



KAZAN
IC YOUTH
CAPITAL 2022

ISBN 978-5-6048212-8-2



9 785604 821282



KAZAN
IC YOUTH
CAPITAL 2022

OIC Youth Scientific Congress

Kazan, Republic of Tatarstan
(Russian Federation)



OIC YOUTH SCIENTIFIC CONGRESS

20-23 November 2022

OIC Youth Scientific Congress is a part of Kazan OIC Youth Capital 2022 international Programme. The Congress is organized by the Ministry of Youth Affairs of the Republic of Tatarstan (Russian Federation) and the Islamic Cooperation Youth Forum (ICYF) is organizing the OIC Youth Scientific Congress in partnership with Kazan Federal University, the Academy of Youth Diplomacy, Academy of Creative Youth of the Republic of Tatarstan and Tatarstan Republican Youth Public Foundation "SELET".

The Congress aims to create an international cooperation platform for the formation of prerequisites for the sustainable development of international cooperation in the scientific field with the OIC region.

The program intends to achieve the following objectives:

- Establishment of a unified scientific platform for interaction of young scientists of the OIC the Member States within the framework of international scientific cooperation;
- Developing deeper scientific awareness and understanding of Sustainable Development Goals, especially those related to the role of youth in science, technology and innovation like SDG 4 Quality Education and SDG 17 Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.

Participants: 100 delegates from 56 OIC member states and observer states – young scientists, researchers, and innovators of the Russian Federation and OIC countries aged 18-35 .

The Congress focuses on the following subtopics:

1. Urban Studies

By 2030, there will be 41 metropolises with 720 million people in the world. And by 2025, 600 cities will provide more than 60% of global GDP growth. If large cities are becoming increasingly attractive to our planet's inhabitants, questions are being raised about the comfort and convenience of urban spaces, their sustainability, carbon footprint reduction, and social inclusiveness. The section will discuss the results of interdisciplinary research on urban spaces emerging and developing in different parts of our planet. Experts in the fields of architecture, sociology, economics, ecology, and others interested in the development of contemporary urban spaces are invited.

2. Modern Technologies in Education

The section will cover a wide range of issues related to the educational process at school and the training of future teachers and psychologists. In particular, it will address the digitalization of the educational process, migration pedagogy, conflict mediation, and gadget addiction of students. Research results in the field of tutoring will be presented, as well as technologies for developing functional literacy and critical thinking among students, motivation, and digital and research competencies of education personnel.

3. Petroleum Engineering Technologies

In the context of the global energy crisis and regional and national energy sustainability issues, it is becoming more important to develop deposits of hydrocarbons with hard-to-recover reserves. High-viscosity hydrocarbons, shale oil and gas fields, low-porosity

Chapter 4. URBAN STUDIES	210
4.1 The creation of ecological advertising in urban areas	210
4.2 The new form of urbanization for achieving the sustainable development goals	212
4.3 Sustainable Integrated Multi-Trophic Aquaculture (SIMA) as a Solution for Mitigation and Adaptation to the Impact of Climate Change in Coastal Areas.....	215
4.4 Collaborative Governance for a Green City: the Analysis of a Public Green Open Space in Yogyakarta (the Robin Garden case-study).....	219
4.5 Manscapes (Manage Our Landscapes): Climate Smart Landscapes Development Strategy Based on Big Data, Cloud Computing, and Artificial Intelligence Technology for Sustainable Development.....	223
4.6 Formation of modern public spaces. The concept of landscaping the territory of the quarter in the city of Yelabuga, Russia.....	226
4.7 Change for Change.....	230
4.8 Development of the concept of the first food mall in Kazan	232
4.9 PSYCHOGEOGRAPHY AND ITS SIGNIFICANCE FOR URBANIZATION IN PRESENT AND FUTURE.....	235
4.10 Impact of urbanization on the biosphere.....	237
4.11 The impact of urbanization on the hotel development.....	240
4.12 AA PROTOPIAN URBAN FUTURE: A COMPREHENSIVE INSIGHT ON THE FUTURE OF URBANISM	

BY THE YEAR OF 2050.....	243
4.13 Smart Urban Waste Management: Are There still an Opportunity or Challenges? (A Case Study of Semarang, Indonesia)	245
4.14 Modern trends in architectural renovation of industrial enterprises and industrial complexes.....	247
4.15 Smart green evenhanded city actions in terms of land use and urban planning in Kazakhstan, Kyrgyzstan and Tajikistan.....	249
4.16 Utopian Contribution of the Extraterrestrial Architecture to the Dystopian World.....	252
4.17 Smart Vertical Axis Wind Turbines for Urban Areas and Highways.....	255
4.18 PERSPECTIVES OF FRACTAL URBAN PLANNING	258
4.19 Integrating Wetlands into Urban Planning - Case of Oued Maleh, Tangier	261
4.20 DIGITAL TECHNOLOGIES FOR TOURIST FLOW MANAGEMENT IN THE CITY	263
4.21 "Smart suburbanization" as a strategic goal of the largest urban agglomerations development: a psychological aspect	266
4.22 The role of walkability in creating sustainable cities and communities. Case of the city of Bejaia in Algeria	268

scale, mesoscale, and macro-scale.

Literature References

Cengiz C., Cengiz B., Boz A.Ö. (2021) Climate-Smart Landscapes for Sustainable Cities. In: Ben Ahmed M., Rakıp Kardeş İ., Santos D., Sergeyeva O., Boudhir A.A. (eds) Innovation in Smart Cities Applications. Vol. 4. SCA 2020.

Lecture Notes in Networks and Systems. Vol. 183. Springer, Cham.

United Nations. (2022) Generating Power // Climate Action Article.

World Wide Fund for Nature. (2016) Guidance Brief Landscape Elements Steps to Achieving Integrated Landscape Managem

4.6 Formation of modern public spaces. The concept of landscaping the territory of the quarter in the city of Yelabuga, Russia

K.M. Badrutdinova, A.M. Khisamova,

Yu.P. Balabanova, M.I. Lushpaeva

Kazan Federal University, Institute of Design and Spatial Arts

e-mail: alinkahis0909@gmail.com

Yelabuga is a historical settlement of federal significance, included in the List of historical settlements of federal significance, which has not lost the integrity of the historical town-planning formation. It has retained to a high degree of

the historical planning structure and public spaces, supported by historical buildings in connection with the natural relief and landscape. According to Russian experts, Yelabuga is one of the 20 most preserved historical cities in Russia.

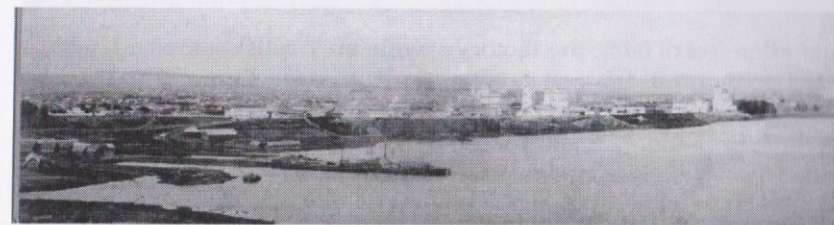


Figure 1. Historical panorama of the city of Yelabuga.

Yelabuga, a centuries-old settlement, received the status of a city in 1780 following the Decree of Catherine II of August 13, 1784, when it received a development plan.

The development of crafts and trade turned Yelabuga into the center of the merchants of the Kama region. The heyday of the city was in the 19th century; about 10 thousand people lived there, including 12 millionaires. The most famous are the Stakheev merchants, who traded bread in many regions of Russia, as well as abroad. They had gold mines in Western Siberia, oil fields, their own shipping companies, plants and factories. Another famous family were the industrialists Ushkovs, who founded chemical production in the vicinity of Yelabuga. Other famous merchants of the Yelabuga district were the Emelyanovs, the Shabalins, the Loshchilovs, the Vavilovs, the Zaitovs [Agzamova, 2012].

Yelabuga has a distinct historical identity and cultural potential for development. At the moment, the Institute of Design and Spatial Arts is developing the concept for the sustainable development of the historical settlement of the city of Yelabuga. As part of the concept for the sustainable development, the concept for the improvement of the territory of the quarter of the former weaving factory was completed. The quarter is adjacent to one of the central streets, Kazanskaya street. According to the plan of 1796, the area adjacent to Kazanskaya Street was named Sennaya. In the 19th century, a complex of trading buildings was located there in the place where people traded fish. Since 1935 it was named the Freedom Square. During the Great Patriotic War in 1941, a spinning and weaving factory was evacuated there from the city of Vyshny Volchok. Despite the evacuation, the factory was able to produce its first products only two

years after. Years later, the factory turned into a full-fledged cotton mill. In 2000, the plant closed and was an abandoned site for 22 years. Now, there is a small square

with an obelisk crowned with a bust of V.I. Lenin (by sculptor S.D. Merkurov), installed in 1928 [Khairutdinov R.R., Khuzin F.Sh., 2000].



Figure 2. Historical reference of the territory of the projected quarter

The concept of landscaping the territory of the quarter of the former weaving factory in the city of Yelabuga is developed on the historical image of the territory. The goal is to develop the landscaping of the territory of the quarter of the former weaving factory located in Kazanskaya Street, which used to be the main shopping street of Yelabuga. Not only residential houses of wealthy

merchants but also shopping arcades, shops, warehouses and cellars were located there. Such a convenient location and the history of the Yelabuga merchants gave us the idea to connect the concept of improvement with the most recognizable symbol of trade, which is a coin. The image of the coin is projected on small architectural forms and the pattern of footpaths.



Figure 3. Formation of small architectural forms



Figure 4. The concept of landscaping the territory of the quarter of the former weaving factory in the city of Yelabuga

The main center of attraction for people in the projected quarter will be a shopping center, a hotel and cafes. In addition, since a music school is located next to the projected area, children who study there, as well as students of the gymnasium and students of the university, located further down Kazanskaya Street, will

walk by. For these people, the Skypark and the children's playground were designed.

The project considered the features of the public space formation in the urban environment and determined their main characteristics.

References:

- [1] Agzamova K. (2012). Ria News: The city according to the drawing of Catherine II: the history of Kazanskaya street in Yelabuga. <https://ria.ru/20120314/594141635.html>
- [2] Khairutdinov R.R., Khuzin F.Sh (2000) Ancient Alabuga: Collection. Publishing house "Master-Line".

4.7 Change for Change

Fasih Uddin

University of Central Asia, Tajikistan

e-mail: Fasihuddin51d@gmail.com

The rising city population is a cause for concern. Everyone is doing their best to get to a big city, where they can find a better job, get a higher education, and live in more comfortable conditions. This shift from the countryside to the cities is putting a strain on metropolitan areas and threatening the rich traditions of the countryside. The statistical evidence reveals that household economics have a significant effect in the decision to relocate from a countryside to a city. Our group has developed the "Change for Change" initiative as a response to this seismic shift in human social organization.

As the first step, through this

project we will construct "Digital centers" in rural areas. This is due to the fact, as we all know, that the digital age has made it possible to learn anything from anywhere. These hubs will be opened in various rural locations, providing education to the locals on how to make the most of the resources at their disposal. This project would be governed by me, as the founder and leader of Sharar team (an organization aimed at improving education in Pakistan). Zconnect, a tech company that teaches people valuable online skills and provides them with opportunities to earn money, will be our partner. Zconnect and Sharar team make an excellent team to implement

the Change for Change project, because both companies have already launched many projects of this kind. It is possible to explore the work of both companies by checking the available information in social media and websites; the links are given below in the references section. The digital centers will be set up by Sharar teams; the students will learn employable skills through Zconnect. They will be able to use their newfound expertise to make money staying in their own homes, through sites like Fiverr, Upwork, YouTube, Amazon, and others. First, we have an intention to launch two skill centers in Upper Chitral and Lower Chitral, where there has been a dramatic increase in migration to urban centers. The members of our team reside in these areas, so they will keep a close eye on the project development. This means that many people in rural areas won't need to relocate to the city in search for work because they can find opportunities close to their home thanks to these centers.

The second component of this initiative will be applied in urban centers aiming to decrease the climate change caused by population. We'll engage educational institutions and the youth in solving urban cities'

climate change challenges. We'll tour schools and universities to inspire students to help the society. We intend to hold a climate change competition among schools, which is the Change for Climate Change (CCC) competition. Our team and Zconnect will fund the winning institution or college for further initiatives. Different schools will be able to come up with different solutions. For example, one school will plant 2,000 trees, while another one will use reusable dust bins, and a third one will go for reusable bags supplied to grocery stores. The most original and effective solutions will be awarded. After two months, we'll visit each school and college to announce the winner. Thus, educational ideas will affect society. We'll also bring in renowned speakers to talk to students about the climate change in urban cities and the ways to tackle it as educated people. We'll announce the findings at a large meeting with school and college leaders. We'll invite government and NGO partners. This event will occur annually, aiming to remove carbon footprints and unfavorable climatic changes caused by urban overpopulation.

When the project is implemented, the team will monitor the rate of migration from rural area to urban areas and see the

The city of Bejaia in Algeria, like other cities in North Africa, does not escape the problems of urban management which generally translates into longer journeys leading to an increase in the use of motorised means of transport. This city experienced an extension in the colonial period due to the plan of Constantine and continued to expand after independence on the part of the plain. The evolution of the old city towards the plain was made on two axes, and the result of this evolution gave birth to several urban entities forming a geometric center and a hypercentre made up of a set of districts within which State buildings with private buildings thus constituting a hybrid urban fabric [Mansouri, Y., Occhiuto, R., & Hanocq, P., 2021].

Can we qualify the hypercentral area of the city of Bejaia as being walkable? and to what extent could we gauge the quality of walkability in this area so that we can improve it eventually?

The complexity of the concept of walkability prompted us to use a variety of analytical tools, ranging from direct observation made several times and at different times and places,

to cartographic and statistical analysis, as well as the use of the spatial syntax method developed by the UCL research center in London. This analysis also gives voice to the inhabitants and users of the place, through a questionnaire survey and the realization of guided tours. All of its methods are supported by the implementation and application of a walkability audit based on the indicator scoring system.

The results of this work show that if there are many studies relating to the evaluation of walkability around the world, little research has focused on Maghreb cities, especially on the city of Bejaia (Algeria). Our research question therefore makes it possible to provide empirical experience on the question of walking in Maghreb cities and indirectly opens the debate around the vivification of the city on new avenues of solutions, and lays the foundations of the argument in favor of the theory that the concept of walkability can be applied for the proper planning of our cities.

Bibliography:

Ann Forsyth, (2020). "What is a Healthy Place? Cities,

Neighborhoods, and Homes". Spring 2020 Open House Lecture. Harvard University Graduate School of Design.

Aslam, S. A. B., E. Masoumi, H., Asim, M., & Anwer, I. (2018). Cyclability in Lahore, Pakistan: Looking into Potential for Greener Urban Traveling. *TeMA - Journal of Land Use, Mobility and Environment*, 11(3), 323-343. <https://doi.org/10.6092/1970-9870/5806>

Abley, S. and Turner, S. (2011) Predicting Walkability: Technical Report, New Zealand Transport Agency.

Bourdin Alain, (2007) « Des ambiances à l'offre urbaine », *Espaces et sociétés*, 2007/3 (n° 130), p. 169-174. DOI : 10.3917/esp.130.0169. URL : <https://www.cairn.info/revue-espaces-etsocietes-3-page-169.htm>

Bradshaw, Chris. (1993). "Creating -- And Using -- A Rating System For Neighborhood Walkability Towards An Agenda For 'Local Heroes'." In 14th International Pedestrian Conference, Boulder CO.

CHIBANE Sami Ramzi, GWIAZDZINSKI Luc, (2015)

« La marche enjeu de santé publique et de qualité de vie. Importance d'une analyse spatialisée de la "marchabilité". Le cas de l'agglomération grenobloise », *Géocarrefour*, n° 3, 90, p. 203-216.

Commission Européenne. (2004). Reclaiming city streets for people Chaos or quality of life ?

Caniggia, G., Maffei, G.L. (2001) Architectural composition and building typology. Interpreting basic building (Alinea, Firenze)

Conzen, M.R.G. (2004). Thinking about urban form. *Papers on urban morphology 1932-1998*. (Peter Lang, Germany).

Cambra, P. (2012) Pedestrian Accessibility and Attractiveness Indicators for Walkability Assessment, Instituto Superior Tecnico.

DESVIGNE, Michel (2009). *Natures intermédiaires. Les paysages de Michel Desvigne*. Basel/ Berlin/Boston, Birkhäuser.