



**EUROPEAN SOCIETY FOR MATHEMATICS AND ART  
NEWSLETTER**

**FOREWORDS    ACTIVITIES    RESOURCE UPDATE    GALLERY**

***Education outreach committee***

***Communication & Exhibit coordination committees***

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## ***ESMA 2010 conference proceedings***

***Problem corner***

***Legal adviser***

### **ACTIVITIES**

- **On-going: 06/07/10 - 09/15/10:** ESMA Mathematics & Art exhibit. Institute Henri Poincaré. Paris, FR. Monday – Friday, 9:30 AM – 18:00 PM or by appointment
- **09/16/20:** Magic, origami and puzzles: The art of mathematics. Erik Demaine - Massachusetts Institute of Technology. University of Calgary, CND. Murray Fraser Hall.
- **09/21/10 - 10/07/10:** IMAGINARY MUSEUM exhibit, Zurich. SW. Algebraic Geometry, Differential Geometry, Symmetry, Geometry. Mathematisches Forschungsinstitut Oberwolfach. [www.imaginary-Exhibition.com](http://www.imaginary-Exhibition.com)

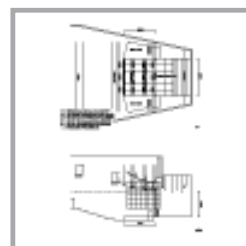
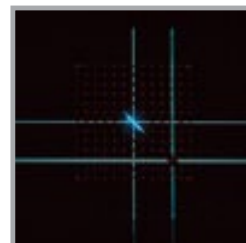
## RESOURCE CENTER

- **ALEXANDERSON, Gerald L.** Department of Mathematics and Computer Science, Santa Clara University, Santa Clara, California. Luca da Pacioli and Leonardo's drawings of polyhedra, Bull. [AMS](#), 47, 3, 553-556.
- **DEZARNAUD, Christine - SEVIN, Alain.** "Histoire des polyèdres" Vuibert, Paris, 2009. Historical overview of the polyhedra from its origin to the crossroad of science, philosophy and art.
- **FERGUSON, Helaman and Claire.** "Celebrating Mathematics in Stone and Bronze" Notices of the AMS, 57, 7 840-850. Helaman Ferguson's sculptures in stone and bronze celebrate ancient and modern mathematical discoveries, melding the universal languages of sculpture and mathematics from initial conception through mathematical design and computer graphics to their final form.
- **GERDES, Paulus.** "TINHLELO" Interweaving Art and Mathematics. Colorful basket trays from the South of Mozambique. Exhibits and analyses of colored circular winnowing baskets collected by the author since the end of the 1970s. (Lulu, 2010, 132 pages. Color) Foreword by the Hon. Aires Aly, Prime Minister of the Republic of Mozambique.
- **KALAJDZIEVSKI, Sasho.** University of Manitoba, Winnipeg, Canada Math and Art: An Introduction to Visual Mathematics. Cover by Jos Leys. [CRC Press, Boca Raton](#), 2008.

## GALLERY

### Ryoji Ikeda

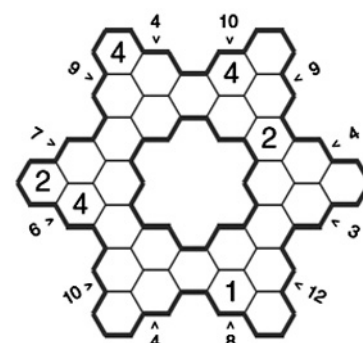
Ryoji Ikeda, Japan's leading electronic composer, focuses on the minutiae of ultrasonics, frequencies and the essential characteristics of sound itself. His work exploits sound's physical property, its causality with human perception and mathematical dianoia as music, time and space. "Formula", a constantly evolving work updated with each presentation, is a perfect synchronization between Ikeda's sound frequencies and the movements on the screen. It places the viewer in a binary geometry of space, and exploits the darkness to amplify the perceptions, with outstanding success. Ikeda aims for the complete integration of the various elements, composing music, images, lighting and orchestrating the relationships between them through a highly precise score. Ryoji Ikeda received the Golden Nica prize at Prix Ars Electronica 2001 in the Digital Music category. More on Ryoki Ikeda at: [www.ryojiikeda.com](http://www.ryojiikeda.com)



## MATHEMATICAL GAME

### Trakasu #2

- Select a number from 1 to 7 for each cell
- Notice that the hexagonal cells that have a common side are aligned by two or seven in three directions
- 1) similar numbers cannot be displayed more than once in the same alignment
  - 2) the exterior numbers outside the grid are equal to the sum of two numbers in the alignment outlined by the arrow.

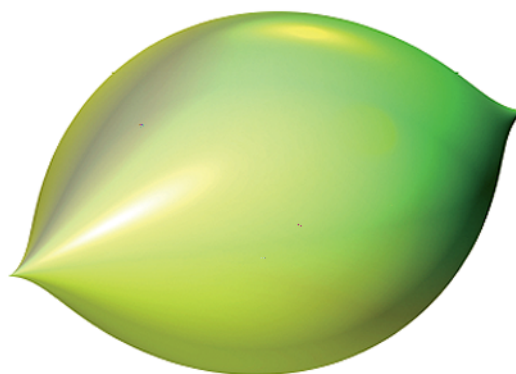


(Solution p.4)

# IMAGINARY

mit den Augen der Mathematik

[www.imaginary-exhibition.com](http://www.imaginary-exhibition.com)



Zitrus  $x^2 + z^2 = y^3(1-y)^3$

Eine interaktive Ausstellung des Mathematischen Forschungsinstituts Oberwolfach präsentiert in Zusammenarbeit mit dem Departement Mathematik der ETH Zürich Visualisierungen, interaktive Installationen, 3D-Objekte und deren theoretische Hintergründe aus unterschiedlichen Gebieten der Geometrie. Abstrakte Mathematik wird zu Bildern, imaginär zu „image“. Virtuelle Welten verwandeln Mathematik in beeinflussbare Kunst und in verständliche Wissenschaft. Ein einzigartiges Erlebnis für alle. Eintritt frei!

**21.09 – 07.10.2010: Mo – Fr 10 – 18 Uhr, Sa 10 – 17 Uhr**  
**ETH Zürich, Haupthalle, Rämistrasse 101, 8092 Zürich**



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