotel;

8:30 am departure of the bus to the venue of the conference (Hotel Holiday Inn Moskovskye Vorota).

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Conference dinner

21 August:

From Hotel Holiday Inn Moskovskye Vorota to Hotel Ambasador

18:10 a meeting at the reception of the Hotel Holiday Inn Moskovskye Vorota ;

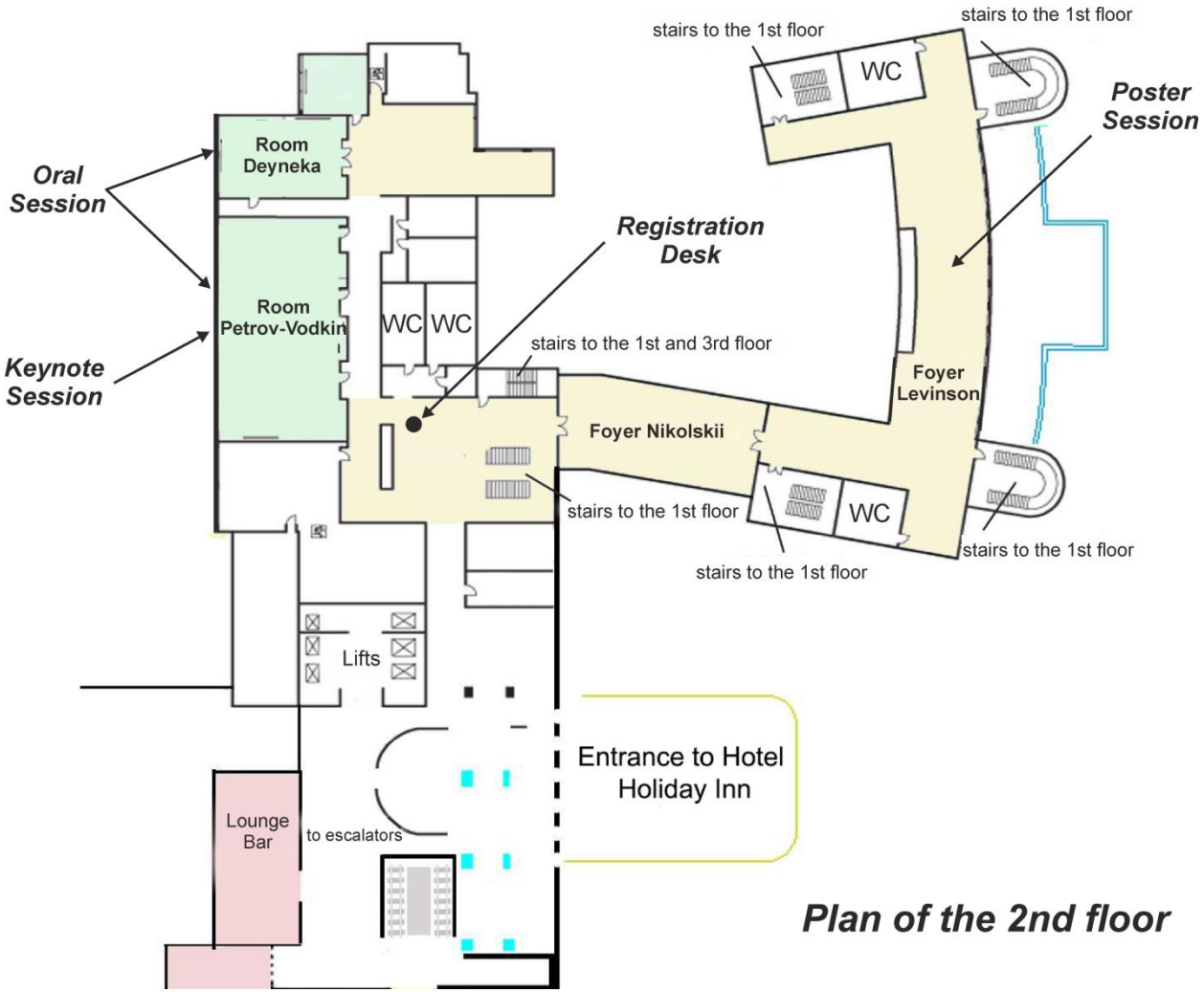
18:20 departure of the bus to the venue of the conference dinner (Hotel Ambasador).

From Hotel Ambasador to Hotel Holiday Inn Moskovskye Vorota and Tourist Hotel

23:00 a meeting at the reception of the Hotel Ambasador;

23:10 departure of the bus to the venue of Hotel Holiday Inn Moskovskye Vorota and Tourist Hotel.

FLOOR PLAN


Oral Session
Keynote Session
Room Deyneka
Room Petrov-Vodkin
WC
WC
Registration Desk
stairs to the 1st and 3rd floor
Foyer Nikolskii
stairs to the 1st floor
stairs to the 1st floor
stairs to the 1st floor
WC
Foyer Levinson
Poster Session
stairs to the 1st floor
stairs to the 1st floor
Lifts
Entrance to Hotel Holiday Inn
Lounge Bar
to escalators
Plan of the 2nd floor

SCHEDULE

Time	19.08.2018 Sunday	20.08.2018 Monday		Time	21.08.2018 Tuesday		Time	22.08.2018 Wednesday		23.08.2018 Thursday
9:00 – 9:20		Opening/ Room Petrov-Vodkin		9:00 – 9:40	Keynote 3 / Room Petrov-Vodkin		9:00 – 9:40	Keynote 5 / Room Petrov-Vodkin		
9:20 – 10:00		Keynote 1 / Room Petrov-Vodkin								
		Room Petrov-Vodkin	Room Deyneka		Room Petrov-Vodkin	Room Deyneka		Room Petrov-Vodkin	Room Deyneka	
10:00 – 10:20		**Symposium for Memory of O. Kaibyshev** Chairmen: Terence G. Langdon Ruslan Z.Valiev	**Superplastic materials** Chairmen: Guofeng Wang Goroh Itoh	9:40 – 10:00	**Symposium for Memory of O. Sherby** Chairmen: Rustam Kaibyshev K. A. Padmanabhan	**Superplastic materials** Chairmen: Roberto B. Figueiredo Atul H. Chokshi	9:40 – 10:00	**UFG materials** Chairmen: Elena Astafurova Gencaga Purcek	**Industrial applications** Chairmen: Alexander P. Zhilyaev Kenji Higashi	
				10:00 – 10:20			10:00 – 10:20			
10:20 – 10:40				10:20 – 10:40			10:20 – 10:40			
10:40-11:00		Coffee Break / Foyer Nikolskii		10:40-11:00	Coffee Break / Foyer Nikolskii			Coffee Break / Foyer Nikolskii		
11:00 – 11:20		**Symposium for Memory of O. Kaibyshev** Chairmen: Terence G. Langdon Ruslan Z.Valiev	**Superplastic materials** Chairmen: Guofeng Wang Goroh Itoh	11:00 – 11:20	**Symposium for Memory of O. Sherby** Chairmen: Rustam Kaibyshev K. A. Padmanabhan	**Superplastic materials** Chairmen: Roberto B. Figueiredo Atul H. Chokshi	11:00 – 11:20	**UFG materials** Chairmen: Elena Astafurova Gencaga Purcek	**Industrial applications** Chairmen: Alexander P. Zhilyaev Kenji Higashi	
11:20 – 11:40				11:20 – 11:40			11:20 – 11:40			
11:40 – 12:00				11:40 – 12:00			11:40 – 12:00			
12:00 – 12:20				12:00 – 12:20			12:00 – 12:20			
12:20 – 12:40				12:20 – 12:40			12:20 – 12:40			
12:40 – 13:00				12:40 – 13:00			12:40 – 13:00			
13:00-14:00		Lunch / Toscana Hall		13:00-14:00	Lunch / Toscana Hall		13:00-14:00	Lunch / Toscana Hall		
14:00 – 14:40		Keynote 2 / Room Petrov Vodkin		14:00 – 14:40	Keynote 4 / Room Petrov Vodkin					
14:40 – 15:00		**UFG materials** Chairmen: Hyoung Seop Kim Alexander P. Zhilyaev	**Superplastic materials** Chairmen: Sergey Zherebtsov Megumi Kawasaki	14:40 – 15:00	**UFG materials** Chairmen: Laszlo S. Toth Ruslan Z.Valiev	**Design, testing and modeling.** Chairmen: Kaveh Edalati Eiichi Sato				
15:00 – 15:20				15:00 – 15:20						
15:20-15:40				15:20-15:40						
15:40-16:00		Coffee Break / Foyer Nikolskii		15:40-16:00	Coffee Break / Foyer Nikolskii					
16:00 – 16:20	Registration and welcome party / Foyer Nikolskii	**UFG materials** Chairmen: Hyoung Seop Kim Alexander P. Zhilyaev	**Superplastic materials** Chairmen: Sergey Zherebtsov Megumi Kawasaki	16:00 – 16:20	**UFG materials** Chairmen: Laszlo S. Toth Ruslan Z.Valiev	**Design, testing and modeling** Chairmen: Kaveh Edalati Eiichi Sato	15:00 – 18:00	Conference Tour		Additional Tour
16:20 – 16:40				16:20 – 16:40						
16:40 – 17:00				16:40 – 17:00						
17:00 – 17:20				17:00 – 17:20						
17:20 – 17:40				17:20 – 17:40						
17:40 – 18:00				17:40 – 18:00						
18:00 – 20:00		Poster Session / Foyer Levinson		19:00- 23:00	Conference dinner / Hotel Ambassador					

August 19 (Sunday)

16:00-19:00	Registration and Welcome Party (Hall, Hotel Holiday Inn Moskovskye Vorota)

August 20 (Monday)

9:00-9:20	Opening	
9:20-10:00	**Keynote** (Room Petrov-Vodkin) Chairmen: *Rustam Kaibyshev and Goroh Itoh* ***Megumi Kawasaki*** *#0010* *Superplastic Flow and Micro-Mechanical Response of Ultrafine-Grained Mateirlas*	
	Kaibyshev's Symposium Room Petrov-Vodkin Chairmen: *Terence G. Langdon and Ruslan Z.Valiev*	**Superplastic materials** Room Deyneka Chairmen: *Guofeng Wang and Goroh Itoh*
10:00-10:20	***Terence G. Langdon*** *(Invited) #0021* *Thirty Years of Superplastic Ultrafine-Grained Materials: Examining the Legacy of Oscar Kaibyshev*	***Irina Kireeva*** *#004* *Orientation dependence of twinning in FCC single crystals of high-entropy alloys*
10:20-10:40	***K.Anantha Padmanabhan*** *(Invited)#00180* *On the Origin of Structural Superplasticity in Different Classes of Materials*	***Hamed Mofidi Tabatabaei*** *#00198* *Friction stir processing trials of SP-700 (Ti-4.5Al-3V-2Fe-2Mo) titanium alloy*
10:40-11:00	**Coffee Break** (foye Nikolskii)	
11:00-11:20	***Alexander P. Zhilyaev*** *(Invited) #0084* *Influence of Inhomogeneity on Mechanical Properties of Commercially Pure Titanium Processed by HPT*	***M.Raviathul Basariya*** *#002* *Mesoscopic scale modeling of superplastic flow in geological and glacial materials*
11:20-11:40	***Yuriy S. Nechaev*** *#0027* *On mechanisms of "grain boundary sliding", in light of the Kaibyshev-Valiev data on two limit "nonequilibrium" GB states in deformed metallic materials*	***Koji Morita****#0011* *#0011* *Influence of DC Current on the High Temperature Deformation of Zirconia Ceramics*
11:40-12:00	***Laszlo S. Toth*** *(Invited) #0020* *Modeling the effects of grain boundary sliding on texture evolution of superplastic materials by a new viscoplastic self-consistent polycrystal approach*	***Ares Gomez-Gallegos*** *#0083* *Studies on Ti54M Titanium Alloy for Application within the Aerospace Industry*
12:00-12:20	***Ruslan Z. Valiev*** *(Invited) #0093* *Superior strength and ductility of ultrafine-grained materials: fundamental issues and latest findings*	***Fusheng Han*** *#00114* *Mechanical behavior of twinning induced plasticity steel processed by warm forging and annealing*
12:20-12:40	***Alexey E. Romanov*** *(Invited) #00124* *Strengthening mechanisms in coarse- and ultrafine-grained materials under large plastic and superplastic deformation*	***Muhammet Demirtas*** *#00146* *Effect of Long-Term Natural Aging on Room Temperature Superplasticity of Zn-Al Alloys*
12:40-13:00	***Farid Z. Utyashev*** *#00179*	***Hailiang Yu*** *#009*

	New approach to evaluate accumulated strains during severe plastic deformation	*Enhanced mechanical properties of asymmetric cryorolled copper sheets under low-temperature annealing*
13:00-14:00	**Lunch** (Toscana Hall)	
14:00-14:40	**Keynote** (Room Petrov-Vodkin) Chairmen**:** *Megumi Kawasaki and Alexey E. Romanov* ***Kenji Higashi*** *#00136* *Superplasticity: past, present and future*	
	UFG materials Room Petrov-Vodkin Chairmen: *Hyoung Seop Kim and Alexander P. Zhilyaev*	**Superplastic materials** Room Deyneka Chairmen: *Sergey Zherebtsov and Megumi Kawasaki*
14:40-15:00	***Kaveh Edalati*** *(Invited)* *#00121* *Transition from low-temperature superplasticity to room-temperature superplasticity by high-pressure torsion*	***Roberto B. Figueiredo*** *(Invited)* *#0030* *Low temperature superplasticity in ultrafine grained AZ31 alloy*
15:00-15:20	***Elena Astafurova*** *(Invited)* *#0068* *Hydrogen embrittlement of the ultrafine-grained austenitic stainless steels*	***Goroh Itoh*** *#00182* *Steady-state flow in some heavily deformed metals*
15:20-15:40	***Vladislav Kulitskiy*** *#00102* *Microstructure of an Al-Mg-Sc-Zr alloy after FSW and ECAP processing schemes*	***Gencaga Purcek*** *(Invited)* *#0071* *Room Temperature Superplasticity in Fine/Ultrafine-Grained Zn-Al Alloys with Different Phase Compositions*
15:40-16:00	**Coffee Break** (foye Nikolskii)	
16:00-16:20	***Haiou Jin*** *#008* *The effects of Mn and Fe on the superplasticity of high-Mg aluminum alloys*	***Dmitri Louzguine*** *#0012* *Bulk metallic glasses as ideally formable materials on heating yet retaining their ultrahigh strength upon further cooling*
16:20-16:40	***Jitka Stráská*** *#00171* *Effect of Precipitates on Thermal Stability of Ultra-Fine Grain Magnesium Alloy Prepared by Equal Channel Angular Pressing*	***Byung-Nam Kim*** *#0028* *Role of Grain-Boundary Sliding on Sintering*
16:40-17:00	***Kyung-Tae Park*** *#0013* *Tensile Deformation of Reversely Transformed Ultrafine Grained TRIP-aided Stainless Steel*	***Anastasia Mikhaylovskaya*** *#0097* *Effect of composition on superplastic deformation mechanisms of aluminium based alloys*
17:00-17:20	***Vladimir Stolyarov*** *#0032* *Microstructure Evolution and Mechanical Behavior in Coarse Grained and Nanostructured Shape Memory TiNi Alloy: A Comparative Study*	***Keijiro Hiraga*** *#0052* *Superplastic Zirconia-Magnesia-Spinel Composite Fabricated by a Two-Step Sintering Method*
17:20-17:40	***Véronique Doquet*** *#0019* *Fatigue Of Ultrafine Grained Al5083*	***Takaomi Itoi*** *#0059* *Improvement of superplastic properties in SPZ by small addition of Sn*
17:40-18:00	***Aleksandr Malikov*** *#0015* *Increase of the elasticity and strength of the welded joints for the Al-Mg-Li alloy made by the laser welding by means of the thermal-mechanical processing*	***Evgeny Naydenkin*** *#0090* *Influence of structural-phase state on low-temperature superplasticity of ultrafine-grained titanium alloys*
18:00-20:00	**Poster Session** (foye Levinson)	

August 21 (Tuesday)

9:00-9:40	**Keynote** (Room Petrov-Vodkin) Chairmen: *Atul H. Chokshi and Ming Wang Fu* ***Fernando Carreño*** *#0023* *Superplasticity of aerospace 7075 (Al-Zn-Mg-Cu) aluminium alloy obtained by severe plastic deformation*	
	Sherby's Symposium Room Petrov-Vodkin Chairmen*: Rustam Kaibyshev and K. Anantha Padmanabhan*	**Superplastic materials** Room Deyneka Chairmen: *Roberto B. Figueiredo and Atul H. Chokshi*
9:40-10:00	***Rustam Kaibyshev*** *Prof. Oleg Sherby. Creep and Superplasticity*	***Guofeng Wang*** *(Invited)* *#0049* *Research on Quick Superplastic Forming Technology of Aluminum Alloy Complex Components*
10:00-10:20	***Jose Maria Cabrera*** *(Invited)* *#00184* *Novel method of severe plastic deformation - continuous closed die forging: CP aluminum case study*	***Laurie Despax*** *#00127* *Superplasticity in fine grain Ti-6Al-4V alloy: mechanical behaviour and microstructural evolution*
10:20-10:40	***Ming-Jen Tan*** *#0026* *Conical shaped AZ31 Mg part formed via hybrid superplastic forming*	***Anton Kotov*** *#00109* *Effect of solid solution composition on superplastic behavior of Al–Zn–Mg based alloys*
10:40-11:00	**Coffee Break** (foye Nikolskii)	
11:00-11:20	***K. Anantha Padmanabhan*** *(Invited) #00181* *On the Nuances in the Power Law Description and Interpretation of High Homologous Temperature Creep and Superplasticity Data*	***Atul H. Chokshi*** *(Invited)* *#00186* *Superplasticity in metals: comparison with ceramics and high entropy alloys*
11:20-11:40	***Rustam Kaibyshev*** *#00176* *Grain growth and superplastic deformation of aluminum alloys*	***Sergey Zherebtsov*** *(Invited)* *#00140* *Low-temperature superplastic deformation of ultrafine Ti-6Al-4V*
11:40-12:00	***Enrique Alabort*** *#00123* *In-situ observations of superplasticity in titanium alloys: rationalising deformation mechanisms*	***Satoshi Kobune*** *#0038* *Tensile properties of AZX612 alloy sheets processed by Friction Assisted Extrusion*
12:00-12:20	***Xifeng Li*** *#0034* *Superplastic deformation behavior of as-received and hydrogenated Ti_2AlNb alloy*	***Balasivanandha Prabu*** *#007* *Microstructure Homogeneity in AA6063 Alloy Processed by Cyclic Expansion Extrusion*
12:20-12:40	***Sadun Karabiyik*** *#00134* *Effect of Multi-Directional Forging on Tribological Properties of Al-7Si-4Zn-3Cu Alloy*	***Andrey Mochugovskiy*** *#00116* *Novel Al-Mg-Si based superplastic alloy*
12:40-13:00	***Tsutomu Ito*** *#00149* *Grain Growth-Driven Superplastic Deformation of Fine-Grained 5083 Aluminum Alloys*	***Hiroshi Masuda*** *#0051* *Dynamic anisotropic grain growth during superplasticity in quasi-single phase aluminium alloys*
13:00-14:00	**Lunch** (Toscana Hall)	

14:00-14:40	**Keynote** (Room Petrov-Vodkin) Chairmen: *Toshiji Mukai and Kaveh Edalati* ***Ming Wang Fu*** *#0077* *Study on the enhanced superplasticity of Mg-Li based alloy by a stepped deformation method*	
	UFG materials Room Petrov-Vodkin Chairmen: *Laszlo S. Toth and Ruslan Z.Valiev*	**Design, testing and modeling** Room Deyneka Chairmen: *Kaveh Edalati and Eiichi Sato*
14:40-15:00	***Werner Skrotzki*** *#0046* *Mechanisms of grain refinement and strengthening during HPT of CrMnFeCoNi high-entropy alloy*	***Artem Alimov*** *#0031* *Simulation of Deformation Behavior and Microstructure Evolution during Hot Forging of TC11 Titanium Alloy*
15:00-15:20	***Andrey Belyakov*** *#00197* *On primary recrystallization of high-Mn austenitic steels*	***Ivan Zakhariev*** *#00143* *The effect of finite element geometry on superplastic forming simulation*
15:20-15:40	***Yasin Alemdağ*** *#0066* *Mechanical Properties of Multi-Directional Forged Al-7Si-4Zn-3Cu Alloy*	***Alexander Pesin*** *#0086* *Modification of the shear-compression specimen and development of a special technique for the physical simulation of asymmetric rolling with a large strain*
15:40-16:00	**Coffee Break** (foye Nikolskii)	
16:00-16:20	***Sergey Dobatkin*** *#0067* *Mechanical and in-service properties of magnesium alloy WE43 after equal-channel angular pressing*	***Sergey Aksenov*** *#0079* *Characterization of stress-strain behavior of superplastic titanium alloy by free bulging tests with pressure jumps*
16:20-16:40	***Josef Stráský*** *#00168* *Ultra-fine grained titanium prepared by cryogenic milling and spark plasma sintering*	***Firas Jarrar*** *#00108* *On the Effect of the Complexity of the Constitutive Model in Simulating Superplastic Forming*
16:40-17:00	***Askar Kilmametov*** *#00166* *High-pressure omega-phase creation and its thermal stability in nanostructured Ti–based alloys*	***Andriy Ostapovets*** *#00160* *Modelling of tensile twin interaction with obstacles in magnesium*
17:00-17:20	***Vincent Velay*** *#0088* *Mechanical behavior of Ti-6Al-2Sn-4Zr-2Mo titanium alloy under hot and superplastic forming conditions: experiment and modeling*	***Shamil Mukhtarov*** *#00129* *Microstructure evolution of nickel-based superalloys induced by thermomechanical processing - simulation and verification*
17:20-17:40	***Auriane Etienne*** *#00128* *Irradiation and corrosion resistance of a nanostructured 316 austenitic stainless steel*	***Donato Sorgente*** *#00155* *Inverse characterization of a superplastic aluminium alloy from full field experimental data*
17:40-18:00	***Bertrand Radiguet*** *#00159* *Radiation resistance of a FeCrW model alloy nanostructured by severe plastic deformation*	***Denis Pustovoytov*** *#0087* *FEM simulation of influence of asymmetric cold rolling on through-thickness strain gradient in low-carbon steel sheets*
19:00-23:00	**Conference Dinner (Hotel Ambassador)**	

August 22 (Wednesday)

9:00-9:40	**Keynote** (Room Petrov-Vodkin) Chairmen: *Gencaga Purcek and Alexander P. Zhilyaev* ***Eiichi Sato*** *#0063* *Local Accommodation Processes of Superplastic Gradin Boundary Sliding*	
	UFG materials Room Petrov-Vodkin Chairmen: *Elena Astafurova and Gencaga Purcek*	**Industrial applications** Room Deyneka Chairmans: *Alexander P. Zhilyaev and Kenji Higashi*
9:40-10:00	***Hyoung Seop Kim*** *(Invited)* *#00169* *Single-roll angular-rolling for continuous severe plastic deformation process*	***Damien Mauduit*** *#00156* *The development and the industrial application of the Infra-Red heating for the superplastic forming*
10:00-10:20	***Toshiji Mukai****(Invited)* *#00187* *Effect of solute on grain boundary plasticity in fine-grained Mg alloys*	***Qinxiang Xia*** *#0085* *Influence of oblique edge blanking on the online punching quality after stretch bending*
10:20-10:40	***Milos Janecek*** *#00167* *Thermal stability of commercially pure Ti and Ti-6Al-7Nb alloy processed by ECAP*	***Werner Beck*** *#00196* *Production of Ti-Sheet Metal Parts. Is SPF still in key position?*
10:40-11:00	**Coffee Break** (foye Nikolskii)	
11:00-11:20	***Dmitry Gunderov*** *#00122* *Influence of high-pressure torsion on structure amorphous melt-spun Ti-Ni-Cu alloys*	***Quoc Viet Vu*** *#0035* *Plastic Flow Machining*
11:20-11:40	***Yi Huang*** *#005* *Effect of different initial lamellar plate thickness on the grain refinement and superplastic behaviour in HPT-processed Ti-6Al-4V alloy*	***Xiu Quan Cheng*** *#0081* *Establishment of the High Temperature Constitutive Relationship of the Haynes230 Ni-based Superalloy*
11:40-12:00	***Wenjing Zhang*** *#00119* *Grain refinement of Ti-6Al-4V alloy processed by friction stir processing and enhanced low temperature superplasticity*	***Wujing Deng*** *#0018* *Influence of longitudinal interface defect on high cycle fatigue behavior of Ti-6Al-4V alloy Diffusion Bonding joint*
12:00-12:20	***Olga Rybalchenko*** *#0062* *Microstructure and Fatigue Properties of a Cr-Ni-Ti Austenitic Stainless Steel after Equal Channel Angular Pressing and Annealing*	***Xiao Xu*** *#0080* *Research on solution treatment process of Haynes230 cylindrical blank used for hot flow spinning*
12:20-12:40	***Pinqiang Dai*** *#00165* *Microstructures and mechanical properties of the CoCrFeMnNiNx high entropy alloys*	***Xiaoning Han*** *#0076* *Influence of Heat Treatment on Microstructure and Properties of Titanium Alloy after SPF/DB*
12:40-13:00	***Nariman A. Enikeev*** *#00204* *Thermomechanical processing as an effective method of preparation of bulk and sheet semifinished products from nickel alloys with UFG and NC structures*	***Torgom Akopyan*** *#00125* *Formation of the nanostructure and mechanical properties during industrial technology of radial-shear rolling of the new aluminum alloy based on the Al-Zn-Mg-Fe-Ni system*
13:00-13:20	**Closing Ceremony**	
13:20-14:20	**Lunch** (Toscana Hall)	
15:00-18:00	**Conference Tour**	

Poster Session
August 20 (Monday)
18:00-19:00

Foye Levinson

	Superplastic materials
P1	***Maksim Kalienko*** *#00188* *Influence Of The Initial Structure Of High-Strength Titanium Alloys On The Properties Of Superplasticity*
P2	***Anna Vyrodova*** *#003* *Orientation dependence of mechanical behavior of FCC CoCrFeNiAl0.3 high-entropy alloy single crystals*
P3	***Elvina Galieva*** *#0029* *Low-temperature superplasticity of the Ni-based EK61 superalloy and application of this effect to obtain sound solid state joints*
P4	***Sergey Malopheyev*** *#0016* *Superplasticity of friction-stir welds of Zr-modified 5083 aluminum alloys with ultrafine-grained structure*
P5	***Keita Sekiguchi*** *#0054* *Continuous dynamic recrystallization in dual-phase titanium alloy in superplasticity*
P6	***Vitalii Sokolovsky*** *#00112* *Superplastic behavior of β–solidifying TiAl based alloy*
P7	***Shakir Pazylov*** *#00106* *On the hierarchy of structural-phase states of 1561 Aluminum alloy*
P8	***Yamato Sasaki*** *#00183* *Low temperature and high speed superplastic flow in TZP by applied electric field*
P9	***Daria Kitaeva*** *#0042* *On Dynamic Superplasticity of Aluminum Alloys with Initial Varying Grain Size Structure*
P10	***Asiya Samigullina*** *#0050* *Effect of ultrasonic treatment on the characteristics of superplasticity of titanium alloy Ti-6Al-4V*
P11	***Alexander Kustov*** *#0095* *Analysis Of The Evolution Of Mechanical Properties Metallic Materials By Amd-Methods For Thermomechanical Impacts*
P12	***Elena Bobruk*** *#00103* *Microstructure of aluminium Al-Zn and Al-Zn-Mg-Cu alloys after high pressure torsion*
P13	
P14	
P15	
	UFG materials
P16	***Petr Straumal*** *#00115* *Phase composition and properties of magnesium-ceramic composites after high pressure torsion*
P17	***Ayrat Nazarov*** *#0058* *Molecular dynamics simulation of nonequilibrium grain boundaries in ultrafine-grained nickel and their relaxation under the action of ultrasound*
P18	***Ekaterina Stepanova*** *#0039*

	Features of Creep of Titanium Alloy of Ti-Al-V-H System
P19	***Roza Chembarisova*** *#0045* *Analitical modelling of strength and electrical conductivity of nanostructured Cu-Cr alloys*
P20	***Maxim Ozerov*** *#00139* *The effect of spark plasma sintering temperature on the microstructure and mechanical properties of the Ti-15%Mo/TiB composite and mechanical behavior of the composite during high-temperature compression tests*
P21	***J. Ping Liu*** *#00189* *Fabrication of Nanocomposite Magnets via Severe Plastic Deformation*
P22	***Marina Odnobokova*** *#0017* *Advanced bimodal microstructure in a 316L austenitic stainless steel*
P23	***Ivan Zuiko*** *#00131* *Effect of ECAP prior to aging on microstructure, precipitation behaviour and mechanical properties of an Al-Cu-Mn-Mg alloy*
P24	***Daria Shangina*** *#0061* *Effect of temperature of high pressure torsion on structure, texture, microhardness and thermal stability of Mg-Zn-Ca alloy*
P25	***Natalia Martynenko*** *#0065* *Enhanced mechanical properties, corrosion resistance and fatigue strength of magnesium alloy WE43 after multiaxial deformation*
P26	***Evgeniy Boltynjuk*** *#00111* *Atomic structure evolution of Zr-based bulk metallic glass processed by severe plastic deformation*
P27	***Anna Morozova*** *#00130* *Effect of initial heat treatment on microstructure and properties of low-alloyed copper alloy subjected to ECAP-processing*
P28	***Margarita Klimova*** *#00135* *Effect of isothermal multiaxial forging on microstructure and mechanical properties of Ti/TiB metal-matrix composite*
P29	***Samat K. Mukanov*** *#00144* *Evaluation of wear resistance of copper at sliding under load against TiC based coatings*
P30	***Anastasia Dolzhenko*** *#00151* *Mechanical Properties and Microstructural Features of High-Strength Low-Carbon Steel Processed by Warm Tempforming*
P31	***Kristina Bartha*** *#00172* *Inhomogeneous precipitation of the α-phase in Ti15Mo alloy processed by ECAP*
P32	***Pavel Dolzhenko*** *#001* *Evolution of the Microstructure of High-Nitrogen Austenitic Stainless Steel during Hot-to-Warm Working*
P33	***Anna Churakova*** *#0055* *The study of the mechanisms of deformation of ultrafine-grained and nanocrystalline TiNi alloys at different test temperatures*
P34	***Elena Konovalova*** *#0014* *Investigation of grain boundary ensemble of the copper M1 subjected to equal-channel angular pressing after annealing*
P35	***Liliya Zaynullina*** *#0033* *Microstructure and strength properties of ultrafine-grained Cu-10% Zn alloy obtained by equal-channel angular pressing*
P36	***Elena Sarkeeva*** *#0072*

	Thermal stability of microstructure and properties of Cu-0.5Cr-0.2Zr alloy subject sever plastic deformation in combination with cold rolling
P37	***Marina Abramova*** *#0073* *Influence of the temperature of severe plastic deformation and annealing on the microstructure, mechanical properties and electrical conductivity of the Cu-Cr-Zr alloy*
P38	***Alexey Shutov*** *#0091* *Fully coupled two-phase composite model for microstructure evolution during non-proportional severe plastic deformation*
P39	***Vener Valitov*** *#00199* *Thermomechanical processing as an effective method of preparation of bulk and sheet semifinished products from nickel alloys with UFG and NC structures*
P40	***Ivan Shakirov*** *#0089* *Comparative study of the ultrafine-grained structure 316L, 321 stainless steels and Ti-6-4 alloy produced by selective laser melting*
P41	***Roman Valiev*** *#00152* *Enhancement of the strength and ductility of a Ti alloy processed by HPT*
P42	***Artur Ganeev*** *#00154* *Thermal stability of UFG martensitic steels produced by severe plastic deformation*
P43	***Ivan Smirnov*** *#00163* *Influence of pure copper and aluminum microstructure on thermoelastic and thermoelectric response under nanosecond laser impact*
P44	***Marina Karavaeva*** *#00170* *Influence of a multi-axial isothermal forging on the structure and properties bearing steel at elevated temperatures*
P45	***Vladimir Torganchuk*** *#00173* *Microstructure and mechanical properties of an ultrafine grained medium-Mn steel*
P46	***Dmitry Shaysultanov*** *#00132* *Formation of duplex UFG structure in the 3d transition metals high entropy alloy and its impact on mechanical properties*
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P50	
Design, testing and modeling	
P51	***Zhongqi Yu*** *#0036* *Study on hot tensile behaviors of aluminum alloy sheet AA2219*
P52	***Ahmed Omar Mosleh*** *#0098* *Arrhenius-type constitutive equation model of superplastic deformation behaviour of different titanium alloy*
P53	***Kostiantyn Kushnir*** *#00178* *On atomistic modelling of twin boundaries in magnesium*
P54	***Rinat Safiullin*** *#0092* *Hollow cellular structures from titanium sheet alloys for aerospace applications*
P55	

NOTES