

PROGRAMME

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- Hungarian Academy of Sciences (HAS)
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MINISTRY OF CULTURAL HERITAGE



Conference Secretariat

Viktor Richter

c/o Computer and Automation Research Institute, HAS

Kende u. 13-17.

H-1111 Budapest

Hungary

fax: +361 386 9378

e-mail: richter@sztaki.hu

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WELCOME

Welcome to Budapest, welcome to the János Bolyai Conference on Hyperbolic Geometry. János Bolyai is generally considered the greatest figure in Hungarian science. He was only 21 years old in 1823 when he wrote to his father Farkas Bolyai, the famous professor of mathematics at Marosvásárhely, Transylvania, that he had created a new, different world. The magic world of absolute and hyperbolic geometry, as we call it today, the first systematic development of a non-Euclidean geometry. The letter was written from Temesvár, another town in Transylvania, where Bolyai had just been appointed as an army engineer (both towns belong to Romania now). Long time had to pass until the name and work of Bolyai became known worldwide. Neither he, nor the co-founder of hyperbolic geometry, the Russian Nikolai Ivanovich Lobachevskii, was able to gain recognition in his lifetime.

It has been a tradition in Hungary to commemorate the Bolyai anniversaries. The last one took place in 1977. However, this is the first time that we organize a meeting of international scale to honor this great mathematician whose discoveries mankind has greatly benefited from, and whose life was full of hardships and died in oblivion.

Hungarian mathematics is flourishing today, and we thank for this, to a large extent, to János Bolyai.

I wish you a good conference and a pleasant stay in the fascinating city of Budapest.

András Prékopa
Member of the Hungarian Academy of Sciences
Chairman of the Programme Committee

GENERAL INFORMATION

INFORMATION FOR PARTICIPANTS

Registration and information desk

The registration and information desk will operate at the Conference venue as follows:

Monday 8 July	08.00 - 18.00
Tuesday 9 July	08.30 - 18.00
Wednesday 10 July	08.30 - 18.00
Thursday 11 July	08.30 - 18.00
Friday 12 July	08.30 - 18.00

Internet access

A number of PCs with internet access are available during the Conference hours on the 2nd floor of the Academy.

Official language

The official language of the Conference is English. No simultaneous translation will be available.

Please note:

Some of the parallel sessions on Friday, 12 July will run in Hungarian, without translation. These sessions are:

14.00 – 15.30

Room D: Teaching and visualisation of hyperbolic geometry I.

Room E: The life and works of Janos Bolyai I.

16.00 – 17.30

Room B: The heritage of Bolyai I.

Room C: The heritage of Bolyai II.

Room D: Teaching and visualisation of hyperbolic geometry II.

Room E: The life and works of Janos Bolyai II.

Room map

A room map on the inner front cover helps to find the session and function rooms.

LIST OF TOPICS

- 1: Hyperbolic geometry and differential geometry
- 2: Radon transforms and integral geometry in hyperbolic spaces
- 3: Hyperbolic manifolds and groups
- 4 *: The heritage of Bolyai
- 5: Hyperbolic geometry and discrete geometry
- 6: Applications of hyperbolic geometry and its extensions in physics and other sciences
- 7: Applications of non-Euclidean geometry in relativity
- 8: Non-Euclidean geometry – foundations of physics – foundations of mathematics
- 9: Hyperbolic geometry and its applications
- 10 *: Teaching and visualisation of hyperbolic geometry
- 11: Applications of hyperbolic geometry in combinatorics and in computational geometry
- 12: Hyperbolic geometry and foundations of geometry
- 13: The role of hyperbolic geometry in the history and philosophy of mathematics and in cultural history
- 14: Teaching and visualisation of hyperbolic geometry
- 15 *: The life and works of Janos Bolyai

Important notice:

Parallel sessions 4*, 10* and 15* will run in Hungarian, without translation.

PROGRAMME AT-A-GLANCE

by topics

		Room A	Room B	Room C	Room D	Room E
Monday 8 July	09.00 – 10.30	Opening ceremony & Plenary session I.: H.S.M. Coxeter				
	<i>10.30 – 11.00</i>	<i>Coffee break</i>				
	11.00 – 12.30	Plenary session II.: Walter Benz, Jeremy Gray				
	<i>12.30 – 14.00</i>	<i>Lunch break</i>				
	14.00 – 15.30	1	3	5	6	11
	<i>15.30 – 16.00</i>	<i>Coffee break</i>				
	16.00 – 17.30	1	3	5	6	11
	<i>18.00 – 20.00</i>	<i>Welcoming reception</i>				
Tuesday 9 July	09.00 – 10.30	Plenary session III.: László Lovász, Robert Connelly				
	<i>10.30 – 11.00</i>	<i>Coffee break</i>				
	11.00 – 12.30	Plenary session IV.: Charles Radin, Jeffrey R. Weeks				
	<i>12.30 – 14.00</i>	<i>Lunch break</i>				
	14.00 – 15.30	1	3	5	7	12
	<i>15.30 – 16.00</i>	<i>Coffee break</i>				
	16.00 – 17.30	1	3	5	7	12
Wednesday 10 July	09.00 – 10.30	Plenary session V.: E.B. Vinberg, Jim Cannon				
	<i>10.30 – 11.00</i>	<i>Coffee break</i>				
	11.00 – 12.30	Plenary session VI.: Igor Rivin, John G. Ratcliffe				
	<i>12.30 – 14.00</i>	<i>Lunch break</i>				
	14.00 – 15.30	1	3	5	8	13
	<i>15.30 – 16.00</i>	<i>Coffee break</i>				
	16.00 – 17.30	1	3	5	8	14
Thursday 11 July	09.00 – 10.30	Plenary session VII.: Sigurdur Helgason, Bernd Stratmann				
	<i>10.30 – 11.00</i>	<i>Coffee break</i>				
	11.00 – 12.30	Plenary session VIII.: Abraham A. Ungar, A.S. Szalay				
	<i>12.30 – 14.00</i>	<i>Lunch break</i>				
	14.00 – 15.30	1	3	5	8	14
	<i>15.30 – 16.00</i>	<i>Coffee break</i>				
	16.00 – 17.30	1	3	5	9	14
<i>20.00 – 22.00</i>	<i>Banquet</i>					
Friday 12 July	09.00 – 10.30	Plenary session IX.: Zoltán Perjés, Samu Benkő				
	<i>10.30 – 11.00</i>	<i>Coffee break</i>				
	11.00 – 12.30	Plenary session X.: Elemér Kiss, Imre Toth				
	<i>12.30 – 14.00</i>	<i>Lunch break</i>				
	14.00 – 15.30	1	3	5	10 *	15 *
	<i>15.30 – 16.00</i>	<i>Coffee break</i>				
	16.00 – 17.30	2	4 *	4 *	10 *	15 *

INFORMATION FOR AUTHORS

Presentation and technical equipment

Time for oral presentation in parallel sessions is 30 minutes. For the benefit of both the audience and the next speaker, all speakers are kindly requested to strictly adhere to the time limit that otherwise will be enforced by the session chairs.

Overhead projectors and data/video beamers will be available in the session rooms. Authors wishing to give a computer presentation are kindly asked to contact the Registration and information desk at their earliest convenience.

Chairs and authors

Session chairs and presenting authors should meet in the session rooms 10 minutes before the sessions start.

EVENING PROGRAMMES

Welcoming Reception

Monday, 8 July, 18.00 – 20.00
Hungarian Academy of Sciences
Picture Gallery, 3rd floor
(1051 Budapest, Roosevelt ter 9.)

All registered participants are cordially invited.

Banquet

Thursday, 11 July, 20.00 – 22.00
“EUROPA” Boat

The boat will start exactly at 20.00 from the boat station at the Hungarian Academy of Sciences. Boarding from 19.30.

All registered participants are cordially invited. Please, wear your name badge which entitles you to enter the boat.

TECHNICAL PROGRAMME

Monday, 8 July

09.00 – 09.45 **Opening Ceremony**
Room A

09.45 – 10.30 **Plenary session I.**
Room A

An Absolute Property of Four Mutually Tangent Circles
COXETER H.S.M.

10.30 – 11.00 *Coffee break*

11.00 – 12.30 **Plenary session II.**
Room A

Hyperbolic Geometry, Dimension-Free
BENZ Walter

Gauss and non-Euclidean geometry
GRAY Jeremy

12.30 – 14.00 *Lunch break*

14.00 – 15.30 **1: Hyperbolic geometry and differential geometry I.**
Room A

The generalized Cayley map from an algebraic group to its Lie algebra
KOSTANT Bertram - MICHOR Peter W.

Hyper-Kähler symmetric spaces
ALEKSEEVSKY D. V. - CORTES V.

Advances in metric spaces with curvature bounds
BISHOP Richard L.

14.00 – 15.30 **3: Hyperbolic manifolds and groups I.**
Room B

A survey on the weak hyperbolization conjecture
KAPOVICH Michael

Endomorphisms of the hyperbolic plane and its cousins
STROPPEL Markus

14.00 – 15.30 5: Hyperbolic geometry and discrete geometry I.
Room C

Sphere Packing in Hyperbolic Space
COHN Henry - HALES Thomas - LURIE Jacob - SARNAK Peter

On the closeness of sphere packings in spaces of constant curvature
H. TEMESVÁRI Ágota

Improving the Rogers-Boroczky upper bound for the density of congruent ball packings in 3-dimensional spaces of constant curvature
BEZDEK Károly

14.00 – 15.30 6: Applications of hyperbolic geometry and its extensions in physics and other sciences I.
Room D

Construction of spacetimes in terms of invariant objects
BRADLEY Michael

Gravitation in 5 dimensions
GERGELY László Árpád

On the existence of spacetime symmetries
RÁCZ István

14.00 – 15.30 11: Applications of hyperbolic geometry in combinatorics and in computational geometry I.
Room E

A random walk round hyperbolic spaces
CAMERON Peter J.

Mixed complexes and mixed surfaces
EDELSBRUNNER Herbert

Finite Bolyai Geometry and Extremal Graph Theory
SZÓNYI Tamás

15.30 – 16.00 Coffee break

16.00 – 17.30 1: Hyperbolic geometry and differential geometry II.

Room A

Isospectral pairs of metrics on balls spheres and other manifolds with different local geometries

SZABO Zoltan I.

Nonlinear Problems in Geometry: A Progress Report

KAZDAN Jerry L.

Certain metrics on $\mathbb{R}^3 \times \mathbb{R}^+$

OTSUKI Tominosuke

16.00 – 17.30 3: Hyperbolic manifolds and groups II.

Room B

Canonical flattening of hyperbolic manifolds

AITCHISON Iain

Andreev's Theorem and Euler Characteristics of 4-manifolds

DAVIS Michael – OKUN Boris

Double limit Theorem for Schottky Groups

KIM Inkang - OHSHIKA Ken`ichi

16.00 – 17.30 5: Hyperbolic geometry and discrete geometry II.

Room C

Symmetric trivalent graphs embedded in hyperbolic honeycombs

WEISS Asia Ivic - MONSON Barry

Tilings by reducible and irreducible parallelotopes

ORDINE Andrei

Gain (voltage) graphs and tilings of manifolds

RYBNIKOV Konstantin

16.00 – 17.30 6: Applications of hyperbolic geometry and its extensions in physics and other sciences II.

Room D

On the classification of fundamental physical theories with utilisation of Bolyai-parameter of first Non-Euklidean geometry

TORÓ Tibor

Geometry, Negative Curvature, and Dynamics: From Bolyai to Sinai
SIMÁNYI Nándor

Vacuum general relativity from a Chern-Simons functional
SZABADOS László B.

16.00 – 17.30 **11: Applications of hyperbolic geometry in combinatorics and in computational geometry II.**
Room E

Hyperbolic and Projective Geometry in Constraint Programming for CAD
SALIOLA Franco - WHITELEY Walter

Two applications of the splitting method: the 3D tiling of the rectangular dodecahedra and cellular automata on infinigrids of IH2
MARGENSTERN Maurice - SKORDEV Gencho - GRIGORIEFF Serge

Hochschild homology of Clifford algebras and scissors congruences
GREBET Jean-Guillaume

18.00 – 20.00 **Welcoming Reception**
Hungarian Academy of Sciences
Picture Gallery Hall, 3rd floor

Tuesday, 9 July

09.00 – 10.30 Plenary session III.

Room A

Hyperbolic Spaces and Graph Representations

LOVÁSZ László

Hyperbolic Structures, Similarities and Dissimilarities with Euclidean Structures

CONNELLY Robert

10.30 – 11.00 Coffee break

11.00 – 12.30 Plenary session IV.

Room A

The symmetry of optimally dense packings

RADIN Charles

Visualizing Hyperbolic Geometry

WEEKS Jeffrey R.

12.30 – 14.00 Lunch break

14.00 – 15.30 1: Hyperbolic geometry and differential geometry III.

Room A

Loops and groups

STRAMBACH Karl

Constructions of Complex and Minimal Submanifolds of a Quaternionic Kähler Manifold: A Report

MARCHIAFAVA Stefano

Hyperbolic geometry, Bol loops and symmetric spaces

NAGY Péter Tibor

14.00 – 15.30 3: Hyperbolic manifolds and groups III.
Room B

On the thin part of hyperbolic manifolds
KELLERHALS Ruth

Hyperbolic structure on a complement of tori in the 4-sphere
IVANSIC Dubravko

Eigenvalue fields for hyperbolic manifolds
HAMILTON Emily

14.00 – 15.30 5: Hyperbolic geometry and discrete geometry III.
Room C

Flexible Octahedra in the Hyperbolic Space
STACHEL Hellmuth

Flexible polyhedra in the Minkowski 3-space
ALEXANDROV Victor

Moveable Models of Polyhedra
RÖSCHEL Otto

14.00 – 15.30 7: Applications of non-Euclidean geometry in relativity I.
Room D

Spacetime canonical gravity
KUCHAR Karel V.

Hyperbolic Geometry in Special and General Relativity
URBANTKE Helmuth K.

Twistor theory and the Quantum Hall Effect in four dimensions
SPARLING George A. J.

14.00 – 15.30 12: Hyperbolic geometry and foundations of geometry I.
Room E

The axiomatic foundation of hyperbolic and absolute geometry
PAMBUCCIAN Victor

The Generating Motions and the Convexity of a well-known Curve in
Hyperbolic Geometry
RUOFF Dieter

Geometries with several non-secants through a point with respect to a given
straight line
KLOTZEK Benno

15.30 – 16.00 *Coffee break*

16.00 – 17.30 1: Hyperbolic geometry and differential geometry IV.
Room A

Second order Contact of Minimal Surfaces
DUISTERMAAT J.J.

Moduli for Spherical Maps and Minimal Immersions of Homogeneous
Spaces
TOTH Gabor

16.00 – 17.30 3: Hyperbolic manifolds and groups IV.
Room B

On isometry group of cyclic branched coverings of 2-bridge knots
VESNIN Andrei

Representation of (1,1)-knots via the mapping class group of the twice
punctured torus
MULAZZANI Michele - CATTABRIGA Alessia

16.00 – 17.30 5: Hyperbolic geometry and discrete geometry IV.
Room C

Relaxation, new combinatorial and polynomial algorithms for the linear
feasibility problem
BETKE Ulrich

Extremality Properties of Regular Simplices in Hyperbolic Space
PEYERIMHOFF Norbert

A volume formula for generalized hyperbolic tetrahedra
USHIJIMA Akira

16.00 – 17.30 7: Applications of non-Euclidean geometry in relativity II.
Room D

Charged relativistic fluid configurations
FODOR Gyula

Evolution of spins in binary systems
VASÚTH Mátyás

The sensitive dependence on initial conditions in terms of curvature invariants
SZYDLOWSKI M. - KRAWIEC A.

16.00 – 17.30 12: Hyperbolic geometry and foundations of geometry II.
Room E

The analytic continuation of hyperbolic space
CHO Yunhi - KIM Hyuk

On the Hausdorff series of local analytic Bol loops
NAGY Gábor P.

Wednesday, 10 July

09.00 – 10.30 **Plenary session V.**
Room A

Hyperbolic reflection groups
VINBERG E.B.

Optimizing the geometry of cell patterns in the plane
CANNON Jim

10.30 – 11.00 *Coffee break*

11.00 – 12.30 **Plenary session VI.**
Room A

Geometry of Polyhedra
RIVIN Igor

The Geometry of Hyperbolic Manifolds of Dimension at least Four
RATCLIFFE John G.

12.30 – 14.00 *Lunch break*

14.00 – 15.30 **1: Hyperbolic geometry and differential geometry V.**
Room A

Variational Problems in Higher-Order Hamilton Spaces
MIRON Radu

On the rectifiability condition of a second order ordinary differential equation
BÁCSÓ Sándor

Geodesics of two-step nilpotent Lie groups
HOMOLYA Szilvia

14.00 – 15.30 **3: Hyperbolic manifolds and groups V.**
Room B

Hausdorff dimension of diophantine geodesics in hyperbolic manifolds
PAULIN Frederic

Topological mixing in CAT(-1) spaces
CHARITOS Charalambos - TSAPOGAS Georgios

Hyperbolic Coxeter groups of large dimension
JANUSZKIEWICZ Tadeusz - SWIATKOWSKI Jacek

14.00 – 15.30 5: Hyperbolic geometry and discrete geometry V.
Room C

Packings of finite collections of compact sets
BLEICHER Michael N. - HEPPEŠ Aladár

Four Sphere Packing Problems
WILLS J. M.

On the Structure of Densest Finite Packings
SCHÜRMAN Achill

14.00 – 15.30 8: Non-Euclidean geometry – foundations of physics – foundations of mathematics I.
Room D

Deciding Arithmetic in Malament-Hogarth Spacetimes
HOGARTH Mark

Non-Turing computations via Malament-Hogarth space-times
ETESI Gábor - NÉMETHI István

Logic and relativity
NÉMETHI István

14.00 – 15.30 13: The role of hyperbolic geometry in the history and philosophy of mathematics and in cultural history
Room E

Misconceptions about Isometrically Embedding the Hyperbolic Plane in Euclidean 3-Space
HENDERSON David W.

Pictures from the History of Non-Euclidean Geometry in Hungary
MUNKÁCSY Katalin

Bolyai's Introduction to Non-Euclidean Geometry as an Arguing According to Non-Classical Logic

DRAGO Antonio

15.30 – 16.00 *Coffee break*

16.00 – 17.30 1: Hyperbolic geometry and differential geometry VI.

Room A

Holonomy, geometry and topology of grassmann manifolds

BOKAN N. - MATZEU P. - RAKIC Z.

Rank two hypersurfaces of hyperbolic spaces and their intrinsic analogues in Riemannian geometry

KOWALSKI Oldrich

Comparison theorems on volume and d-mean curvature for convex hypersurfaces in Hyperbolic and Hadamard manifolds

MIQUEL Vicente

16.00 – 17.30 3: Hyperbolic manifolds and groups VI.

Room B

Hyperbolic manifolds with convex boundary

SCHLENKER Jean-Marc

A unified description of the hyperbolic symmetric spaces

KORÁNYI Ádám

On an infinitive hyperbolic orbifold series

SZIRMAI Jenő

16.00 – 17.30 5: Hyperbolic geometry and discrete geometry VI.

Room C

Finite coverings by equal hyperbolic circles

BÖRÖCZKY Károly Jr.

Optimally dense and completely saturated packings of hyperbolic space

BOWEN Lewis

On Fejes Tóth's Solidity Conjecture

HEPPES Aladár

16.00 – 17.30 8: Non-Euclidean geometry – foundations of physics – foundations of mathematics II.

Room D

A system of axioms for hyperbolic geometry

SCHUTZ John W.

Lorentz's theory and relativity theory are completely identical

SZABÓ E. László

Decidability and undecidability issues in special relativity theory

VÁLYI Sándor

16.00 – 17.30 14: Teaching and visualisation of hyperbolic geometry I.

Room E

Visualising new universes: Learning hyperbolic geometry in the context of a computational microworld

STEVENSON Ian

Introduction to hyperbolic geometry using Cabri

LISTER Tim

Teaching the Poincaré Model of Hyperbolic Geometry with the Help of Sketchpad, Version 4

RADNAI-SZENDREI Julianna

Thursday, 11 July

09.00 – 10.30 Plenary session VII.
Room A

Non-Euclidean Analysis and Radon Transforms
HELGASON Sigurdur

The Exponent of Convergence of Kleinian Groups: on a Theorem of Bishop and Jones
STRATMANN Bernd

10.30 – 11.00 Coffee break

11.00 – 12.30 Plenary session VIII.
Room A

Placing the Hyperbolic Geometry of Bolyai and Lobachevski Centrally in Special Relativity Theory: An Idea Whose Time Has Come Back
UNGAR Abraham A.

Measuring the Curvature of the Universe
SZALAY A.S.

12.30 – 14.00 Lunch break

14.00 – 15.30 1: Hyperbolic geometry and differential geometry VII.
Room A

L.c.a.K.-structure and almost contact structure
KASHIWADA Toyoko

Roulettes in Hyperbolic Planes with Constant Curvature
BJELICA Momcilo

Homogeneity of isoparametric hypersurfaces and of compact generalized polygons
GRUNDHÖFER Theo

14.00 – 15.30 3: Hyperbolic manifolds and groups VII.
Room B

Classification of non-free two-parabolic generator Kleinian groups
AGOL Ian

Automorphisms groups and arithmeticity of Riemann surfaces
BELOLIPETSKY Mikhail

Two-generator hyperbolic orbifolds
KLIMENKO Elena - KOPTOVA Natalia

14.00 – 15.30 5: Hyperbolic geometry and discrete geometry VII.
Room C

The Beckman Quarles Theorem for rational d-spaces
ZAKS Joseph

Selected topics in discrete and hyperbolic geometries
BEZDEK András

Circle-covering of the Hyperbolic Plane
BÖRÖCZKY Károly

14.00 – 15.30 8: Non-Euclidean geometry – foundations of physics – foundations of mathematics III.
Room D

On Gödel's rotating universe and the logical analysis of relativity
MADARÁSZ Judit - TÓKE Csaba

Relativity and logic
ANDRÉKA Hajnal

An axiomatic approach for relativistic geometries
SÁGI Gábor

14.00 – 15.30 14: Teaching and visualisation of hyperbolic geometry II.
Room E

Trileg mini - geometry as a didactical tool
HEJNY Milan

The Role of Physical Models in Teaching Hyperbolic Geometry
TAIMINA Daina

Hyperbolic Exploration in a Dynamic Klein Model
FLESNER David E.

15.30 – 16.00 Coffee break

16.00 – 17.30 1: Hyperbolic geometry and differential geometry VIII.

Room A

Geodesic Bol Loops of Non-Euclidean Spaces

FIGULA Ágota

Growth tightness of negatively curved manifolds

SAMBUSETTI Andrea

Finsler geometry in the tangent bundle

TAMÁSSY Lajos

16.00 – 17.30 3: Hyperbolic manifolds and groups VIII.

Room B

Bounding Measures of sets in non-Euclidean spaces

PRÉKOPA András

Volumes and isometry groups of hyperbolic 3-manifolds

MEDNYKH Alexander D.

Classification of Tile-Transitive 3-Simplex Tilings and their Realizations in Homogeneous Geometries

MOLNÁR Emil - PROK István - SZIRMAI Jenő

16.00 – 17.30 5: Hyperbolic geometry and discrete geometry VIII.

Room C

Recent developments concerning the prime-power conjecture for finite projective planes

BLOKHUIS Aart

Touching pairs problems and edge-isoperimetric inequalities

BRASS Peter

On thickness of $\langle p, q \rangle$ point systems

HORVÁTH Jenő

16.00 – 17.30 9: Hyperbolic geometry and its applications

Room D

Two infinite sequences of perfect lattice polytopes

ERDAHL Robert

Are the gravitational waves quantised?

LOVAS István

Janos Bolyai's arithmetic problem and its extensions

KISS Elemér - SÁNDOR József

16.00 – 17.30 14: Teaching and visualisation of hyperbolic geometry III.

Room E

Art and the Visualization of Hyperbolic Geometry

DUNHAM Douglas

Teaching Bolyai's 'Appendix' Through Comparative Geometry

LÉNÁRT István

20.00 – 22.00 Banquet

“EUROPA” Boat

09.00 – 10.30 Plenary session IX.

Room A

Black hole perturbations

PERJÉS Zoltán

The Bolyai's and the *-s

BENKŐ Samu

10.30 – 11.00 Coffee break

11.00 – 12.30 Plenary session X.

Room A

Janos Bolyai's New Face

KISS Elemér

To Be or Not to Be: the non-Euclidean Controversy and the Reception of the non-Euclidean Geometry

TOTH Imre

12.30 – 14.00 Lunch break

14.00 – 15.30 1: Hyperbolic geometry and differential geometry IX.

Room A

Homogeneous foliations on hyperbolic spaces

BERNDT Jürgen

How far does hyperbolic geometry generalize?

SZENTHE János

14.00 – 15.30 3: Hyperbolic manifolds and groups IX.

Room B

Partition surfaces and ovals in topological translation planes

LÖWEN Rainer

Tilings of the Hyperbolic Space by Some Series of Truncated Simplices

STOJANOVIC Milica

Isoperimetric inequalities for hyperbolic and spherical polyhedra and link orbifolds

PASHKEVICH Marina

14.00 – 15.30 5: Hyperbolic geometry and discrete geometry IX.

Room C

The minimum area of a simple polygon with given side lengths

BÖRÖCZKY K. - KERTÉSZ G. - MAKAI E. Jr.

Hyperbolic Gameboards

HARBORTH Heiko

Asymptotic behavior of convex sets in hyperbolic plane

GALLEGO Eduardo - SOLANES Gil

14.00 – 15.30 10: Teaching and visualisation of hyperbolic geometry I.

Room D

The elements of the Bolyai geometry in teacher's training and in the school

HORVÁTH Jenő

What ought to be Taught about Janos Bolyai in the Secondary Schools?

KÁLMÁN Attila

Illustrated Bolyai Geometry (A computer software utilising the tools of dynamic geometry)

SZILASSI Lajos

Session running in Hungarian, without translation.

14.00 – 15.30 15: The life and works of Janos Bolyai I.

Room E

The History of Bolyai Family

OLÁH-GÁL Róbert

The Bolyai Town and Cult

BARABÁSSY Sándor

Development of the Bolyai cult

KOLUMBÁN József

Session running in Hungarian, without translation.

15.30 – 16.00 *Coffee break*

16.00 – 17.30 2: Radon transforms and integral geometry in hyperbolic spaces
Room A

Inversion of the Radon transform on Grassmann manifolds
GRINBERG Eric - RUBIN Boris

Integral geometry and Crofton formulas in non-euclidean spaces
FERNANDES Emmanuel

16.00 – 17.30 4: The heritage of Bolyai I.
Room B

Tetrahedron Theorem in Bolyai-Lobachevsky Geometry
WAGNER István

Bolyai the Military Engineer
ÁCS Tibor

An American mathematician for János Bolyai
FILEP László

Session running in Hungarian, without translation.

16.00 – 17.30 4: The heritage of Bolyai II.
Room C

A World in a Grain of Sand
MÁTHÉ Márta

The Bolyai-cult in Marosvásárhely
MÁRTON Annamária

The Great Master's Apostles (Disciples of Farkas Bolyai)
BODÓ Előd Barna

Janos Bolyai pioneer of the new theory of gravitation
GÁBOS Zoltán

Session running in Hungarian, without translation.

16.00 – 17.30 10: Teaching and visualisation of hyperbolic geometry II.

Room D

Teaching Bolyai Geometry for Disadvantaged Pupils

MUNKÁCSY Katalin

Non-Euclidean geometries in teacher's training? Yes!

MAKARA Ágnes

Bolyai geometry - for the public

LÉNÁRT István

Session running in Hungarian, without translation.

16.00 – 17.30 15: The life and works of Janos Bolyai II.

Room E

Diseases of Bolyai Janos revealed from medical documents of his time

JUNG János

Role of Göttingen in Farkas Bolyai's and János Bolyai's lives

GAJZÁGÓ Mária Irma

The foundation of hyperbolic differential geometry in the Appendix

WESZELY Tibor

Session running in Hungarian, without translation.