

### 18 session, 2017

### Urban rivers rehabilitation as a part sustainable development





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## Winter University

18 session, 2017

Winter University was founded in 1999 by the administration of Irkutsk, with INRTU, and with the participation of institutes and public organizations. Principle MBZGU sessions based on the experience of the European University Summer Workshops Urbanism (city of Cergy-Pontoise, France), which was created own original approach and strategy of the summer sessions, proven over 30 years in various countries around the world, which is to create a competitive programs and implementing them in the work of project team comprising of young professionals with different training from different countries and cultures. This program is an original model of training young professionals of various specialties related to urban planning, and allows them to develop a higher level of conceptual thinking, communication, mastery of analytical and design approaches in an international multi-disciplinary partnership working with dynamically developing town planning system of the city of Siberia. For thirteen years in the design of innovative educational programs attended by more than 1,000 young spetsialists, assistants, experts, members of the International Jury, representatives of 42 universities, Germany, UK, Spain, Italy, France, Norway, Sweden, Bulgaria, Ukraine, China, Korea, Japan, Lebanon, India, Mexico, Brazil, Mongolia, Russia, Switzerland, Turkey, the U.S. and Georgia and a number of Russian cities: Moscow, Krasnoyarsk, Novosibirsk, St. Petersburg, Volgograd, Rostov-on-Don, Vladivostok, Yekaterinburg, Irkutsk.



#### Winter University

Winter University was founded in 1999 on the initiative of Irkutsk administration, jointly with National Research Irkutsk State Technical University and with the assistance of planning institutes and public-organizations. The principle of carrying out creative workshops of the WU of Urban- Planning is based on the experience of Summer Workshops of the European University of the Urban Planning (Cergy--Pontoise, France), where the originalprocedure and strategy of holding summer workshops was created. These workshops have been holding all over the world-formore than 30 years. Having no analogues in Russia, this program is an original model of training of young specialists of different professions related to the city and its districts development

#### **Goals and objectives**

-is to create competitive programs and implement them in the work of design groups, comprising young specialists with different vocational training, representatives of different countries and cultures that come to see each other for the first time;

- exchanging of vast experience in mastering analytic and designed approaches in the framework of international interdisciplinary partnership, in the work with dynamically developing urban planning systems of Siberian cities; to reach a new higher level of conceptual thinking in the qualitative sense, exceeding the bounds of traditional education; to preserve and to hand down the rich traditions of russian nation.

#### Auditory

• undergraduates / graduates / young specialists/ professionals in following fields of activity:

- architecture
- urban planning design;
- urban economics;
- transport engineering;
- ecology;
  - urban sociology
  - landscape design







### Relevance of a subject



Aleksandr Mikhaylov Pilot of the 18th session Professor of Urban Planning Department Professor of Transport Management and Logistics Department in INRTU

The Head of transport research laboratory Member of the Irkutsk branch of Russian Architects Union

One of the factors determining the uniqueness of Irkutsk is its river net, forming unique landscape diversity of the city territory (Angarsk Amphitheater, the Irkut and the Ushakovka rivers floodplains, as well as the Kaya river valley). The once minor rivers of Irkutsk were the favorite rest places for the citizens. Let's turn to sources (http:// irkipedia.ru)

«...The most visited places were: Verholenskaya Mountain, the Kashtak fold, the Ushakovka river with Kosoy Brod and other areas, the Island of Love on the Angara river opposite to the City Garden, lower and high banks of the Irkut river, and the Kaya river valley with Senyushino lake. «

Especially loved were the terrain along the Kaya river and Kosoy Brod area. Here's the evidence from the 32-d issue of the «Irkutsk Gubernskie Vedomosti» newspaper of 1869:

«Cutting the valley in various directions, the Kaya barely reaches 4-6 meters in its widest places, forming a narrow strip of water going far in the misty mountains. Shaded top soil of the valley looks like a plush carpet spread at the feet of distant mountains, bare shapes of which show up through clear purple air. Isolated forest pieces, scattered across the valley, complement this picture. Right here in these forests we find huge number of continuously boiling samovars, pitched up tents, carpets, and all kinds of urban people enjoying the Kaya nature».

But It's all in the past. During the process of development Irkutsk lost many

coastal landscapes and historically formed recreations: Komendantskiy Garden on the Ushakovka river bank and Senyushino Lake fell into oblivion, the Kaya valley was build up with industrial and storage facilities, and Sverdlovskiy district's folds degraded (garages, gas stations, engineering networks appeared; some streams are already enclosed in tubes), etc.

However, in modern culture of urban spaces development minor rivers play an important role and are used in various ways:

 axis of recreational areas: Luxembourg and Bournemouth (England);

 elements of protected historical landscape: Little Venice - Colmar (France); Fishing Village - Ulm;

• axis of mixed use of the territory - combination of recreations and public spaces: Reading and Salisbury (England).

Minor rivers and streams are the most vulnerable ecosystem elements in the process of urban territories development. Changes in the balance of surface and underground drains result in contamination of minor urban streams and reduction of their water content, and, as a consequence, degradation of surrounding territories landscape together with losing their recreational potential. For that reason, in the context of sustainable development and livable city development a new trend has appeared in the modern urban planning -revitalization of minor urban rivers and streams. A number of revitalization projects on minor urban rivers and adjacent territories can be implemented:

Revitalization program for the minor rivers of London

The Los Angeles river revitalization

• The master plan of the city of Perm

• Concept proposal for the minor rivers revitalization in the city of Nizhny Novgorod

The problems of minor urban rivers revitalization have become the subject of interest for international and academic organizations

• Urban Rivers - Vital Spaces (The European Union)

• River Restoration Workshop (the University of Gloucestershire, England www. glos.ac.uk).

All the above mentioned gives hopes that Irkutsk urban community will turn its attention to the problem of the minor city streams current conditions.

Possible alternatives for revitalization and development:

recreations

• mixed use - combination of recreations, public spaces and residential housing



**Tatiana Danilova** Assistant of the 18th session architecture student, INRTU

It's hard to overestimate the significance of the topic of revitalization of urban rivers. River is ecological, economical and recreational resource of the every city. Historically rivers appeared to be essential component of each well-developed city, connection between different settlements and consequently centers of social and cultural life. However, significance of the river in urban area dropped down due to the process of industrialization and river became just an instrument in manufacture processes. In some cases rivers even became an undesirable element of urban environment and were hidden in drainage pipes because of the danger of floods. This kind of treatment resulted situation when the city turned its back on river's riverfront areas. Firstly, it caused an ecological degradation of the rivers because of the number of industrial facilities. After that, due to the shut-down of many manufactures and postindustrial processes, riverfronts were neglected and cut off from other urban areas of the city.

Today many cities reconsider the place of the river as the most important resourse of the city. Municipalities create new complex programms of rivers revitalization and new algorithms of riverfront development. It includes a big set of event including events concerning environmental balance of riverfront areas and flood-protection activities, landscaping and creating scenarios of using of the area. Despite of big number of methods and ways of rivers revitalization, there is no common design approach to this process. The reason is that every project shows unique relations between city and river and its historical, cultural, social and infrastructural connections.

Unfortunately, Russia is far from understanding of importance of this topic for complex development of urban areas. At the same time, international experience shows that revitalization of riverfront areas shows significant economical effect: for example, it increases cost of adjoining residential areas and rent of commercial areas. It also has social and cultural effect: it attracts citizens and consequently has commercial value.

That is why applicability of the 18 WU session seems to me principally in drawing an attention of the society and munitipalities to the topic of rivers revitalization and creating algorithms, which will allow to integrate riverfronts development processes with social and economical and other processes of the city.

### Relevance of a subject



Daria Chervinskaya Assistant of the 18th session architect

Nowadays, in our cities we are losing natural urban resource - small rivers. Small water is one of the basics of the city strength. Preservation and enhancement of the natural components of the urban landscape and ensuring a high level of recreational services determines the quality of life of people. However, an increasing intensive anthropogenic impact on the coastal areas is observed and characterized by a high degree of landscapes degradation. In addition, due to the proportionally intense urban growth the last decades there is a tendency of increasing expansion of the city on the riverfront landscapes, accompanied by the irrational use of the coastal zone, the green spaces degradation and strong reduction of areas suitable for recreational use.

An important problem is the degradation of the landscape surrounding the city small water flows, pollution and water quality deterioration of small rivers and streams. But the areas adjacent to the small rivers and flows should not be underestimated since their location and watercourse shape can be forming element of the city building structure. In addition to the historical and cultural potential of coastal areas, the importance of this resorce is defyined by: aesthetic purpose of the river, which has been and remains one of the main factors for the formation of systems of visual city dominants; the formation of an ensemble building and perception of the architecture of this building as the silhouette of the city; and panoramic views opening up from the banks of the rivers.

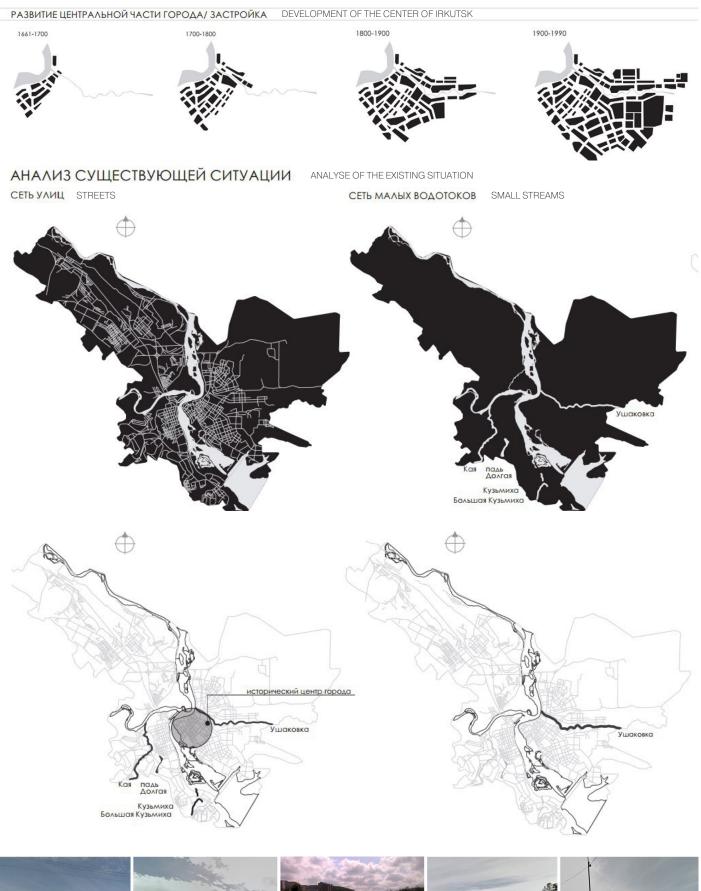
As the challenge of the city quay is complicated and multifaceted, the complex solution of all issues related to its restoration or creation and operation is particularly important. One of the main problems is the accessibility to the coastal areas and embankments. Currently, the quality of the functional organization and use of the big cities riverfront areas do not fully meet modern essential requirements which are ecological security, comfort and aesthetic appeal in response to the contact of urbanized environment and the natural landscape.

The territory of the city of Irkutsk is accounted for a large number of small urban rivers: Kaya, Ushakovka, Creek Valley Dolgaya, Kuzmiha and Bolshaya Kuzmiha. Adjacent territories of the small streams and quays are under destruction turning into garbage dumps and abandoned areas. For unknown reasons a part of the river body of some rivers is placed in the concrete pipes passing underground. Unfortunately, the development of modern society in the world does not exclude the risk of adverse effects on the environment, including the aquatic environment.

Moreover, while working on this topic and analyzing the Russian and foreign examples, it is observed that in European cities have more positive examples of the use and improvement of riverfront areas than in Russia. Germany, France, Britain may be the example of countries using small rivers areas. A lot of programs for restoring the small rivers areas are realized in Central Europe, some of these projects are «REURIS» and River Restoration Centre (RRC), which are aimed at the dissemination and promotion of successful management of river basin throughout the UK (including the river bed, its floodplain and riparian area). The goal of the project is to create a coordination center for the exchange with river restoration experience.

Natural frame and its development is one of the most relevant policies of «sustainable development of urban environment»; also it is the possibility to develop the coastal area with the preservation of the ecological balance of the river; identifying the principles and methods of development of the coastal areas in big and large cities; the development of the program to determine the parameters and criteria for the riverine areas of big cities for different possible scenarios in the city landscape.

International examples show the professional use of the riverfront areas of the city revealing hidden resources that enhance its recreational opportunities, increase the emotional and aesthetic effect of the existing environment, develop the tourism industry, generate investment and stimulate the city as a whole.





Ушаковка

### Relevance of a subject

The law on comprehensive development of industrial zones

The State Duma of the Russian Federation adopted the law on comprehensive development of industrial zones in the third and final reading.

"The law primarily gives clear definition of the industrial zone and sets conditions under which it can be decided to start comprehensive development of such territories,» reads the statement of the Ministry of Construction, Housing and Utilities of the Russian Federation, as "RIA Real Estate" information agency reports.

The law prescribes the mechanisms for involving the owners of land and real estate located within the boundaries of the industrial zone into the process of comprehensive development.

Nikita Stasishin, the Director of Housing Policy Department, Ministry of Construction and Housing Utilities of the Russian Federation, said earlier that housing developers, in particular, can include the spending on social infrastructure, created within the framework of industrial zones development, into the prime cost.

The law will enter into force in the beginning of 2017. Before this, municipalities should modify land use and development rules to conform with the law.

This allows to use up to 20-25% of the territories of the cities for the economy - i.e. to develop new housing, social facilities, and transport infrastructure on them.

It is to be reminded that today industrial zones are the largest growth points within «old» Moscow. They possess huge urban planning potential due to location and size of the territories. Industrial zones occupy 18.8 thousand hectares, more than 4.3 thousand of which may be reorganized.

Work on revitalization of the abandoned industrial areas is being actively persued in the capital of Russia, as Marat Husnullin, the Deputy Mayor of Moscow for Urban Development and Construction, stated earlier. Already more than 20 construction sites are being developed. The most important industrial zones are «ZIL», «Serp i Molot» (Sickle and Hammer), «Lenino", "Perovo", "Verhniye Kotly", and the territory of the former Tushinskiy airfield.

Some industrial zones will be totally reorganized, the others will keep production preserved. It opens the opportunity to provide citizens with additional living space, social and culture facilities, roads, and parking lots.

Moreover, it allows to address the problem of busy roads as people won't have to commute to the other end of the city. Many people will get jobs close to their homes.

The source: http://stroi.mos.ru/news/ gosduma-priniala-word-o-komplieksnomrazvitii-promzon

# Examples of international experience of riverfront development

#### Los-Angeles river, Los-Angeles, USA

#### Goal:

Transformation of canal for flood control into ecological and recreational recourse of regional significance

#### Objectives

1. Increasing the value of the river

2. Transformation of the roads and arterial streets into pedestrian areas

3. Development and landscaping of the adjoining residential areas and creation of a «green spine» of the area

4. Creation of control system of the river 5. Organization of the central recreational space

#### Original conditions

LA river is interstate river, which inside the city looks like concrete canal for flood control with abandoned areas around it. Consequences of these engineering solutions are hard river pollution and ecological disorder

#### **Design approach**

- Urban river enhances the commercial value of the adjoining riverfront ares

- River is a valuable element of natural landscape of the city

#### Design methods and tools

1. Creation of the pocket parks and platforms to provide access to the river

2. Designing green areas on unoccupied spaces including industrial areas with a luck of landscaping.

3. Creation of the river identity by designing pedestrian bridges and entrances

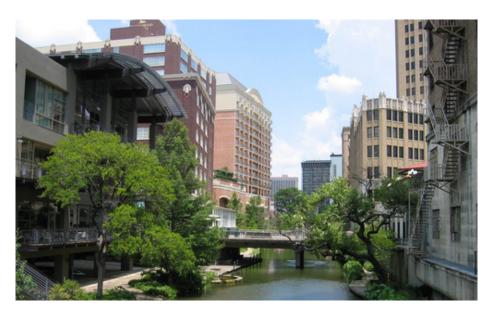
4. Providing regulations concerning urban design, mobility and drainage for owners of the land close to the river

















#### San-Antonio river, San-Antonio, USA

#### Goal

Enhancing a river attractiveness

#### Objectives

1. Creation of a pedestrian infrastructure

2. Flood-protection works

3. Recreation of connections between river and historical center of the city

4. River ecosystem remediation

5. Design of a public and recreational spaces

#### **Original conditions**

The project of riverfont development was firstly designed for banks stabilization. It included preserving and enhancing the natural beauty of the downtown river and river loop area and required support of both public and private interests.

#### Design approach

- River can enhance attractiveness of the city

- River is a valuable element of urban ecosystem

#### Design methods and tools

1. Organization of extensive pedestrian promenade – San-Antonio river walk

2. Organization of cooperation between different facilities located along riverfront

3. Landscaping by using different kinds of local plants to create biological diversity and organize natural drainage

4. Organization of river transport and water platforms

#### Manzanares river, Madrid, Spain

#### Goal

Revitalization of neglected areas **Objectives** 

Recreation of an urban space continuity
Organization of significant for city public

space.

3. Organization of a system of pedestrian routs.

4. Recreation of connections between river and historical center of the city

#### **Original conditions**

Manzanares river for a long time was hidden into canal for flood control and ecology of riverfront areas degraded because of the overloaded arterial road crossing both shores of the area. Besides that, the arterial road disturbed the continuity of the urban space. Consequently, the riverfront area became neglected and abandoned for decades.

#### **Design approach**

River is a central element of public and recreational space of the city

#### Design methods and tools

1. Wide range of different elements of urban environment, including children playgrounds, parks, sport areas, bicycle roads.

2. Diversification of the area into 3 blocks with different functions and elements

3. Refreshment of facades of the buildings along the riverfront and renovation of historical buildings

4. Functional transformation of adjoining areas

5. Connection of the area with the city by organizing public transport and stops.

6. Adaptation of existing bridges for pedestrian movement

7. Universally applicable design of the park for all groups of the people, including people with reduced mobility

















#### Lahn river, Germany

Goal

Revitalization of neglected areas

Objectives

1. Designing regulations for preservation of riverfront areas

2. Organization of connections between different parts of the city

Original conditions

The Lahn river is the eastern tributary of the Rhine river. Riverfront areas were divided from the city and neglected for many decades because of construction of railroad.

#### Design approach

1. River is connecting element of the city 2. River is important element of urban ecosystem

River is public space

Design methods and tools

1. Adaptation of private property for public use

2. Preservation and recreation of meadows and grasslands alongside the riverfront

3. Diversification of area into 6 segments

4. Organization of connection between river and historical part of the city by designing pedestrian and bicycle bridges, walkways and integration of the buildings

5. Organization of the park entrance with boulevards and playgrounds and creation of identity of place by designing a pedestrian bridge

6. Organization of levels of terraces to underline the terrain of the river

# Aims and goals

18 session, 2017

1. To design a conception of development of urban recreational, public and residential spaces on the riverfront areas

2. To suggest new urban scenarios of recreational, public and residential spaces for riverfront development

3. To develop the program of implementation of the new urban scenarios in the existing cityplanning conditions of coastal areas

 To find instruments to improve the quality of life and attraction of the city by developing the riverfront area

#### **Objectives. Steps of work**

#### 1 step - Concept

Collation and synthesis of the raw materials provided by the organizers, including legal and regulatory framework of development of built up areas in Irkutsk.

Identify the circumstances preventing reconstruction of quarters of the city of Irkutsk, dilapidated multifamily residential buildings and development of solutions which eliminate the negative part of this process. Development of basic principles (ideology) for the development of built up areas of the city of Irkutsk. Develop general principles of the reconstruction process, as well as suggestions on the typology and image of the building.

Identification of spatial, cultural, socioeconomic, infrastructure, transport and other features assigned to the team, which would be considered within the framework of the project session.

Requirement for presentation:

- Hand drawing, teamwork

 Analysis of the project site with the use of raw data and taking into account the background information (lectures, excursions) in reference to the scale of the city.

- 2 sheets of A4 print with an open concept of the project in 2 languages.

#### 2 step - Strategy

Integrating concepts: the possible and promising development options for the built up areas of the city, containing strategic and tactical decisions that are applicable for the built up area and should combine both planning and regulatory management tools.

Strategic vision for the reconstruction of blocks (dilapidated multifamily residential buildings), should cover a period of 10-25 years. Tactical decision should be identified for implementing the strategic vision in short settlement period of 1-3 years. Preparation of preliminary design for the prescribed area, demonstrating the applicability of the concept in the current urban and social conditions and also taking into account the individual characteristics of the site.

Requirement for presentation:

- PowerPoint Presentation of 15-20 slides, using the established mediums (Sketches, diagrams, hand drawing)

-Teamwork

-Conceptual design, containing an implementation plan with reconstruction blocks and the technical and economic indicators for the development of built up area

#### 3 step - Project

Finalizing the concepts, strategies and possible options for the development of promising built up areas of the city.

Finalization of the conceptual design with detail, including refinement stages of reconstruction areas and also identifying the technical and economic indicators.

Requirement for presentation:

- PowerPoint presentation of 25-30 slides -Teamwork

- Final draft containing an analysis of the situation, the concept of project implementation strategy.

- Proposals for high dense residential typologies, alternative ways of infrastructure development blocks (social, infrastructure and transport), new schemes for local authorities and investors which will be used by administration of Irkutsk, Irkutsk Oblast government and developers in Irkutsk.

- 8 pieces of A4 paper in electronic form, illustrating the project in 2 languages.

# Program Session 2017

International Baikal University of Urban Planning Design

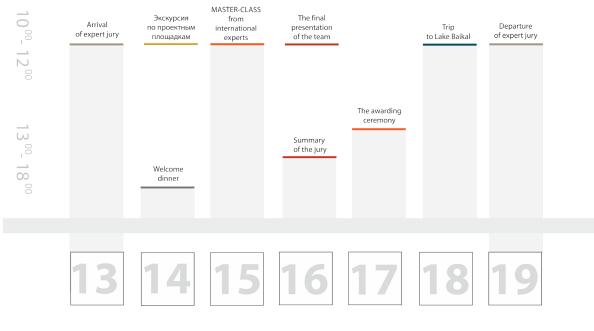
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
23 Arrival of assistants	24 Preparation for the session	25 Preparation for the session	26 Preparation for the session	27 Arrival/registration of participants	28 Introductory Iecture Areas'Tour	29 Presentation of participant's home projects Formation of the teams
30 Introductory lecture Work in teams ISTU/ Conference room	31 Official opening of the 18th session Work in teams ISTU/ Conference room	1 Work in teams	2 Work in teams	3 Work in teams	4 The first presentation of the projects ISTU/ Technopark	5 Trip to Lake Baikal
ISTU/ Technopark	ISTU/ Technopark			ISTU/Technopark		12
6 Work in teams	/ Work in teams	8 Work in teams	9 The second presentation of the projects	10 Work in teams	 Work in teams	12 Work in teams
ISTU/Technopark	ISTU/ Technopark	ISTU/ Technopark	Технопарк ИРНИТУ	ISTU/ Technopark	ISTU/ Technopark	ISTU/ Technopark
13 Work in teams	14 Rehearsal of final presentation Collecting a total material	15 Work in teams	16 The final presentation of the projects Summary of the jury	17 The reduced final presentation of the projects in administration The awarding	18 Trip to Lake Baikal	19 Departure of participants
ISTU/ Technopark	ISTU/ Technopark	ISTU/ Technopark	ISTU/ Conference room	ceremony/Restaurant		

Program of the session for assistants and participants (January, 23 - February, 19)

. .. Program of the session for experts and jury(13 - 19 of February)

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# Condition of participation

18 session, 2017

#### PARTICIPANTS

- invites young professionals, students, undergraduates

- must complete and submit an application till 23.09.16, the nominees will be considered by the Academic Council of the Winter University and the Organizing Committee of the Les Ateliers 30.09.16

- participation fee is 350 euros (we provide a contribution

-accommodation, meals

- breakfast and lunch, common events - parties, banquets, a trip to Lake Baikal, as at the end of workshop, we provide a degree of professional development)

- during the workshop, you can listen to a series of lectures by international experts, get invaluable experience in the design team with experts in different fields

- for participation will be selected 30 people, 20 participants from Europe, America, Asia, Africa and 10 Russian regions workshop lasts 3 weeks from 27 of January to 19 of February, every week is a stage

- concept, design, image and representation of the program implementation, each accompanied by a presentation to a panel of judges who will select the winners for the total

#### **ASSISTANTS**

- invites young professionals, students, undergraduates

- must complete and submit an application till 15.09.16, the nominees will be considered by the Academic Council of the Winter University and the Organizing Committee of the Les Ateliers 22.09.16, priority is given to those who already have experience in international workshops

- the duties of assistants included - training workshop during November, December, January remotely, then from January 28 you will support teams during the workshop and to help organize events during the session

- we provide you with a transfer of up to 25,000 rubles, accommodation, meals

-breakfast and lunch, common events

-parties, banquets, a trip to Lake Baikal, as at the end of workshop, we provide a degree of professional development

- during the workshop, you can listen to a series of lectures by international experts, get invaluable experience in the design team with experts in different fields

- for participation will be selected 5 people, Workshop lasts 3 weeks from 27 January to 19 February

#### **EXPERTS JURY**

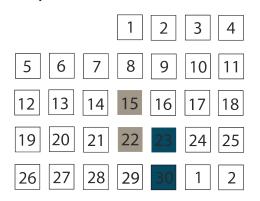
- invited practicing architects, urban planners, developers, proffessory with experience in the design and implementation of social and recreational spaces in the city

- we invite you, if you are presenting to our workshop 2 of your students or young professionals from your company

- we take on your travel expenses and hotel accommodation from 13 to 19 February

- representatives of the expert jury prepares a report on the session, which they will present at the symposium in the workshop, as well as a presentation of the projects, which will be present for the students of Engineering Institute ISTU

### DEADLINE September



#### **ASSISTANTS**

Registration deadline 15 sept Announcement of results 22 sept

PARTICIPANTS

**Registration deadline** Announcement of results

23 sept 30 sept

#### Pilot of the 18th session



Aleksandr Mikhaylov Professor of Urban Planning Department Professor of Transport Management and Logistics Department in INRTU

#### Organize comittee



Aleksandra Kostrubova Curator of the 18th session ph number: 89041292564 email: info@winteruni.com



**Tatiana Kopylova** Assistant of the international jury

#### Directorate



Mark Meerovich Honoured Architect of Russia Scientific adviser of «Urban Planning School», INRTU





#### Assistants of the 18th session



Tatiana Danilova architecture student, INRTU



Daria Chervinskaya Architect



Valeria Nuianzina Curator of the 18th session ph number: 89500711789 email: info@winteruni.com



Julia Nikiforova Graphic editor



Roman Malinovich Project manager



Evgenia Yamova Deputy director



Alice Kozak Director



+7 (3952) 40- 54- 11 info@winteruni.com www.winteruni.com



организаторь





### winteruni.com

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