SCHEDULE FOR THE BRIDGES ENSCHEDE CONFERENCE

SESSION	SLOT	TIME	TYPE	AUTHORS AND TITLES

SATURDAY JULY 27, 2013
REGISTRATION: Saxion University July 26 4 PM - 6 PM   AND   Grote Kerk July 27, 8:30 AM - 9:30 AM

Grote Kerk, Old Market				Morning 9:30am - 12:00 noon SESSION I-1
27 AM 1	1	9:30		Marijke van Hees, Alderman of Culture and Economy, Enschede, the Netherlands Dave H.A. Blank and Reza Sarhangi *Welcoming Remarks (No registration during this time)*
27 AM 1	2	10:00	PLEN	Harold Kroto *An Arts Project Uncovering an Important Scientific Advance*
27 AM 1	3	10:40	PLEN	Koen van Mensvoort *Next Nature*
27 AM 1	4	11:20	PLEN	Jarke J. van Wijk *Math for Visualization, Visualizing Math*

2013 Art Exhibition Opening and Light Lunch in Saxion University 12:00pm - 2:00pm

Saxion University Room 1				Midday 2:00pm – 3:30pm SESSION I-2 Chair: Robert Bosch
27 PM 2	1	2:00	REG	Tiffany C. Inglis and Craig S. Kaplan *Animating Line-based Op Art*
27 PM 2	2	2:30	REG	Kristóf Fenyvesi, Slavik Jablan and Ljiljana Radovic *Following the Footsteps of Daedalus: Labyrinth Studies Meets Visual Mathematics*
27 PM 2	3	3:00	REG	Robert Bosch, Sarah Fries, Mäneka Puligandla and Karen Ressler *From Path-Segment Tiles to Loops and Labyrinths*

Saxion University Room 2				Midday 2:00pm – 3:30pm SESSION I-3 Chair: Anne Burns
27 PM 3	1	2:00	REG	Bernat Espigulé Pons *Unfolding Symmetric Fractal Trees*
27 PM 3	2	2:30	REG	Abdalla G. M. Ahmed *AA Weaving*
27 PM 3	3	3:00	REG	Anne Burns *Removing Tremas with a Rational Function*

Saxion University	Room 3			Midday 2:00pm – 3:30pm	SESSION I-4	Chair: Kenneth Brecher
27 PM 4	1	2:00	SHRT	**Ester Dalvit** *Braids: A Mathematics Documentary*		
27 PM 4	2	2:15	SHRT	**Mara Alagic and Glyn Rimmington** *Google Earth: Mathematical Art Forms*		
27 PM 4	3	2:30	SHRT	**Luke Wolcott and Elizabeth McTernan** *Exquisite Failure: The Telescope as Lived Object*		
27 PM 4	4	2:45	SHRT	**Wout Zweers, Valerie Zwart and Onno Bokhove** *Making Waves: Visualizing Fluid Flows*		
27 PM 4	5	3:00	SHRT	**Curtis Palmer** *Retrograde Rotation Illusions in Turntable Animations of Concentric Icosahedral Domains*		
27 PM 4	6	3:15	SHRT	**Kenneth Brecher** *Mathematics, Art and Science of the Pseudosphere*		

Saxion University	Room 4			Midday 2:00pm – 3:30pm	SESSION I-5	Workshop
27 PM 5	1	2:00	WORK	**Simon Morgan** *Printing by Rolling Möbius Band Stencils: Glide Reflection Embodied in Physical Action*		

Coffee Break 3:30-4:00

Saxion University	Room 1			Afternoon 4:00pm – 6:00pm	SESSION I-6	Chair: Mike Naylor
27 PM 6	1	4:00	REG	**Andreas Matt and Anna Hartkopf** *SURFER in Math Art, Education and Science Communication*		
27 PM 6	2	4:30	REG	**Sebastian Uribe, Susanne Schimpf and Andreas Daniel Matt** *How to make an IMAGINARY exhibition*		
27 PM 6	3	5:00	REG	**Stephen Luecking** *Mathematics Education and Early Abstract Art*		
27 PM 6	4	5:30	REG	**Mike Naylor** *Math Runes*		

Saxion University Room 2				Afternoon 4:00pm – 6:00pm SESSION I-7 Chair: Henry Segerman
27 PM 7	1	4:00	REG	**Alejandro Erickson** *Tatami Maker: A Combinatorially Rich Mechanical Game Board*
27 PM 7	2	4:30	REG	**Robert Fathauer** *Iterative Arrangements of Polyhedra – Relationships to Classical Fractals and Haüy Constructions*
27 PM 7	3	5:00	REG	**Saul Schleimer and Henry Segerman** *Triple Gear*

Saxion University Room 3				Afternoon 4:00pm – 6:00pm SESSION I-8 Chair: Charles Gunn
27 PM 8	1	4:00	SHRT	**Francesco De Comite** *Circle Packing Explorations*
27 PM 8	2	4:15	SHRT	**Douglas G. Burkholder** *Iterating Borromean Rings on a Sphere*
27 PM 8	3	4:30	SHRT	**Kerry Mitchell** *Spirolateral-Type Images from Integer Sequences*
27 PM 8	4	4:45	SHRT	**Dániel Erdély** *Hexagons and Their Inner World*
27 PM 8	5	5:00	SHRT	**Kevin Jardine** *Imperfect Congruence: Tiling with Regular Polygons and Rhombs*
27 PM 8	6	5:15	SHRT	**Jean Constant** *Symmetry in Mathematics, Physics and Art*
27 PM 8	7	5:30	SHRT	**Manuel Diaz Regueiro** *The Equations of Westminster Abbey*
27 PM 8	8	5:45	SHRT	**Charles Gunn** *Rendering the Whole World with Conformal Curvilinear Perspective*

Saxion University Room 4				Afternoon 4:00pm – 5:30pm SESSION I-9 Workshop
27 PM 9	1	4:00	WORK	**Ricardo Nemirovsky and J. Brooke Ernest** *Alberti's Window: Projective Geometry as the Geometry of Vision*

Bridges Enschede Public Lecture

THE WORLD IS FLAT!

No, the world is not actually flat, but there are still people out there who would like to make it so!

 Join us for the Bridges 2013 Public Lecture to learn why and how. In this special celebration of art-math connections between Canada and The Netherlands, researchers Jack van Wijk (Eindhoven University of Technology, the Netherlands) and David Swart (Christie, Kitchener-Waterloo, Canada) will discuss their shared interest in the impossible task of cutting up the earth in order to make it lie flat. This program will be hosted by Craig Kaplan (University of Waterloo, Canada).

Learn about this fascinating topic through images, animations, and live models.

- When: Saturday, 27 July 2013
- Where: Grote Kerk, Oude Markt, Enschede
- 7:00 pm Reception (Dinner Buffet)
- 8:00 pm Lecture

SUNDAY JULY 28, 2013

Saxion University Room 1				Morning 9:30am - 11:30am	SESSION II-1	Chair: Robert Crease
28 AM 1	1	9:30	REG	**James Mai** *Territories of Color: Towards a New Model of Simultaneous Color Contrast*		
28 AM 1	2	10:00	REG	**Dirk Huylebrouck** *The Moore-Penrose Inverse in Art*		
28 AM 1	3	10:30	REG	**Donald Spector** *John Cage Adores a Vacuum*		
28 AM 1	4	11:00	REG	**Robert Crease** *The Beauty of Equations*		

Saxion University Room 2				Morning 9:30am - 11:30am	SESSION II-2	Chair: Tom Verhoeff
28 AM 2	1	9:30	REG	**Robert Hanson and George Hart** *Custom 3D-Printed Rollers for Frieze Pattern Cookies*		
28 AM 2	2	10:00	REG	**Vladimir Bulatov** *Bending Circle Limits*		
28 AM 2	3	10:30	REG	**Greg Frederickson** *Artfully Folding Hexagons, Dodecagons, and Dodecagrams*		
28 AM 2	4	11:00	REG	**Tom Verhoeff and Koos Verhoeff** *Folded Strips of Rhombuses and a Plea for the sqrt[2]:1 Rhombus*		

Saxion University Room 3				Morning 9:30pm – 11:30am SESSION II-3 Chair: David Reimann
28 AM 3	1	9:30	SHRT	**Irene Rousseau** *Uncertainty of Structure, Quantity, and Space as our Reality*
28 AM 3	2	9:45	SHRT	**János Szász Saxon** *Up Suprematism to the "supreMADIsm" on Saxon's Paintings*
28 AM 3	3	10:00	SHRT	**Karl Kattchee** *Kandinsky, Math Artist?*
28 AM 3	4	10:15	SHRT	**Zsófia Ruttkay, Tamás Páll, Jelena Viskovic and Litza Juhász** *Color patterns in Bull by Vasarely*
28 AM 3	5	10:30	SHRT	**Zsófia Ruttkay and Litza Juhász** *The 3D Effect of Bull by Vasarely*
28 AM 3	6	10:45	SHRT	**Russell Hendel** *Aesthetic Appeal of Magic Squares*
28 AM 3	7	11:00	SHRT	**Hossein Behforooz** *Weighted Magic Squares, Stars and Circles*
28 AM 3	8	11:15	SHRT	**David Reimann** *Point Symmetric Ribbon Patterns using a Hexagonal Motif from M.C. Escher*

Saxion University Room 4				Morning 9:30am – 11:00am SESSION II-4 Workshop
28 PM 4	1	9:30	WORK	**Jay Kappraff** *A Fractal Wallhanging*

Light Lunch in Saxion University 11:30pm - 1:00pm

Saxion University Room 4				Afternoon 1:30pm - 6:00pm SESSION II-5 Workshop
28 PM 5	1	1:30	WORK	**Ann Hanson** *The Mathematics and Art of Spirals Workshop*
28 PM 5	2	3:00	WORK	**M. Draghicescu, I. Browne, M. Browne, C. Draghicescu, C. Ionescu** *A Fun Approach to Teaching Geometry and Inspiring Creativity*
28 PM 5	3	4:30	WORK	**Ho Gul Park** *A Workshop on N-regular Polygon Torus*

Saxion University Room 5				Afternoon 1:30pm - 6:00pm SESSION II-5 Workshop
28 PM 5	1	1:30	WORK	**Andrea Hawksley and Scott Kominers** *Flipbook Polyhedra*

Bridges Enschede Family Day   **Chair: Kristóf Fenyvesi**   http://www.familyday.hu/

				Afternoon 1:30pm – 6:00pm SESSION II-6
28 PM 6	1	1:30	FEST	*Bridges 2013 Short Movie Festival* Coordinators: **Amy and Nathan Selikoff (Saxion University)**
28 PM 6	2	5:00	FEST	*Bridges 2013 Short Movie Festival (Repeat)* **(Concordia Hall, Old Market)**
28 PM 6	3	4:30	POET	*Bridges* 2013 Mathematical Poetry Day Coordinator: **Sarah Glaz (Saxion University)**

Bridges 2013 Mime-Matics Night

Tim and Tanya Chartier's mime combines masks, puppetry, and classical mime illusions into a distinctive style that they have performed throughout the United States and in national and international settings.

- When: Sunday, 28 July 2013, 8:00 pm
- Where: Grote Kerk, Oude Markt, Enschede

Family Day Music Night

The Family Day will be concluded by the Informal Music Night, which will be coordinated by **Vi Hart**.

- When: Sunday, 28 July 2013, 9:00 pm
- Where: Grote Kerk, Oude Markt, Enschede

MONDAY JULY 29, 2013

Grote Kerk, Old Market				Morning 9:00am - 12:00 noon SESSION III-1 Chair: Dave Blank *CROSS-OVERS IN ARCHITECTUUR – MINISYMPOSIUM*
29 AM 1	1	9:00	PLEN	**Pi de Bruijn** *The Reconstruction of Enschede District Roombeek*
29 AM 1	2	9:45	PLEN	**Henriette Bier** *The Hyperbody Project*
29 AM 1	3	10:30	PLEN	**Jos de Krieger** *Connecting Flows to Improve Urban Ecosystems'. Architecture, Durability and Reuse*
29 AM 1	4	11:15	PLEN	**Michiel de Wit** *The Pet Bottles Pavilion*

2013 Zometool Giant Construction Opening and Light Lunch in Saxion University 12:00pm - 2:00pm

Saxion University Room 1				Midday 2:00pm – 3:30pm SESSION III-2 Chair: Darrah Chavey
29 PM 2	1	2:00	REG	**Craig Kaplan** *Grid-based Decorative Corners*
29 PM 2	2	2:30	REG	**Taneli Luotoniemi** *Knot Designs Based on the Hexagonal Rosette*
29 PM 2	3	3:00	REG	**Darrah Chavey** *Wallpaper Designs of Mirror Curves Inspired by African Sona*

Saxion University Room 2				Midday 2:00pm – 3:30pm SESSION III-3 Chair: Stephanie Toussaint
29 PM 3	1	2:00	REG	**Akihiro Matsuura, Jyunki Hashimoto and Kento Okuno** *Geometric Visual Instruments Based on Object Rolling*
29 PM 3	2	2:30	REG	**Koji Miyazaki** *Multidimensional Impossible Polycubes*
29 PM 3	3	3:00	REG	**Stephanie Toussaint** *A Comparative Geometric Analysis of the Patterns ... Pavements ... Chedworth Roman Villa*

Saxion University	Room 3			Midday 2:00pm – 3:30pm	SESSION III-4	Chair: Kristóf Fenyvesi
29 PM 4	1	2:00	SHRT	**Anna Weltman, Paul Salomon and Justin Lanier** *MArTH Madness: Building a Culture of Mathematical Art at Saint Ann's School*		
29 PM 4	2	2:15	SHRT	**Patrick Honner** *Teaching Mathematics through Image Manipulation*		
29 PM 4	3	2:30	SHRT	**J. Brooke Ernest and Ricardo Nemirovsky** *Creating Art as a Catalyst for Making Meaningful, Personal Connections to Mathematics*		
29 PM 4	4	2:45	SHRT	**Barbora Kamrlova** *How Do Symmetries Come To Children, and Vice Versa?*		
29 PM 4	5	3:00	SHRT	**Cindy Lawrence** *Adding it all Up: Building the National Museum of Mathematics*		
29 PM 4	6	3:15	SHRT	**Kristóf Fenyvesi and Eleonóra Stettner** *Adventures on the Borderland of Mathematics and Arts: "CrossBorderScience"*		

Saxion University	Room 4			Midday 2:00pm – 3:30pm	SESSION III-5	Workshop
29 PM 5	1	2:00	WORK	**Eva Knoll, Wendy Landry and Tara Taylor** *Mat Weaving: Towards the Möbius Band*		

Coffee Break 3:30-4:00

Saxion University	Room 1			Afternoon 4:00pm – 6:00pm	SESSION III-6	Chair: Carlo Sequin
29 PM 6	1	4:00	SHRT	**Mereke van Garderen and Jarke J. van Wijk** (Short) *Seifert Surfaces with Minimal Genus*		
29 PM 6	2	4:15	SHRT	**Dugan Hammock** (Short) *Visualizing 3-Dimensional Manifolds*		
29 PM 6	3	4:30	REG	**Faniry Razafindrazaka and Konrad Polthier** *The 6-ring*		
29 PM 6	4	5:00	REG	**Carlo Sequin** *Cross-Caps - Boy Caps - Boy Cups*		
29 PM 6	5	5:30	REG	**Sue Goodman, Alex Mellnik and Carlo H. Séquin** *Girl's Surface*		

Saxion University Room 2				Afternoon 4:00pm – 6:00pm SESSION III-7 Chair: Gary Greenfield
29 PM 7	1	4:00	REG	**Daniela Velichova** *The Art of Geometry*
29 PM 7	2	4:30	REG	**Michael Eisenberg, Antranig Basman, Sherry Hsi and Hilarie Nickerson** *Turtle Temari*
29 PM 7	3	5:00	REG	**Sebastien Perez-Duarte and David Swart** *The Mercator Redemption*
29 PM 7	4	5:30	REG	**Gary Greenfield** *Ant Paintings based on the Seed Foraging Behavior of P. barbatus*

Saxion University Room 3				Afternoon 4:00pm – 6:00pm SESSION III-8 Chair: Diana Cheng
29 AM 8	1	4:00	REG	**Xavier Mora and Marta Pellicer** *Understanding and measuring rhythmic quality in dance. What is a movement accent?*
29 AM 8	2	4:30	REG	**Susan Gerofsky** *Learning Mathematics Through Dance*
29 AM 8	3	5:00	SHRT	**Karl Schaffer** *Dances of Heavenly Bodies: Dance, N-body Choreographies, and Change Ringing*
29 AM 8	4	5:15	SHRT	**Miriam Fradera Gajo** *Count and Dance: Sardana*
29 AM 8	5	5:30	SHRT	**Godfried Toussaint** *On the Question of Meter in African Rhythm: A Quantitative Mathematical Assessment*
29 AM 8	6	5:45	SHRT	**Diana Cheng** *International Judging System of Figure Skating: A Middle Grades Activity on Decimal Operations*

Saxion University Room 4				Afternoon 4:00pm – 5:30pm SESSION III-9 Workshop
29 PM 9	1	4:00	WORK	**Vi Hart** *Orbifold and Cut*

Bridges Enschede Music Night

A Formal Concert by Professional Musicians

Coordinator
Dmitri Tymoczko
Professor of Music
Princeton University, USA

The 2013 Bridges Concert will be by Quartet Quinetique, with improvisations and compositions by Dmitri Tymoczko (focusing on histograms), Giovanni Albini (based on a mathematical transformation of a Gesualdo motet), and Clifton Callender (featuring "infinite canons" based on the logarithmic spiral), as well as pieces and improvisations from the quartet's repertoire.

- When: Monday, 29 July 2013
- Where: Arke Zaal, Muziekcentrum
- 8:00 pm

TUESDAY JULY 30, 2013

Saxion University Room 1				Morning 9:30am - 11:30am SESSION IV-1 Chair: Paul Gailiunas
30 AM 1	1	9:30	REG	**Rinus Roelofs** *The Discovery of a New Series of Uniform Polyhedra*
30 AM 1	2	10:00	REG	**Douglas Dunham** *Escher Patterns on Triply Periodic Polyhedra*
30 AM 1	3	10:30	REG	**Marcel Tünnissen** *Polyhedra with Folded Regular Heptagons*
30 AM 1	4	11:00	REG	**Paul Gailiunas** *Patterns for Skew Mad Weave Polyhedra*

Saxion University Room 2				Morning 9:30am - 11:30am SESSION IV-2 Chair: Javier Barrallo
30 AM 2	1	9:30	REG	**Loe Feijs and Jun Hu** *Turtles for Tessellations*
30 AM 2	2	10:00	REG	**Phil Webster** *Fractal Islamic Geometric Patterns Based on Arrangements of {n/2} Stars*
30 AM 2	3	10:30	REG	**Reza Sarhangi** *Two Talks about Persian Ornaments and Tiling*
30 AM 2	4	11:00	REG	**Javier Barrallo, Santiago Sánchez-Beitia and Francisco González-Quintial** *Geometry Experiments with Richard Serra's Sculpture*

Saxion University Room 3				Morning 9:30am - 11:30am SESSION IV-3 Chair: Elaine Ellison
30 AM 3	1	9:30	SHRT	**S. Louise Gould and Franklin Gould** *One Mucuboctahedron: Four Ways to View It*
30 AM 3	2	9:45	SHRT	**Dmitri Kozlov** *Form-Finding Experiments with Resilient Cyclic Knots*
30 AM 3	3	10:00	SHRT	**Robert Weadon Rollings** *Exploring the Vertices of a Triacontahedron*
30 AM 3	4	10:15	SHRT	**Raymond Aschheim** *How to 3D-print Complex Networks and Graphs*
30 AM 3	5	10:30	SHRT	**Hans Kuiper and Walt Van Ballegooijen** *3D SUDOKU Puzzle with 81 Connected Cubes*
30 AM 3	6	10:45	SHRT	**Loe Feijs and Marina Toeters** *Constructing and Applying the Fractal Pied de Poule (Houndstooth)*
30 AM 3	7	11:00	SHRT	**Elaine Ellison** *Kolmogorov's Question*

Saxion University Room 4				Morning 9:30am - 11:00am SESSION IV-4 Workshop
30 AM 4	1	9:30	WORK	**Carol Dorf** *Talking Back To Mathematics*

2014 Seoul
The Republic of Korea

A Program by
The Gwacheon National Science Museum, Seoul
The 2014 International Congress of Mathematics (ICM) Seoul
Bridges Seoul 2014

Light Lunch Reception, Movies, and Lecture at Grote Kerk, Old Market 11:30pm - 1:30pm

Saxion University Room 1				Midday 2:00pm – 4:00pm SESSION IV-5 Chair: Sarah Glaz
30 PM 5	1	2:00	REG	**Tatiana Bonch-Osmolovskaya** *Antisymmetrical Palindromes in Traditional European and Contemporary Russian Poetry*
30 PM 5	2	2:30	REG	**Michael Bartholomew-Biggs** *Poetry & Algorithms*
30 PM 5	3	3:00	REG	**Alice Major** *Math into Metaphor*
30 PM 5	4	3:30	REG	**Sarah Glaz** *Mathematical Ideas in Ancient Indian Poetry*

Saxion University Room 2				Midday 2:00pm – 4:00pm SESSION IV-6 Special JMA Session Chair: Craig Kaplan
30 PM 6	1	2:00	REG	**Yang Liu and Godfried T. Toussaint** *The marble frieze patterns of the cathedral of Siena*
30 PM 6	2	2:30	REG	**Sabina Puc and Riste Škrekovski** *Contour map patterns*
30 PM 6	3	3:00	REG	**N.A. Dodgson** *Mathematical characterization of Bridget Riley's stripe paintings*
30 PM 6	4	3:30	REG	**Dorien Herremans and Kenneth Sörensen** *Composing first species counterpoint with a variable neighbourhood search algorithm*

Saxion University Room 3				Midday 2:00pm – 3:45pm SESSION IV-7 Chair: Samuel Verbiese
30 PM 7	1	2:00	SHRT	**Akio Hizume, Yoshikazu Yamagishi and Shoji Yotsutani** *Poly-Twistor by 3D printer: Classification of 3D Tori*
30 PM 7	2	2:15	SHRT	**Ron Asherov** *Finding Optimal Paths in Beadworks: What If Euler Were a Beader?*
30 PM 7	3	2:30	SHRT	**Chia-Chin Tsoo, Chern Chuang and Bih-Yaw Jin** *Mathematical Beading as Molecular Analog Computation: Beaded Sierpinski Buckyball*
30 PM 7	4	2:45	SHRT	**Chern Chuang and Bih-Yaw Jin** *Construction of Sierpinski Superfullerenes with the Aid of Zome Geometry*
30 PM 7	5	3:00	SHRT	**Bojana Ginn** *Minimalism, Math, and Biology*
30 PM 7	6	3:15	SHRT	**Laura Shea** *Edge Color Patterns in the Bead Truncated Icosahedron*
30 PM 7	7	3:30	SHRT	**Jacques Beck, Françoise Beck-Pieterhons and Samuel Verbiese** *Three-Dimensional Generalizations of the Triskele*

Saxion University	Room 4			Midday 2:00pm – 3:30pm	SESSION IV-8	Workshop
30 PM 8	1	2:00	WORK	**John Belcher and Terrence Blackman**		
				Hearing the Drum of the Rhythm		

Coffee Break 4:00-4:30 Art Exhibition Conclusion Cleaning

Saxion University	Room 1			Afternoon 4:30pm – 6:00pm	JMA Board Business Meeting	Chair: Craig Kaplan
30 PM 9	1	4:30	MEET	***By invitation only.***		

Bridges Enschede Experimental Theater

Director: Steve Abbott, Professor of Mathematics, Middlebury College, USA

The goal of this event is to provide a spirited, engaging evening of theater that should be as rewarding to the audience as it is to the conference participants who volunteer as actors. The intersection between mathematics and theater has grown substantially in recent years, enough to become an area for scholarly research, but the main thrust of this event will be to create an evening's entertainment consistent with the mathematics/art theme of Bridges.

Who can participate?

All are welcome and we will do our best to incorporate as many interested people as we can. Previous acting experience would be a valuable asset but it is in no way a requirement for potential readers. If you are interested in performing, get in touch with Steve (abbott@middlebury.edu) and he will provide you with more details.

- When: Tuesday, 30 July 2013, 8:00 pm
- Where: Grote Kerk, Oude Markt, Enschede