

Bridges 2010 Schedule

Welcome to the Bridges Pécs 2010 Conference, the largest and most exciting in our thirteen-year history. This schedule is subject to change, so please check for announcements.

Room Key: 1 = Hotel Palatinus, Bartók Hall.

2 = Pécs Cultural Center (Dominikánus Ház) lecture hall, 2nd floor

3 = Pécs Cultural Center (Dominikánus Ház) lecture hall, 1st floor

4 = Pécs Cultural Center (Dominikánus Ház) small lecture room, 2nd floor

The curated art exhibition is at Hotel Palatinus, Nádor Hall.

The informal display room of works brought by participants is in the Pécs Cultural Center.

There will be an on-going Zometool construction on the first floor of the Pécs Cultural Center on Saturday and Sunday, then at the Education Center after that.

Morning coffee breaks are at the hotel; afternoon coffee breaks are at the Cultural Center.

For meals, participants are on their own to explore local restaurants.

The last speaker in each session is the moderator, listed in brackets below, and is responsible for maintaining a tight schedule. The conference is being held in two different buildings, a block apart, so participants need five minutes free before each talk begins in case they want to switch rooms and possibly buildings. Regular talks are 20-22 minutes long, with 3-5 minutes allowed for questions and 5 minutes for the switch. Short talks are about 8 minutes long with 2 minutes allowed for questions and 5 to switch. Note that these 5-minute breaks are not needed at the end of plenary talks (45 minutes) and workshops (90 minutes).

All four rooms are equipped with a data projector and a computer with PowerPoint, CD drive, and USB port. Presenters can bring a PowerPoint file on CD or USB memory stick, or can use their own laptop to give talks.

Welcome to Bridges. We hope you enjoy the conference.

Day 1. Saturday, July 24

Sat July 24th 8:00 AM – 11:30 AM Registration

The registration desk is in the Hotel Palatinus. Pick up your name-tag and Proceedings.

Sat July 24th 9:00 AM – 11:00 AM Plenary Session

Room 1 [Hart and Sarhangi]

9:00 Welcoming Remarks

9:30 Plenary Talk: László Lovász. Visual and Logical Beauty in Mathematics

10:15 Plenary Talk: Julian Voss-Andreae. Quantum Sculpture: Art Inspired by the Deeper Nature of Reality

Sat July 24th 11:00 AM – 12:30 PM Art Exhibition Reception [Fathauer and Greenfield]

11:00 Art Exhibition Reception. Sponsored by Journal of Mathematics and the Arts, Taylor and Francis Publications. Artists, please spend some time near your artworks to answer questions of viewers.

Sat July 24th 12:30 PM – 2:30 PM Lunch Break

Participants are on their own to explore local restaurants.

Sat July 24th 2:30 PM – 4:00 PM Four Parallel Sessions

Room 1 Regular Papers [Roelofs]

2:30 Tom Verhoeff and Koos Verhoeff. Branching Miter Joints: Principles and Artwork

3:00 Doug Burkholder. Brunnian Weavings

3:30 Rinus Roelofs. About Weaving and Helical Holes

Room 2 Regular Papers [Glaz]

- 2:30 Tatiana Bonch-Osmolovskaya. Some Possibilities of Russian Combinatorial Literature
3:00 Carsten Miller. Everything is Number – Mathematics Meets Arts
3:30 Sarah Glaz. Poetry Inspired by Mathematics

Room 3 Short Papers [Varland]

- 2:30 Jesús Hernando. Alhambra's Nazary Single Tile Patterns Guided Tour
2:45 Koert Feenstra. Moiré II
3:00 Anna Virágvölgyi. Tile Color Matching Using Simple Universal Cycles
3:15 John Hiigli. Intertransformability
3:30 Daniel Lorincz, Brigitta Szilagyí and Ágnes Urbin. Perspective with Six Vanishing Points
3:45 Joel Varland. The Visualization of Flow

Room 4 Workshop

- 2:30 Janos Saxon-Szász. Poly-Universe – Knowledge Produce Toy Family

Sat July 24th 4:00 PM – 4:30 PM 30-Minute Break

Coffee break at the Cultural Center.

Sat July 24th 4:30 PM – 6:00 PM Four Parallel Sessions

Room 1 Regular Papers [Kaplan]

- 4:30 Jean-Marc Castera. From the Angle of Quasicrystals
5:00 Elaine Krajenke Ellison and John Sharp. Tiled Torus Quilt with changing tiles
5:30 Craig Kaplan. Curve Evolution Schemes for Parquet Deformations

Room 2 Regular Papers [B.G. Thomas]

- 4:30 Sandor Kabai. 30 Cubes on a Rhombic Triacanthedron
5:00 Michael Longuet-Higgins. On Growth, Form and Yin-Yang
5:30 B.G. Thomas. Viruses and Crystals: Science Meets Design

Room 3 Short Papers [Zielinski]

- 4:30 Nicholas Abruzzo. Toward a Tesseract Theater
4:45 Julie Varland. The Qualitative and Quantitative World of Robert Wilson's Theater
5:00 Ferhan Kiziltepe. Review of a Cinema Film from the Perspective of Symmetry: "The Pillow Book"
5:15 Nahid Tootoonchi. Mathematical Interpretation of Graphic and Poster designs in Iran
5:30 Andreia Hall, Rosa Amélia Martins and Carlota Simões. Exploring Symmetry in Elementary Schools
5:45 Daylene Zielinski. Beautiful Homework: The Artists' Critique Group in the Mathematics Classroom

Room 4 Workshop

- 4:30 Simon Morgan, Jaqueline Sack and Eva Knoll. Creative Learning with Giant Triangles

Sat July 24th 6:00 PM – 8:00 PM Long Break, Early Dinner

Sat July 24th 8:00 PM – 9:30 PM Short Math/Art Film Fest

- Room 1 Short Math/Art Film Fest [Sarhangi]

Sat July 24th 9:30 PM Dinner

Day 2. Sunday, July 25

Sun July 25th 8:30 AM – 9:25 AM Registration

The registration desk is in the Hotel Palatinus. Pick up your name-tag and Proceedings.

Sun July 25th 9:30 AM – 11:00 AM Four Parallel Sessions

Room 1 Regular Papers [Sequin]

- 9:30 Hideki Tsuiki. Imaginary Cubes --- Objects with Three Square Projection Images
10:00 László Vörös. Specialties of Models of the 6-Dimensional Cube
10:30 Carlo H. Sequin. My Search for Symmetrical Embeddings of Regular Maps

Room 2 Regular Papers [Hall]

- 9:30 Russell Hendel. Biblical Cantillations
10:00 János Malina. Amateur and Pioneer: Simon Stevin (ca. 1548–1620) about Music Theory
10:30 Chirashree Bhattacharya and Rachel Wells Hall. Geometrical Representations of North Indian Thāts and Rāgs

Room 3 Short Papers [Sullivan]

- 9:30 Bih-yaw Jin, Chern Chiang and Chia-Chin Tsoo. Constructing Molecules with Beads: The Geometry of Topologically Nontrivial Fullerenes
9:45 Jonathan McCabe. Cyclic Symmetric Multi-Scale Turing Patterns
10:00 Charles Gunn. Ribbon Edges: a New Impulse for Geometric Sculpture
10:15 Tibor Tarnai. Ivory Polyhedra Turned on a Lathe
10:30 Kenneth Brecher. Anamorphic, Kaleidoscopic and Sculptural Mirror Reflections
10:45 John Sullivan. Minimal Flowers

Room 4 Workshop

- 9:30 Reza Sarhangi. A Workshop in Geometric Constructions of Mosaic Designs

Sat July 24th 11:00 PM – 11:30 PM 30-Minute Break

Coffee break at the Hotel Palatinus.

Sun July 25th 11:30 AM – 12:15 PM Plenary Session [Kaplan]

- Room 1 Angela Vierling-Claassen. Models of Surfaces and Abstract Art in the Early 20th Century

Sun July 25th 12:15 PM – 2:30 PM Lunch Break

Sun July 25th 2:30 PM – 4:00 PM Four Parallel Sessions

Room 1 Regular Papers [Fathauer]

- 2:30 Paul Gailiunas. A Fractal Celtic Key Pattern?
3:00 Darrah Chavey. Strip Symmetry Groups of African Sona Designs
3:30 Robert Fathauer. Some Three-dimensional Self-similar Knots

Room 2 Regular Papers [Field]

- 2:30 Gary Greenfield. On Generating Dot Paintings in the Style of Howard Arkley
3:00 James Mai. Compositional Constraints of Simultaneous Color Contrast: Towards a Classification of Types
3:30 Michael Field. Using Mathematics in Art

Room 3 Short Papers [Verbiese]

- 2:30 Zsolt Lengvarszky. An Origami Puzzle of Intersecting Cubes
2:45 Gail Kaplan. Parabolic Connections Linking History, Art, Acoustics, and Mathematics
3:00 Eleonóra Stettner. Playing with the Möbius Band
3:15 Jacques Beck. Multisculpture or Polymorphic Sculpture: A Different Approach to Sculpture to Challenge and Nurture Reflection Both in the Sculptor and in the Viewer
3:30 Louise Mabbs. Borromean Rings & Three-fold Knots
3:45 Samuel Verbiese. The K5 Graph Turned into a Golden Pyramid

Room 4 Workshop

- 2:30 E.B. Meenan and B.G. Thomas. Escher-type Tessellations and Pull-up Polyhedra: Creative Learning for the Classroom

Sun July 25th 4:00 PM – 4:30 PM 30-Minute Break

Coffee break at the Cultural Center.

Sun July 25th 4:30 PM – 6:00 PM Four Parallel Sessions

Room 1 Regular Papers [Carlson]

- 4:30 Stan Spencer. Creating and modifying Images using Newton's Method for Solving Equations
- 5:00 Joel Langer. The Vitruvian Figure of Eight
- 5:30 Christopher Carlson. Interactive Exploration of Corporate Logos: From Mercedes Benz to Sea Creatures

Room 2 Short Papers [Bica]

- 4:30 Lajos Szilassi. Locally and Globally Regular Toroids With Less than 16 Hexagonal Faces
- 4:45 Dave McCooley. Models of Locally Regular Heptagonal Dodecahedra
- 5:00 Ma. Louise Antonette De Las Penas, Eden Delight Provido and Rene Felix. On Torsion Free Subgroups of p^2 and Related Colored Tilings
- 5:15 Toshihiro Bando, Masamichi Kobayashi and Yuri Sakurai. Matière of Painting Analyzed by Wavelet Transform
- 5:30 Tim Boykett. Aesthetic and Mathematical Research: A Comparison with Two Examples
- 5:45 Ion Bica. Oscillatory Solutions for Sine-Gordon Equation

Room 3 <empty, set up for JMA meeting>

Room 4 Workshop

- 4:30 Vi Hart. Mathematical Balloon Twisting for Education

Sun July 25th 6:00 PM – 8:00 PM Long Break, Early Dinner

(The Journal of Mathematics and the Arts editorial board business meeting. Board members only. Room 3.)

Sun July 25th 8:00 PM – 9:30 PM Theater Night

Theater Night at the Bóbita Puppet Theater.

The Schaffer and Stern Dance Ensemble performs The Secret Life of Squares

Sun July 25th 9:30 PM Dinner

Day 3. Monday, July 26
“Hungarian Day”

Mon July 26th 8:30 AM – 8:55 AM Registration

The registration desk is in the Hotel Palatinus. Pick up your name-tag and Proceedings.

Mon July 26th 9:00 AM – 12:00 PM Plenary Talks

Room 1 Hungarian Day [Darvas]

- 9:00 György Darvas. Projection of Point Sets to a Lower Dimension with Applications in the Arts
- 9:30 István Lénárt. Gauss, Bolyai, Lobachevsky – in general education? (Hyperbolic Geometry as Part of the Mathematics Curriculum)
- 10:00 Ljiljana Radovic and Slavik Jablan. Vasarely's Work – Invitation to Mathematical and Combinatorial Visual Games
- 10:30 30-Minute Coffee Break
- 11:00 Devrim İşikkaya. Early Modern Design Layouts in Breuer's Design
- 11:30 Antal Kelle. Artformer Geometry
- 11:45 Istvan Orosz. Art with a Double Meaning

Mon July 26th 12:00 PM – 2:00 PM Lunch Break

Mon July 26th 2:00 – 3:00 PM Plenary Presentation

Room 1 Plenary presentation: Erno Rubik. The System Approach and Design

Mon July 26th 2:00 PM – 8:00 PM Outdoor Family Day

Family Day. Outdoor Mathematical Art Exhibits and Workshops at Promenade Square and other locations, or in case of rain, at Pécs Cultural Center (Dominikánus Ház). See separate listing of activities.

Mon July 26th 9:00 PM – Inner Solis Concert

At the Culture Garden. Dynamic music and attractive visual effects by Lajos Sebestyén Szabó and Alex Popov.

Mon July 26th 8:00 PM – 12:00 PM Dinner

**Day 4. Tuesday, July 27
Excursion Day**

Tues July 27th 9:00AM – 6:00 PM

9:00 Trip to Zsolnay Porcelain Museum, Vasarely Museum, ScienTile Exhibition in the Zsolnay Ceramic Factory, Blum Winery and Restaurant in Villánykövesd, open air Stone Sculpture Park of Nagyharsány, and exhibition at the Cathedral of Pécs. Meet in front of the Zsolnay Porcelain Museum at 9:00 AM.
Register for the excursion beforehand at the conference registration table in the Hotel Palatinus.
There is a separate fee charged for the excursion and the lunch.

Tues July 27th 10:00 PM Informal Music Night

Room 2 Informal performances by Conference Participants. Wine will be provided. [Vi Hart]
Contact Vi if you would like to be on the schedule to perform.

Day 5. Wednesday, July 28

Wed July 28th 9:30 AM – 11:00 AM Four Parallel Sessions

Room 1 Regular Papers [Schwabe]

9:30 Bjarne Jespersen. Geometric Tools for the Magic Woodcarver

10:00 Chiara Tuffanelli. Mirrors and spheres: The Geometry within the “Tall Tree and the Eye”

10:30 Caspar Schwabe. Eureka and Serendipity: The Rudolf von Laban Icosahedron and Buckminster Fuller’s Jitterbug

Room 2 Short Papers [Farsi]

9:30 Mike Kostner, Franz Schubert and Carola-Bibiane Schoenlieb. Chaos, Noise, Randomness and Coincidence as Constitutional for Generative Art

9:45 Pedro Campos and Ana Isabel Portugal. Seeing with the Mind: From the Matrix into the Cloud

10:00 Zoltán Juhász. Classification and Comparison of Different Folk Music Traditions Using Self Learning Algorithms

10:45 Robert McDermott. Revisiting Mat Board Models for A Physical Proof of Five and Only Five Regular Solids

11:00 Philippe Bootz. Use of Pseudo Functions in Digital Creation

11:45 Carla Farsi. Mathematical Models for Argentine Tango

Room 3 <empty>

Room 4 Workshop

9:30 Karl Schaffer and Erik Stern. Workshop on Mathematics and Dance

Wed July 28th 11:00 AM – 11:30 AM 30-Minute Break

Coffee break at the Hotel Palatinus.

Wed July 28th 11:30 AM – 12:15 PM Plenary Presentation [Sequin]

Room 1 Penousal Machado. Expressions, Assemblages and Grammars. And Bridges 2011 Announcement.

Wed July 28th 12:15 PM – 2:30 PM Lunch Break

Wed July 28th 2:30 PM – 4:00 PM Four Parallel Sessions

Room 1 <empty, for music night preparation>

Room 2 Short and Regular Papers [Barrallo]

2:30 Maria da Graça Marques and Marília Pires. Creating Cartoon Images with Functions: A Pedagogical Project

2:45 Eliana Manuel Pinho. Ad Quadratum Ad Infinitum

3:00 Francesco De Comite. A General Procedure for the Construction of Mirror Anamorphoses

3:30 Javier Barrallo. Expanding the Mandelbrot Set into Higher Dimensions

Room 3 Short Papers [Brothers]

2:30 Henry Segerman. The Sunflower Spiral and the Fibonacci Metric

2:45 David Reimann. Patterns from Archimedean Tilings Using Generalized Truchet Tiles Decorated with Simple Bezier Curves

3:00 János Erdős. Sphaerica, Interactive Spherical Geometry Software

3:15 Jan Marcus. Cylinder Anamorphosis of Impossible Structures.

3:30 Tamás F. Farkas. Impossible Ornaments

3:45 Harlan Brothers. Mandel-Bach Journey: A Marriage of Musical and Visual Fractals

Room 4 Workshop

2:30 Zsófia Ruttkay. Programming for Artists with Processing. (Bring a laptop for maximum participation.)

Wed July 28th 4:00 PM – 4:30 PM 30-Minute Break

Coffee break at the Cultural Center.

Wed July 28th 4:30 PM – 6:00 PM Four Parallel Sessions

Room 1 <empty, for music night preparation>

Room 2 Regular Papers [Toussaint]

4:30 Douglas Dunham. Hyperbolic Vasarely Patterns

5:00 Dirk Huylebrouck. Regular Polyhedral Lattices of Genus Two: 11 Platonic Equivalents?

5:30 Yang Liu and Godfried Toussaint. Types of Repetition and Multistable Perception in the Frieze Patterns on the Marble Pavement of the Cathedral of Siena

Room 3 Abstracts. Short presentations not in the printed Proceedings: [Kirchner]

4:30 Ruth Mateus-Berr Maths, Maths Goes Design - Post It!

4:40 Mehdi Nasrin, Bridging Architecture and Philosophy: The Influence of the Bauhaus on Logical Empiricism

4:50 Robert E. Wendrich, RSFF1: Exploring Intuitive Design through Tangible Real & Virtual Real

5:00 Hourieh Mashayekh and Hayedeh Mashayekh, An introduction to Architectural Images in Hafez's Poetry

5:10 Erich Neuwirth, Musical Structures as a Vehicle to Teach Computer Science Concepts

5:20 Mary Kay Kirchner and Reza Sarhangi, Connecting the Art of Navajo Weavings to Secondary Education

5:30 "Open Mike" session for other participants to make brief presentations.

Room 4 Workshop

4:30 Janka Szilagyí and Jill Zarazinski. Using Roller Coasters to Bridge Mathematics, Science and the Arts

Wed July 28th 6:00 PM – 8:00 PM Long Break, Early Dinner

Wed July 28th 8:00 – 10:00 PM Music Night

Room 1 Music Night [Tymoczko]