







Геоинформатика сохасида докторантура Doctoral Studies in Geoinformation Sciences



**International Scientific and Practical Conference** 

## SCIENTIFIC-RESEARCH WORK IN THE FIELD OF GEOINFORMATICS: CURRENT STATE AND PROSPECTS

October 19-20, 2018 Tashkent, Uzbekistan

Халқаро илмий-амалий конференция

## ГЕОИНФОРМАТИКА СОХАСИДА ИЛМИЙ ТАДКИКОТ ИШЛАРИ: ХОЗИРГИ ХОЛАТИ ВА ИСТИКБОЛЛАРИ

19-20 октябрь, 2018 Тошкент, Ўзбекистон

Международная научно-практическая конференция

НАУЧНО-ИССЛЕДОВАТЕЛЬСКИЕ РАБОТЫ В ОБЛАСТИ ГЕОИНФОРМАТИКИ: СОВРЕМЕННОЕ СОСТОЯНИЕ И ПЕРСПЕКТИВЫ

> 19-20 октябрь, 2018 Ташкент, Узбекистан







## MINISTRY OF HIGHER AND SECONDARY SPECIALIZED EDUCATION OF THE REPUBLIC OF UZBEKISTAN

## NATIONAL UNIVERSITY OF UZBEKISTAN NAMED AFTER MIRZO ULUGBEK

#### INVITATION AND PROGRAMME

of the International Scientific and Practical Conference
«SCIENTIFIC - RESEARCH WORK IN THE FIELD OF
GEOINFORMATICS: CURRENT STATE AND PROSPECTS»

| Dear | ·          |           |         |     |    |      |      |    |    |
|------|------------|-----------|---------|-----|----|------|------|----|----|
| The  | Organizing | Committee | invites | you | to | take | part | in | th |

The Organizing Committee invites you to take part in the conference «Scientific - research work in the field of Geoinformatics: current state and prospects»

Conference will be held from October 19-20, 2018 in the National University of Uzbekistan.

Registration for the conference will be held on  $19^{th}$  of October from  $9^{00}$  to  $10^{00}$  in the small conference hall of center of Youth Union.

October 19 – 20, 2018 TASHKENT, UZBEKISTAN

## TIME TABLE OF THE CONFERENCE

## Friday October 19, 2018

| $9^{00}$ - $10^{00}$  | Registration of participants of the conference      |                 |  |  |  |  |
|-----------------------|---|-----------------|--|--|--|--|
| $10^{00}$ - $11^{30}$ | Opening of the conference and first plenary session |                 |  |  |  |  |
| $11^{30}$ - $11^{45}$ | Coffee break  |                 |  |  |  |  |
| $11^{45}$ - $12^{45}$ | Second plenary session                              |                 |  |  |  |  |
| $13^{00}$ - $14^{45}$ | Lunch   |                 |  |  |  |  |
| $15^{00}$ - $16^{00}$ | Third plenary session                               | Special session |  |  |  |  |
| $16^{00}$ - $16^{15}$ | Coffee break  |                 |  |  |  |  |
| $16^{15}$ - $18^{00}$ | Fourth plenary session                              | Special session |  |  |  |  |
| $18^{30}$ - $21^{00}$ | Dinner  |                 |  |  |  |  |

## Saturday October 20, 2018

| $9^{00}$ - $11^{00}$  | Work of section                            |              |  |
|-----------------------|--|--------------|--|
| $11^{00}$ - $11^{15}$ | Coffee break                               |              |  |
| $11^{15}$ - $13^{00}$ | Work of sections                           | Master class |  |
| $13^{00}$ - $14^{45}$ | Lunch                                      |              |  |
| $15^{00}$ - $16^{00}$ | Section reports, closing of the conference |              |  |

## RULES OF THE CONFERENCE

- 1. Working languages: English, Russian, Uzbek
- 2. Speaking time:

plenary lecture – 15-20 min. section reports – 10-15 min.

#### ORGANIZING COMMITTEE

Chairman::

Marakhimov Avazjon Raximovich - Rector of the National University of

Uzbekistan named after Mirzo

Ulugbek (NUU)

Co-chairmen:

Abdullaev Abdushukur Khamidovich - Chairman of the State Committee of

the Republic of Uzbekistan on Land Resources, Geodesy, Cartography

and State Cadastre

Vice-chairmen:

Turayev Abbosxon Sobirxonovich - Vice rector, NUU

**Members:** 

Mrs. Aziza Abdurakhmanova National ERASMUS+ Office coordinator

Dr. Rasul Rakhmonov Vice-rector, NUU
Dr. Vakhid Ibodullaev Vice-rector, NUU

Dr. Takhirjon Sultanov Vice-rector of Tashkent Institute of

Irrigation and Agricultural Mechanization

Engineers (TIIAME)

Dr. Erkin Isakov The Vice-rector of the Samarkand state

architectural and civil engineering institute

(SamSACEI)

Dr. Ravshan Nurimbetov The Vice-rector of the Tashkent Institute of

Architecture and Construction (TIAC)

Dr. Tulkin Abdullaev First Deputy Chairman of the State

Committee of the Republic of Uzbekistan on Land Resources, Geodesy, Cartography

and State Cadastre

Dr. Lorant Foldwary Coordinator of the DSinGIS Project, Vice

dean on scientific affairs at Obuda University (OU), Alba Regia Technical

Faculty

Prof. Béla Márkus Manager of the DSinGIS Project, OU

Prof. Josef Strobl Project partner coordinator, Head of

Department of Geoinformatics and

Z\_GIS University of Salzburg (PLUS)

Prof. Huaan Fan Project partner coordinator, Associate

professor at Royal Institute of

Technology (KTH)

Dr. Daniel Müller Project partner coordinator, Deputy Head

of Department Structural Change Leibniz Institute of Agricultural Development in

Transition Economies (IAMO)

Mr. Shavkat Turaev Deputy Head of the Department for

Coordination of Research Activities at the Ministry of Higher and Secondary Specialized education of the Republic of

Uzbekistan

Dr. Zakhirkhodja Tadjikhojaev Head of the department of the Supreme

**Attestation Commission** 

Dr.Fazliddin Hikmatov Chairman of the Geographical Society of

Uzbekistan

Dr. Polat Reymov Associate professor of the Geography

Department of Karakalpak State

University (KSU), head of GIS Center.

Dr. Shavkat Sharipov Dean of the Geography and Natural

resources faculty, NUU

Dr. Khamid Muborakov Head of Geodesy and Geoinformatics

department, NUU

Prof. Eshkabul Safarov Head of Cartography department, NUU

#### PROGRAM COMMITTEE

Chairmen:

Associate Professor of Cartography

Department, NUU

Vice-chairmen:

Ilkhomjon Abdullaev Senior lecturer of Geodesy and

Geoinformatics Department, NUU

**Members:** 

Dr. Djurabay Karabaev Associate Professor of Cartography

Department, NUU

Mrs. Sevar Salohitdinova Senior lecturer of Cartography

Department, NUU

Ilhom Abdurahmanov Head of International Relations

Department, TIIAME

Mamanbek Reimov PhD researcher, TIIAME

Otabek Avezbaev Senior teacher at the Department of

Geodesy and cadaster, TIAC

Vokhidjon Niyazov Senior teacher of the Department

"Geodesy, Cartography and Cadastre,

SamSACEI

Yakhshimurad Khudaybergenov Assistant at the Geography Department,

KSU

#### **EXECUTIVE COMMITTEE:**

Azizjon Ruziev Senior lecturer of Geodesy and

Geoinformatics Department, NUU

Shavkat Prenov Senior lecturer of Cartography Department,

NUU

Gayrat Yakubov Teacher of Geodesy and Geoinformatics

Department, NUU

Abdujalil Muminov Teacher of Cartography Department, NUU
Bakhritdin Yusupov Teacher of Cartography Department, NUU
Dilshod Rakhmonov PhD student of Geodesv and

Geoinformatics Department, NUU

#### **OPENING CEREMONY**

## on October 19, 2018, 10<sup>00</sup>-10<sup>30</sup>

Venue: Small conference hall of center of Youth Union

Chairman: **Dr. Sh. Sharipov** 

#### Greeting participants of the conference

- A.R. Marakhimov Rector of the National University of Uzbekistan
- **A.Kh. Abdullayev** Chairman of the State Committee of the Republic of Uzbekistan on Land Resources, Geodesy, Cartography and State Cadastre
- U.Sh. Begimqulov— Deputy Ministry of Higher and Secondary special Education of the Republic of Uzbekistan
- **U.P. Umurzakov** Rector of the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers
- Mrs. A.K. Abdurakhmanova National ERASMUS+ Office coordinator
- Dr. L. Foldvary Coordinator of the DSinGIS Project

# THE FIRST PLENARY SESSION on October 19, 2018, 10<sup>30</sup>-11<sup>30</sup>

Venue: Small conference hall of center of Youth Union

Chairman: **Dr. Sh. Sharipov** 

- 1. Prof. J. Strobl. Without GIS we are Nowhere Open Spatial Data Infrastructures for Society and Business
- 2. Dr. T. M. Abdullaev, S.A.Karabazov, Sh.Q.Mayinov. Updating data using geoinformation technologies in geodesy and cartography
- 3. Prof. Mirzaliev T.M., prof. Egamberdiev A., prof. Safarov E.Y., Dr. Karabaev J.S., Muminov A.A. General description of the National Atlas of Uzbekistan

#### SECOND PLENARY SESSION

## on October 19, 2018, 1145-1245

Venue: Small conference hall of center of Youth Union

### Chairman: Dr. Shavkat Sharipov

- 1. Dr. Földváry. L. De-smoothing of block-wise gridded Geoinformation
- 2. Dr. Gulyamova L. Open Source Resources: challenges and prospects to manage land use in midsized cities in Uzbekistan
- 3. Dr. Isakov E. Kh. Application of modern electronic geodesic devices (GIS technologies) for the production of surveying architectural monuments
- 4. Prof. Hikmatov F. Kh., Dr. Adenbaev B.E., Dr. Yunusov G.Kh., Magdiev Kh. H. Experience of making the Atlas of surface water of Uzbekistan and the adjacent territories

#### THIRD PLENARY SESSION

## on October 19, 2018, 15<sup>00</sup>-16<sup>00</sup>

#### Venue: Small conference hall of center of Youth Union

### Chairman: Dr. Shavkat Sharipov

- 1. Dr. Reymov P.R., Dr. Mamutov N.K., Statov V.A., Khudaybergenov Y.G., Bekanov K.K. Geoinformatics Center of Karakalpak State University: progress and expertise
- 2. Mukhamedjanov I.D., Lupyan E.A., Uvarov I.A. Satellite monitoring of seasonal dynamics of the reservoirs of the Vakhsh cascade
- 3. Dr. Mirmakhmudov E., Abdumuminov B., Begimqulov Q. Using GIS Panorama to build a some Digital Elevation Models in National University of Uzbekistan
- 4. Dr. Tóth Z., Balázsik V. Practical experiences of applying GIS technology in archeology

#### FOURTH PLENARY SESSION

## on October 19, 2018, 16<sup>15</sup>-18<sup>00</sup>

## **Venue:** Small conference hall of center of Youth Union

### Chairman: Dr. Shavkat Sharipov

- 1. Dr. Rakhmonov K. Systematic approach to the development of Land Cadastre Information
- 2. Dr. Niyazov D. B., Saidov S.M., Imomov K.F. Investigation of the mudflow area of Tibolay river (Tajikistan) with application of GIS of technologies.
- 3. Dr. Tibor M. Pintér, Abdullaev I. The glossary of Geospatial terms for the benefit of Uzbek GIS-community

# SPECIAL SESSION on October 19, 2018, $15^{00}$ - $18^{00}$

## <u>Chairmen:</u> **Prof. Bela Markus** Secretaries: **Adam Podolcsak.**

Room: Meeting room

- 1. Prof. Markus B. Targeted training and knowledge transfer programs for cadastre and registration.
- 2. Podolcsak A., Dr. Samborsky A., Mamatov A. Capacity building for the modernisation of real property and cadastre system.
- 3. Finne A., Dr. Samborsky A., Boltoboyev F. ICT strategy for land administration and NSDI in Uzbekistan.
- 4. Vasiljev V., Nishanov B., Magdiev H. Digitization of real property registration and cadastre data in Uzbekistan
- 5. Dr. Samborsky A., Tolvanen J.P. Legal aspects in modernization of the real property registration and cadastre

#### WORKSHOPS

#### SECTION №1.

GEOINFORMATICS IN GEODETIC OPERATIONS AND APPLICATION OF GEOINFORMATION TECHNOLOGIES IN ARCHITECTURE AND CONSTRUCTION.

## on October 20, 2018, 900-1600

Chairmen: Dr. Muborakov Kh.

Secretaries: Yakubov G.

Room: 511

- 1. Nur Belkayalı, Yavuz Güloğlu, Ozodbek Karamatov. Planning innovative urban parks: case study from Kastamonu, Turkey.
- 2. Uspankulov B.M., Kadirov O.Q., Ismanov Sh.P. Advantages of maintaining a three-dimensional (3D) state cadastre of buildings and structures in Uzbekistan.
- 3. Saydalieva G.A. Modern technologies for the development of cadastral documents for land and real estate.
- 4. Dr. Isakov E.Kh. Research on the application of modern electronic devices for making front plans of the walls of monuments of architecture.
- 5. Dr. Abduazizov A., Kutumova G.S., Allanazarov O.R. Ways of development of the geodesic basis for cadasters using GIS technologies
- 6. Suyunov Sh.A., Karimova U.E., Fayziev Sh.Sh. Investigation of transfer of optical images in the cloud atmosphere by inclined tracts

#### SECTION №2.

## THEMATIC CARTOGRAPHY, WEB-CARTOGRAPHY, MAPPING SERVICES AND ITS APPLICATIONS.

## on October 20, 2018, 9<sup>30</sup>-16<sup>00</sup>

Chairmen: prof. Egamberdiev A.

Secretaries: Muminov A.

Room: 505

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- 1. Usmanov S., Olimkhon Kh., Irisbaev M. Hydro Morphological Mapping of Aksagatsay Watershed Using GIS and Remote Sensing Data.
- 2. Salokhitdinova S.S Cartographic sources as a geographical basis for Geographical Information Systems
- 3. Prenov Sh.M., Safarov E.Y., Allanazarov O.R., Avezov S. Role of geoinformation systems in the development of mapping methodology ecological meliorative condition
- 4. Allanazarov O.R., Prof. Safarov E.Y. Prenov Sh.M., Gulmirzaev F. About the algorithm of cartographic provision of the communication objective cadaster
- 5. Khakimova K.R., Makhamadaliev R.Y., Mannopov Kh. Development of maps for the study of nature protection and rational nature use in the Fergana valley.
- 6. Rakhmonov D.N., Yakubov G.Z., Toshov Kh. Importance of the interactive dynamic maps population.
- 7. Khakimova K.R., Egamberdieva M.M., Eshnazarov D. Using of GIS technologies for development digital ecological maps

#### SECTION №3.

## GEOSPATIAL ANALYSIS AND MODELING. PROCESSING AND ANALYSIS OF REMOTE SENSING DATA.

## on October 20, 2018, 9<sup>00</sup>-16<sup>00</sup>

Chairmen: Dr. Mirmakhmudov E.

Secretaries: Ruziev A.

Room: 109

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- 1. Dr. Sabine Hennig. How to make online geospatial participation a success?
- 2. Dr. M. Verőné Wojtaszek. Remote Sensing based detection of spatial variability within a field
- 3. Mayinov Sh.Q., Sirojov S.A., Safaev C.Z. Creating 3D models using UAV data.
- 4. Shukina O.G. Automated aerial photography using the Geoscan software and hardware complex
- 5. Dr.Muborakov Kh., Ruziev A.S., Abdullaev I.U. Application of remote sensing data for calculation of design parameters and monitoring of reservoirs regime

#### SECTION №4.

CADASTRAL SERVICES IN THE MANAGEMENT OF NATURAL RESOURCES. GEOINFORMATICS IN ENVIRONMENTAL PROTECTION, RATIONAL USE AND MANAGEMENT OF LAND AND WATER RESOURCES.

## on October 20, 2018, 9<sup>00</sup>-16<sup>00</sup>

Chairmen: prof. Hikmatov F.

Secretaries: Yunusov G.

Room: 506

- 1. Yavuz Güloği, Nur Belkayali, Dr. Karamatov O.O. Legislation changes in order to protect agricultural lands in turkey and judicial auidit
- 2. Dr. Karamatov O.O., Sadikova G.F. Geoinformatics and land cadastral information support for evaluating the effectiveness of innovations in the agriculture
- 3. Dr. Artikova F.Y., Sagdiev N.Z., Khamzaeva J.T. A question of the statistical evaluation of extended costs rows of coxu river water.
- 4. Ashurov A.F. Condition and development of land-management of the manufacturing fund and questions GIS application for managing them.
- 5. Inamov A.N., Abdusamatov O.Z. Mamatkulov Z.J. Application of modern innovative technologies in water supply characteristics.
- 6. Rakhmonov K.R., Shavazov T.K., Uspankulov B.M. The introduction of innovative technologies in the management of the land cadaster.
- 7. Boltaeva L.A., Jaloliddinov B.M. Application of Geoinformatics in meteorology.
- 8. Halimova G., Zaitov Sh. Using of Geographic Information Systems for estimating water resources of the Kulzhutau system.
- 9. Erlapasov B.N., Ziyaev R.R. Application of GIS technologies in mapping = ountain rivers by flow sources.
- 10. Magdiev Kh.H., Rakhmonov K.R. Mapping of soil washing from river basin using GIS technology.
- 11. Hikmatov B. Using of GIS technology in the creation of maps of lakes and reservoirs of Uzbekistan.
- 12. Dr. Shadjalilov Sh.Sh., Dr. Abdullaev I.Kh. Negative consequences of pollution of the Akhangaran valley landscapes under the influence of anthropogenic factors
- 13. Ergasheva Y.Kh., Egamberdiev Kh.T. Using of the Geoinformation System of observation results for Solar radiation in Uzbekistan.
- 14. Narbaev Sh., K., Axmadaliev B.A. Zoning area based on gis in sustainable land use

#### SECTION №5.

# GEOINFORMATION TECHNOLOGIES IN THE EDUCATION SYSTEM. THE ROLE OF GEOINFORMATION TECHNOLOGIES IN THE EARTH SCIENCES.

## on October 20, 2018, 900-1600

Chairmen: Prof. Sabitova N.I.

Secretaries: Dr. Nikadambaeva H.B.

Room: 215

- 1. Prof. Sabitova N., Tadjibaeva N.R., Stelmakh A.G. Use of flow structures in evaluation landslide processes
- 2. Uvraimov S.T., Prof. Safarov E.Y. The role of the geoinformation database in the history of development of geodesy and cartography.
- 3. Dr. Nikadambaeva H.B., Ergasheva M.K. Using of GIS technology in teaching geography.
- 4. Dr. Ibraimova A.A. Some features of the distribution of geographical names in maps.
- 5. Dr. Tadjieva Z.N., Dr. Makhamadaliev R.Y. Territorial organizations of urban inhabitants in Uzbekistan and the demogeographic aspects of urbanization.
- 6. Babakhanova Sh.O., Dr. Sharipov Sh.M. Features of natural and cultural memorials in Tashkent region
- 7. Mamajanova D.M., Dr. Sharipov Sh.M. Analyzes the origin of flood events in the Namangan region with the help of stream basins

