

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

URGENCH STATE UNIVERSITY

PROGRAM

of the CIMPA School on
Complex Analysis, Geometry and Dynamics
October 25 — November 6, 2021
and
International workshop
Trends in Complex Geometry
October 30-31, 2021.

We gratefully acknowledge the support of:



Scientific Committee

- Berndtsson Bo (Chalmers and University of Gothenburg, Sweden)
- Sadullaev Azimbay (National University of Uzbekistan, Uzbekistan)
- Marco Laura (Northwestern University, United States of America)
- Fino Anna Maria (Università di Torino, Italy)
- Myslivets Simona (Syberian Federal University, Russia)

Organizing Committee

- Abdullaev Bakhrom (Urgench State University, Uzbekistan)
- Inomjon Madjidov (National University of Uzbekistan, Uzbekistan)
- Sevdiyor Imomkulov (Khorezm branch of the Institute of Mathematics, Uzbekistan)
- Zeriahi Akmed (Université Toulouse III Paul Sabatier, France)
- Zafar Ibragimov (Urgench State University, Uzbekistan)
- Dan Popovici (Université Toulouse III Paul Sabatier, France)
- Umida Baltaeva (Urgench State University and Khorezm Mamun Academy, Uzbekistan)
- Mokhira Vaisova (Urgench State University, Uzbekistan)
- Jumanazar Khujamov (Urgench State University, Uzbekistan)
- Bazar Babajanov (Urgench State University, Uzbekistan)
- Iroda Baltaeva (Urgench State University, Uzbekistan)
- Rasul Sharipov (Urgench State University, Uzbekistan)
- Reyimberganov Anvar (Urgench State University, Uzbekistan)

| Day 1, October 25, 2021, Moderator: Umida Baltaeva, Zafar Ibragimov | |
|--|--|
| 9:00-9:30 | Registration |
| 9:30-11:00 | Introductory Course 1(Prof. Judith Brinkschulte) |
| 11:00 -11:30 | Coffee break |
| 11:30-13:00 | Introductory Course 2 (Prof. Azimbay Sadullaev) |
| 13:00-15:00 | Lunch Break |
| 15:00-16:30 | Introductory Course 1(Prof. Judith Brinkschulte) |
| 17:00-18:00 | Training Session 1 (Prof. Eleonora Di Nezza) |

| Day 2, October 26, 2021, Moderator: Alimardon Atamuratov, Bozorbay Bobojonov | |
|---|--|
| 9:00-10:30 | Introductory Course 2 (Prof. Azimbay Sadullaev) |
| 10:30 -11:00 | Coffee break |
| 11:00-12:30 | Introductory Course 1(Prof. Judith Brinkschulte) |
| 12:30-14:30 | Lunch Break |
| 14:30-16:00 | Introductory Course 2 (Prof. Azimbay Sadullaev) |
| 16:30-18:00 | Holomorphic Dynamics (Prof. Charles Favre) |

| Day 3, October 27, 2021, Moderator: Iroda Boltaeva, Nargiza Boboyarova | |
|---|--|
| 9:00-10:30 | Introductory Course 1(Prof. Judith Brinkschulte) |
| 10:30 -11:00 | Coffee break |
| 11:00-12:30 | Introductory Course 2 (Prof. Azimbay Sadullaev) |
| 12:30-14:30 | Lunch Break |
| 14:30-16:00 | Introductory Course 3 (Prof. Dan Popovici) |
| 16:00 -16:30 | Coffee break |
| 16:30-17:30 | Training Session 1 (Prof. Eleonora Di Nezza) |

| Day 4, October 28, 2021, Moderator: Sevdiyor Imomkulov, Aygul Babajanova | |
|---|--|
| 9:00-10:30 | Introductory Course 3 (Prof. Dan Popovici) |
| 10:30 -11:00 | Coffee break |
| 11:00-12:30 | Holomorphic Dynamics (Prof. Charles Favre) |
| 12:30-14:30 | Lunch Break |
| 14:30-16:00 | Introductory Course 3 (Prof. Dan Popovici) |
| 16:00 -16:30 | Coffee break |
| 16:30-17:30 | Holomorphic Dynamics (Prof. Jasmin Raissy) |

| Day 5, October 29, 2021, Moderator: Yusupov Bakhtiyor, Bozorbay Bobojonov | |
|--|--|
| 9:00-10:30 | Training Session 1 (Prof. Eleonora Di Nezza) |
| 10:30 -11:00 | Coffee break |
| 11:00-12:30 | Introductory Course 3 (Prof. Dan Popovici) |
| 12:30-14:30 | Lunch Break |
| 14:30-15:30 | Training Session 1 (Prof. Eleonora Di Nezza) |
| 16:00 -16:30 | Coffee break |
| 16:30-18:00 | Holomorphic Dynamics (Prof. Jasmin Raissy) |
| 18:00-18:40 | CIMPA Presentation: (Prof. St'ephanie Nivoche) |

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| Day 6, November 02, 2021, Moderator: Gayrat Urazbaev, Umid Karimov | |
| 9:00-10:30 | Advanced Course 1(Prof. Vincent Guedj) |
| 10:30 -11:00 | Coffee break |
| 11:00-12:30 | Advanced Course 2 (Prof. Bo Berndtsson) |
| 12:30-14:30 | Lunch Break |
| 14:30-15:30 | Training Session 2 (Prof. Houda Bellitir) |

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|---|---|
| Day 7, November 03, 2021, Moderator: Umida Baltaeva, Zafar Ibragimov | |
| 10:30 -11:00 | Coffee break |
| 11:00-12:30 | Advanced Course 1(Prof. Vincent Guedj) |
| 12:30-13:30 | Lunch Break |
| 13:30-14:30 | Advanced Course 1 (Prof. Vincent Guedj) |
| 14:30-16:00 | Advanced Course 2 (Prof. Bo Berndtsson) |
| 16:00 -16:30 | Coffee break |
| 16:30-17:30 | Training Session 2 (Prof. Simona Myslivets) |

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| Day 8, November 04, 2021, Moderator: Iroda Boltaeva, Nargiza Boboyarova | |
| 11:00-12:30 | Advanced Course 1(Prof. Vincent Guedj) |
| 12:30-14:30 | Lunch Break |
| 14:30-17:30 | Free Afternoon |

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| Day 9, November 05, 2021, Moderator: Sevdiyor Imomkulov, Aygul Babajanova | |
| 9:00-10:30 | Advanced Course 2 (Prof. Bo Berndtsson) |
| 10:30 -11:00 | Coffee break |
| 12:30-14:30 | Lunch Break |
| 14:30-16:00 | Advanced Course 1 (Prof. Vincent Guedj) |
| 16:00 -16:30 | Coffee break |
| 16:30-18:00 | Advanced Course 2 (Prof. Bo Berndtsson) |

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| Day 10, November 06, 2021, Moderator: Gayrat Urazbaev, Umid Karimov | |
| 11:00-12:00 | Training Session 2 (Prof. Houda Bellitir) |
| 12:00-14:00 | Lunch Break |
| 14:00-15:00 | Training Session 2 (Prof. Simona Myslivets) |

OPENING CEREMONY OF THE CIMPA SCHOOL AND THE INTERNATIONAL WORKSHOP

October 30, 2021. Chairs: Azimbay Sadullaev, Bakhrom Abdullaev

11:00 – 12:00 REGISTRATION/CHECK – IN, Main Building

12:00 – 12:30 Welcome speeches, Arts Hall, ZO OM

Join a ZOOM meeting: <https://us02web.zoom.us/j/7389135247>

Conference ID: 738 913 5247 Access code: cimpa2021

| Speakers | Title |
|------------------------------------|---|
| Abdukodir Toshkulov | Minister of Higher and Secondary Special Education |
| Bekhzod Yuldashev | President of the Academy of Sciences of the Republic of Uzbekistan |
| Ahmed Zeriahi, Dan Popovici | Professor of Université Toulouse III, France |
| Shavkat Ayupov | Director of the Institute of Mathematics |
| Inomjon Madjidov | Rector of the National University of Uzbekistan |
| Abdulla Azamov | Institute of Mathematics |

12:30 – 13:00 Lunch

PLENARY TALKS I: October 30, 2021. Chairs: Dan Popovici, Gayrat Urazbaev

ZOOM, 13:00 – 16:30, IM Hall

Join a ZOOM meeting: <https://us02web.zoom.us/j/7389135247>

| Time | Speaker | Title | Location |
|---------------|------------------------|---|------------------|
| 13:00 – 14:00 | Anna Fino | Pluriclosed metrics and Kähler-like conditions on complex manifold-ds | IM Hall |
| 14:15 – 15:15 | Mario Garcia Fernandez | (0,2) Mirror Symmetry on homogeneous Hopf surfaces | IM Hall |
| 15:15 – 15:30 | Coffee break | Coffee break | |
| 15:30 – 16:30 | Duong H. Phong | A Priori Estimates for the Complex Monge-Ampère Equation | IM Hall |
| 16:30 – 17:30 | Durvudkhan Suragan | Fisher-KPP equation on the Heisenberg group | IM Hall |
| 19:00 – 21:00 | Dinner (Banquet) | | Local restaurant |

PLENARY TALKS II: October 30, 2021.
Chair: Bakhodir Shoimkulov, Karimbergan Kudaybergenov

| Time | Speaker | Title | Location |
|---------------|-------------------------|---|------------------|
| 13:30 – 14:00 | Shavkat Ayupov | Quantum Dynamics and Derivations on Operator Algebras | Arts Hall |
| 14:00 – 14:30 | Abdulla Azamov | I love Mathematics. Why? | Arts Hall |
| 14:30 – 15:00 | Mamadsho Ilolov | On the Application of Methods of Differential Geometry in Stochastic Analysis | Arts Hall |
| 15:00 – 15:30 | Coffee break | Coffee brake | |
| 15:30 – 16:00 | Mirsaid Aripov | To the qualitative properties of the solution for the double nonlinear parabolic equation with damping | Arts Hall |
| 16:00 – 16:30 | Ravshan Ashurov | An analog of the Tricomi problem for a mixed-type equation with a fractional derivative. Inverse problems | Arts Hall |
| 16:30 – 17:00 | Gulmirza Khudaybergenov | Вопросы комплексного анализа в матричных областях Problems of complex analysis on matrix domains | Arts Hall |
| 17:00 – 17:30 | Aknazar Khasanov | Cauchy problem for defocusing nonlinear Schrödinger equation with a loaded term | Arts Hall |
| 17:30 – 18:00 | Ermamat Sattorov | Cauchy problem for a generalized Cauchy-Rieman system in a multidimensional unbounded domain | Arts Hall |
| 19:00 – 21:00 | Dinner (Banquet) | | Local restaurant |

PLENARY TALKS I: October 31, 2021. Chairs: S. Nivoche, Umida Baltaeva
ZOOM, 13:00 – 16:30, IM Hall
 Join a ZOOM meeting: <https://us02web.zoom.us/j/7389135247>

| Time | Speaker | Title | Location |
|---------------|------------------|---|-----------------|
| 13:00 – 14:00 | Franc Forstneric | Pluriclosed Metrics and Kähler-like Conditions on Complex Manifolds | IM Hall |
| 14:15 – 15:15 | Hajime Tsuji | Adiabatic limit of Kähler-Ricci flow | IM Hall |
| 15:30 – 16:30 | Slavomir Dinev | Invitation to quaternionic potential theory and geometry | IM Hall |

PLENARY TALKS II: October 31, 2021. Chairs: Utkir Razikov, Ravshan Ashurov

| Time | Speaker | Title | Location |
|----------------------|---------------------------|--|------------------|
| 09:00 – 09:30 | Isroil Ikromov | On uniform estimates for oscillatory integrals | Arts Hall |
| 09:30 – 10:00 | Karimbergan Kudaybergenov | Isomorphisms of commutative regular algebras | Arts Hall |
| 10:00 – 10:30 | Utkir Rozikov | p-adic dynamical systems of rational functions | Arts Hall |
| 10:30 – 11:00 | Coffee break | | Arts Hall |
| 11:00 – 11:30 | Bakhodir Shoimkulov | О многомерных вычетах | Arts Hall |
| 11:30 – 12:00 | Obidjon Zikirov | Solvability of a non-local problem with an integral condition for a loaded heat equation | Arts Hall |
| 12:00 – 12:30 | Abdullaziz Artikbaev | Геометрия полувеклидовых пространств | Arts Hall |
| 12:30 – 13:00 | Lunch | | Dining Hall |
| 13:00 – 16:30 | Plenary talks I | | IM |
| 16:30 – 17:00 | Durdimurod Durdiev | Коэффициентная обратная задача для дробного уравнения диффузии | Arts Hall |
| 17:00 – 17:30 | Golibdjan Botirov | Gibbs measures for a model with uncountable set of spin values on the Cayley tree | Arts Hall |
| 17:30 – 18:00 | Abror Khudayberdiev | The algebraic and geometric classification of Novikov, right commutative and left symmetric algebras | Arts Hall |
| 18:00 – 18:30 | Bayram Utemuratov | Многомерный аналог теоремы Гартогса в круговых областях для интегрируемых функций | Arts Hall |
| 18:30 – 19:00 | Barlikbay Prenov | Сингулярный интеграл типа Бохнера-Мартинелли в ограниченных областях с негладкими границами | Arts Hall |
| 19:00 – 21:00 | Closing ceremony, Dinner | | Local restaurant |

November 1, 2021, 09:00-- Visit to the Presidential School in Khiva
November 1, 2021, 15:00-- Visit to the International Math School in Shavat

