BMS-NCM NEWS
—
No 86, January 15, 2012

Letter from the editor

BEST WISHES, GREETINGS FOR 2012!

Regards,
Françoise

Contents

1 News from the BMS

- Please find all the information (leaflet) at the end of this Newsletter for

the renewal of your membership to our society!

Many thanks for your support

- The

General Assembly

of the BMS took place on November 19, 2011, at the Academy. On this occasion, elections for President and Vice-president (2011-2013) were organized. See the "Minutes" at the end of this Newsletter.

2 Meetings, Conferences, Lectures

2.1 January 2012

<div align="center">

Hopf Algebra Workshop
Brussels, January 31, 2012

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You will find the poster of the conference at the end of this Newsletter

2.2 February 2012

<div align="center">

Incidence geometry and buildings
February 6-10, 2012, GHENT

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You will find the poster of the conference at the end of this Newsletter

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Lecture at Ghent University on February 7, 2012:
Escher and the Droste effect
by Hendrik Lenstra, Universiteit Leiden

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On Tuesday February 7, Hendrik W. Lenstra will give a lecture for a general audience at Ghent University, Krijgslaan 281, S25, Lecture Room Emmy Noether, at 8pm. The lecture will be followed by a drink.

Abstract:

In 1956, the Dutch graphic artist M.C. Escher made an unusual lithograph with the title 'Print Gallery'. It shows a young man viewing a print in an exhibition gallery. Amongst the buildings depicted on the print, he sees paradoxically the very same gallery that he is standing in. A lot is known about the way in which Escher made his lithograph. It is not nearly as well known that it contains a hidden 'Droste effect', or infinite repetition; but this is brought to light by a mathematical analysis of the studies used by Escher. On the basis of this discovery, a team of mathematicians at Leiden produced a series of hallucinating computer animations. These show, among others, what happens inside the mysterious spot in the middle of the lithograph that Escher left blank.

2.3 March 2012

<div align="center">

Conférences dans le cadre de l'EDT à l'UMons.
March 27, 2012- Pentagone, UMons.

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- D.Li (Université d'Artois): Sous-espaces bien disposés de L_1

- S.Charpentier (Université de Lille1): Opérateurs de composition.

More information will be available in the next Newsletter but you can already contact C.Finet (catherine.finet@umons.ac.be) or K.Grosse-Erdmann (kg.grosse-erdmann@umons.ac.be)

2.4 May 2012

<div align="center">

CANT 2012 –
School and Conference on Combinatorics, Automata and Number Theory
CIRM Marseille - May 2012

</div>

See the pages at the address

<div align="center">

http://www.cant.ulg.ac.be/cant2012/index.html

</div>

From 21st to 25th May 2012, the third edition of the summer school CANT will be organized in CIRM (Centre International de Rencontres Mathématiques: international center of mathematical meetings in Marseille, France). Grants to cover living expenses are available (see details on the web pages).

Invited speakers

- Marie-Pierre Béal, Université Paris-Est Marne-la-Vallée
  Synchronized automata

- Maxime Crochemore, King's College London
  Text redundancies

- Mike Hochman, Hebrew University of Jerusalem
  Symbolic dynamics, multidimensional subshifts, computability and arithmetic

- Jarkko Kari, University of Turku
  Cellular automata, tilings and (un)computability

- Narad Rampersad, University of Winnipeg
  Repetitions in words

- Christophe Reutenauer, UQAM Montréal
  Linearly recursive sequences and Dynkin diagrams

Scientific committee
S. Akiyama, University of Niigata
J.-P. Allouche, CNRS, IMJ, Paris 6
J. Bell, Simon Fraser University
V. Berthé, CNRS, LIAFA
S. Brlek, UQAM, Montréal
K. Dajani, University of Utrecht
A. Frid, Sobolev Institute of Mathematics
J. Mairesse, CNRS, LIAFA
M. Rigo, University of Liège
B. Solomyak, University of Washington

Important dates
1st February 2012 : deadline to notify your intention to participate in the school/application for a grant/talk proposal.
15th February 2012 : decisions about grant/talk.

Please read carefully the two web-pages about grants and registration.
Looking forward to see you in Marseille,

V. Berthé and M. Rigo

2.5   June 2012

1st Joint Conference of the
Belgian, Royal Spanish and Luxembourg Mathematical Societies
June 6-8, 2012, LIEGE

On June 6-8, 2012, the BMS will co-organized a meeting (in Liège) with the Real Sociedad Matemática Española and the Luxembourg mathematical society.

The list of plenary speakers is as follows

- Pierre-Emmanuel Caprace (Un. catholique de Louvain)

- Gilles Godefroy (Directeur CNRS, Univ. Paris 6, Jussieu)

- Giovanni Peccati (Luxembourg University)

- Alvaro Pelayo (Washington Un. St. Louis)

- Julio Rubio Garcia (University La Rioja)

- Ana Vargas Rey (Un. Autonoma de Madrid)

- Michel Van den Bergh (U. Hasselt)

Scientific and organizing committee:
Françoise Bastin, Université de Liège, Belgium
Adhemar Bultheel, K.U.Leuven, Belgium
Stefaan Caenepeel, Vrije Universiteit Brussel, Belgium
Antonio Campillo López, University Valladolid, Spain
José Gómez Torrecillas, University of Granada, Spain
Martin Schlichenmaier, University Luxemburg, Luxemburg
Javier Soria de Diego, University Barcelona, Spain
Hendrik Van Maldeghem, Universiteit Gent, Belgium

Parallel sessions are also organized. And REGISTRATIONS ARE OPEN!! See the web page at

http://nalag.cs.kuleuven.be/BSL2012/

Homotopical algebra and its applications
25-29 June 2012, Luminy (FRANCE)

This international conference will be held to celebrate the 60th birthday of Yves Felix.

The confirmed plenary speakers include

- Greg Arone (University of Virginia)

- Octav Cornea (Université de Montreal)

- Emmanuel Dror-Farjoun (Hebrew University of Jerusalem)

- Soren Galatius (Stanford University)

- Tom Goodwillie (Brown University.

- Kathryn Hess (Ecole Polytechnique Fédérale à Lausanne)

- Mike Hill (University of Virginia)

- Jean-Louis Loday (CNRS - Université de Strasbourg)

- Serguey Merkulov (Stockholm University)

- Lionel Schwartz (Université Paris-13)

- Stephan Schwede (University of Bonn)

- Hirotaka Tamanoi (University of California Santa Cruz)

- Michael Weiss (University of Aberdeen)

Scientific committee:
Luchezar Avramov (University of Nebraska Lincoln)
Fred Cohen (University of Rochester)
Bill Dwyer (University of Notre Dame)
Benoît Fresse (Université de Lille 1)
Steve Halperin (University of Maryland)
Jean Lannes (Ecole polytechnique - Palaiseau)
Ulrike Tillmann (University of Oxford)
Burt Totaro (University of Cambridge)

Organizing committee:

Pascal Lambrechts, Université de Louvain

Institut Mathématique 2, chemin du Cyclotron B-1348 Louvain-la-Neuve (Belgique) - pascal.lambrechts@uclouvain.be

Jean-Claude Thomas, UMR CNRS 6093 - Université d'Angers,

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Funded by:

CNRS, FNRS, Université catholique de Louvain, Université d'Angers, SMF, Ministère français de l'enseignement et de la Recherche, Ministère français des Affaires étrangères , GDR de Topologie Algébrique

2.6   August 2012

PADGE2012 - Conference on Pure and Applied Differential Geometry
August 27 to August 30, 2012,
Department of Mathematics, K.U.Leuven, Belgium

See the website: http://wis.kuleuven.be/Events/padge2012

3   Miscellaneous

3.1   From ULB

The Faculty of Sciences of the Université Libre de Bruxelles (ULB) announces the opening of two full-time **academic positions** in the Department of Mathematics **starting October 1, 2012,** one in

"Algebra and Geometry" and the other in **"Applied Analysis"**.

The deadline for applications is March 1, 2012.
More information can be found online at

http://www.ulb.ac.be/facs/sciences/math/
http://www.ulb.ac.be/facs/sciences/math/math/Vacance52en.pdf
http://www.ulb.ac.be/facs/sciences/math/math/Vacance51en.pdf

3.2   From EMS

Dear Colleagues,

We are pleased to inform you that preparations for the 6th European Congress of Mathematics are going on: the list of plenary and invited speakers is complete, 15 satellite meetings are announced, offers of a sightseeing programme have been prepared.

Young mathematicians and mathematicians from economically less-favoured countries may apply for grants supporting participation in the 6th ECM. There are reductions of the conference fee for members of the EMS, Polish Mathematical Society and for students.

Please consult the Congress website www.6ecm.pl ¡http://www.6ecm.pl/¿ for updated information. The 6th ECM poster can be downloaded from the site.

The registration for the 6th ECM is now open and we cordially invite you to register. Electronic registration is done through a new Polish Mathematical Society conference services and payments website. You can access this website from the 6th ECM site at www.6ecm.pl ¡http://www.6ecm.pl/¿ or directly at the address pay.ptm.org.pl ¡http://pay.ptm.org.pl/¿ .

We are looking forward to seeing you in Krakow.

The Organizers of the 6th ECM

EMS Secretariat, Ms. Terhi Hautala
E-Mail: ems-office@helsinki.fi,
Phone: (+358) 9 1915 1503 Fax: (+358) 9 1915 1400

Department of Mathematics & Statistics
P.O.Box 68 (Gustaf Hällströmink. 2b), 00014 University of Helsinki, Finland

4   History, maths and art, fiction, jokes, quotations . . .

Mathématiques, un dépaysement soudain (EXPOSITION)
Mathématiques pour tous? (COLLOQUE, 30 et 31 janvier 2012)

Exposition à Paris du 21 octobre 2011 au 18 mars 2012, présentée par la fondation Cartier. Voir l'annonce à la fin de la Newsletter de novembre 2011. Informations pour le colloque, voir

$$http: //www.ihes.fr/\ comdev/liens/Colloque\_UNESCO.pdf$$

Review and comments – literature and music
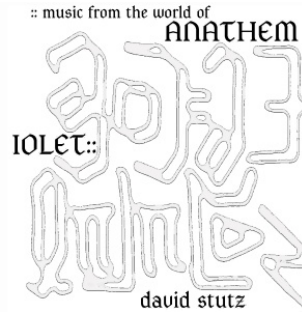
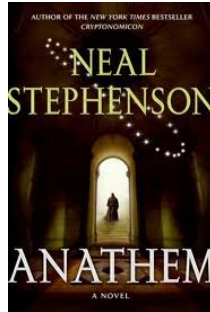by A. Bultheel. See next pages of this Newsletter.

Neal Stephenson

David Stutz

Neal Stephenson is best known from his novel *Cryptonomicon* (1999) which was all about cryptography, and his *Baroque Cycle* (8 books in 3 volumes: Quicksilver[1], The Confusion, The System of the World, 2003-2004), which dealt with the history of science in the 17th and 18th century is Europe. His science-f[a/i]ctional work got several prizes. His *Anathem* of 2008 is again an SF novel set in a distant future on a planet Arbre that is different from our world, yet very recognizable. The author got the initial idea for this novel when he was working on his *Baroque Cycle* and heard about the *Long Now Foundation*.
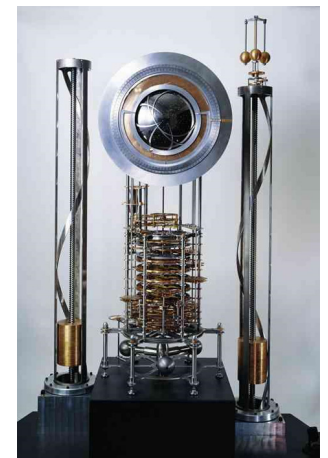

Logo of Long Now
Foundation

This Foundation was initiated by *Danny Hillis*, an engineer and inventor, who started the idea already back in 1986 to construct a clock that should work for 10,000 years. The underlying incentive was to react against short-term thinking. He was backed up by *Stewart Brand*, a biologist and visionary pioneer who started the Foundation. A first prototype of the clock was finished in 01991 and is now on display in the London Science Museum. A second prototype was finished just before the end of 01999, so that it could chime when 02000 started. And all chime-melodies are unique since the musician *Brian Eno* also got involved and designed the melodies that will never be the same during the 10K years. The whole clock is a purely mechanical construction, no electronics at all. Finding out which melody to play next and the orrery (the sphere on top shows horizons) is calculated by 'the slowest mechanical computer on earth'. A special melody will be played every year, decade, century, millennium, and 10K years. This gave Stephenson the idea of humans visiting the clock when the gates opened, but when they were still inside when the gates closed they were confined to stay inside for 1, 10, 100, or 1000 years. In fact that is exactly what happens in *Anathem*.

Currently the construction of the first full size clock has started in a mountain in Nevada (more clocks are planned). *Jeff Bezos*, the CEO of `amazon.com` owns the place. The clock is huge, about 200 feet (61 meter), and visiting the clock to read it would take you a whole day, like being on a spiritual journey, climbing spiral stairs. Going up there is the only way to read off the time. To avoid energy consumption, the indicated time will be fixed until somebody wants to read it. Human input of energy is welcome while somebody is visiting, but using for instance the temperature differences the machine should harvest enough energy to keep the clock going on its own for thousands of years. Much more about the clock and the Long Now Foundation can be found on the web.

10,000 year clock
(prototype)

Back to *Anathem* now. The story starts in the year 3982 A.R. on planet Arbre. The 'Reconstitution' in the year 0 was the consequence of the 'Terrible Events' that had happened because irresponsible scientists had brought apocalyptic catastrophes over Arbre after some 3500 years of 'Praxic Age'. The Reconstitution reorganized society such that there is a strict separation between the 'sæcular community' where all the 'praxic' (technology) is freely available such as 'jeejahs' (mobiles) 'speelycaptors' (camcorders), the 'Reticulum' (Internet) etc, and on the other

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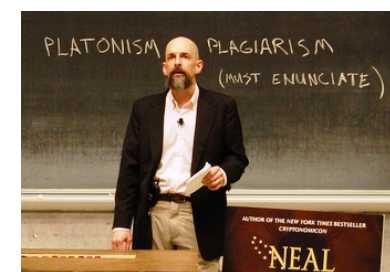[1]See review in this Newsletter, issue 54, Sept. 2005

Chime generator of the long now clock

hand the 'mathic world' where 'avout' (scientists and philosophers), live in 'concents' (abbey-like communities) all over the planet according to strict rules written down in the 'Discipline' but deprived of all technology. The avout, both 'fraas' (male) and 'suurs' (female) are not allowed to breed, but every year there is a 10-day 'Apert' when the gates of the concents open and both societies can interact. On that occasion young people are recruited to join the mathic community. Depending on their talent, they will stay inside without interaction with the outside world for 1, 10, 100, or 1000 years and take a vow to become an 'unarian', a 'decenarian', 'centenarian', or possibly reach the highest status of 'millenarian'. The avout use the old language of science 'Orth' (like Latin used to be on earth in former centuries) while the sæcular world uses 'Fluccish' (but fortunately the novel is written in English).

As the previous paragraph illustrates, Neal Stephenson has put much effort in designing a new vocabulary. Often the words sound familiar if you know some Latin and Greek, but it will take the reader some 50 pages or more to become a bit familiar with it. Fortunately there is a 20 page dictionary at the end of the book and it needs a great deal of looking up words again and again in the early stage. Also in the text you will find at random places extracts from 'the dictionary, 4th edition, 3000 A.R.'. For the book a whole universe is created somewhat like *Frank Herbert* did for *Dune* or *J.R. Tolkien* did for *The Lord of the Rings*. When it appeared, it rapidly became a hype. Partly because it

S. Brand, N. Stephenson, D. Hillis

was related to the Long Now Foundation project and partly because Neal Stephenson had already a group of addicted fans. Add to this a good merchandising campaign and the result is that wiki and blog pages pop up where people discuss about interpretations of *Anathem* much like 'trekkies' never get enough of their *Star Trek*. At such sites you may read that *Jeremy Bornstein* has designed an elaborated version of Orth grammar, completely with declensions, conjugation, and pronunciation; and *Steve Wiggins* invented an orthographic alphabet etc (you may find more details on `www.monastic/orth`).


Stephenson lecturing about
Anathem at MIT

Although this is a very thick novel, the adventurous part of the plot is relatively simple. Simplifying things considerably, it comes down to this. The main character who tells the whole story is Erasmas, a decenarian who attends the clock of his concent that has to be ringed with different melodies for the different 'auts' (rites). At some point his tutor Orolo, and later he himself, detects that Arbre is observed by an alien spaceship. When the situation becomes threatening, the 'Sæculum Power' summons avouts from all over the planet to organize a 'Convox' (an world-wide conference) where scientific and technological knowledge of Arbre is joined to attack the spaceship.

If you have read this far, you may wonder why this review should be in a Newsletter for mathematicians. Well, Stephenson got his 'scientific basis' for the novel from the work of *Roger Penrose*. In particular quantum physics and the many-worlds interpretation. In a nut-shell: every possible outcome of an event does exist in its own world. Thus there is an infinity of possible worlds or universes where all things that could have happened in your past (but didn't in your experience) did happen and are real in their own universe. It is essentially denying wavefunction collapse. In the novel, this idea is used because it turns out that the spaceship is inhabited by people from four different world tracks and live on separated concentric shells of the ship. Near the end of the book the narrative, faithful to the overall idea, also splits up in different possible realities. Penrose argues in his *The emperor's new mind* (1989) that the human brain operates like a quantum computer. Thus it is a contradiction that the different possible tracks of what has happened can be remembered and told by one person at the end. In principle, the different

world tracks can not interact. Stephenson solves this problem by a theory of directed acyclic graphs. Therefore he takes recourse to 'Platonic realism', a branch of philosophy where abstract 'universals' exist independently of particular realizations. It claims for example that mathematics is not created but it is discovered. So, according to Stephenson, in state space (called 'Hemn' space in the novel) there exist many distinct universes, all corresponding to a node in a graph connected by arrows indicating 'causality'. The state of a universe at a certain 'instance' or node is defined by its 'past', i.e., by the nodes that precede in the graph. So every universe has its own history, but some of them will be very close to ours because of overlapping nodes in the past. Just as many nodes have influenced our universe, we shall be influential for many future nodes, and this is how different universes can interact. Cycles are excluded because in a loop the future would also be the past contradicting causality.
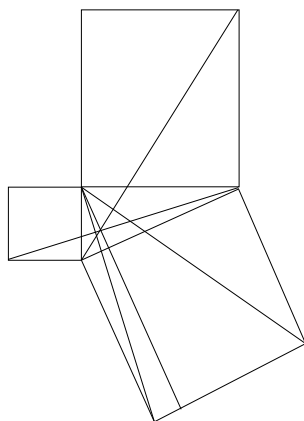
The Bride's Chair

There is a lot of philosophical argumentation in the novel between the 'Halikaarnians', defending what we call mathematical formalism and 'Procians', adepts of what we call Platonic realism. In the concents, sometimes such discussions take on the form of a 'Dialog' which is a formal way of discussion or written report following certain rules. Since these argumentations take a relatively large number of pages, the reader should have enough interest in these matters or he/she will put the book aside before reaching the end. But there are also many less philosophical droplets of mathematics from time to time. The most striking one is the fact that the spaceship is not some fancy 'Star Wars' kind of construction, but it has the form of an icosahedron and it has a logo on one of its faces consisting of a number of lines forming a configuration known to us as the 'bride's chair'. That is the graphic used by Pythagoras to prove his well known theorem (called 'Adrakhonic theorem' in the novel). Therefore the aliens are called 'Geometers' for a certain period. One of the 'Dialogs' that a 'fid' (a young avout who just entered the concent) had to memorize was a verbal proof that the square root of 2 is irrational. Another example: if in a concent, an avout misbehaves, he or she is sequestered and has to learn a chapter from 'the Book'. Chapters are numbered from 1 to 12 and the number gives the severeness of the punishment. Chapter 1 is for young fids and requires about 2 hours to master it, while chapter 12 is almost like a life sentence. Three avouts finished chapter 12 after 3960 years but came out completely insane. Erasmas gets chapter 4, which contains 5 pages of digits of π. To be dismissed he 'had to know them as thoroughly as a student of quantum mechanics has to know group theory'.

D. Stutz and choir at the Anathem Launch Event

Some more examples: the 'Teglon' is related to Penrose's aperiodic tilings. A decagon contains seven different kinds of tiles, each with a groove on its top face. The problem is to lay the tiles in such a way that the grooves form an uninterrupted line over a large surface. The solution is hard since it is aperiodic. Fraa Jad, a millenarian, is able to find a solution in one night. Off line Stephenson admits that this is probably nonsense and that a mathematician could probably prove it to be wrong, but he just wanted to claim that aperiodic tilings is an important branch of mathematics. He also acknowledges *Kurt Gödel*. In the novel, one of the aliens by the name of Jules Verne Durand, mentions Gödel's name explicitly as if he had existed on Arbre. One of the novel's appendices presents a 'calca' (a lesson) where a cake-cutting problem is analyzed. It is related to the problem of doubling the square, an obvious reference to *Plato's 'Meno'*. The second appendix is a calca about the configuration space for 2D-motion, and the third is a discussion of the complex Platonic realism explained above.

On his web page, Neal Stephenson writes that he does not claim any credentials as a scientist, mathematician or philosopher. Besides Penrose and Gödel he also cites many other scientists and philosophers as sources of inspiration.

The one thing I did not mention so far is the *music of Anathem.* The different melodies played at the 'auts' were some kind of communication, telling the whole community what was happening. So during the Anathem Launch Event at the Long Now Foundation in 2008, one of the acts was the performance of the Anathem music composed by David Stutz. To explain their strange outfits, one should know that the avout had only three things they could call their own: a bolt, a chord and a sphere. This made them look like monks. The sphere was an object that could be deformed, made of 'new matter' and was a multipurpose instrument.

David Stutz at the
Anathem Launch Event

The music is available as a CD and its returns go to the Long Now Foundation. There are 8 pieces of music that sound like a mixture of Gregorian songs, Tibetan Buddhist monks meditating and the Tuvan music of Huun-Huur-Tu. These songs have titles like 'The Approximation of Pi', 'Thousander Chant', 'Proof (using finite projective geometry)', 'Sixteen Color Prime Generating Automaton', etc. The titles are suggestive of how they have been composed. For example the piece 'Cellular Automata' is composed as follows. A cellular automaton is a discrete system consisting of a regular grid of cells that have a finite number of states. The state a cell will be in at the next time instance depends on the states of its neighboring cells according to certain rules that are uniform over the grid and constant in time. Conway's *Game of Life* is one of the best known examples. Similarly, each singer may decide on a certain chord to sing and 'compute' his or her song on the fly as the choir evolves according to some prescribed automaton rule. On the CD, there is a 'master of automata' who regularly calls out a rule number (in Orth) to change the patterns.
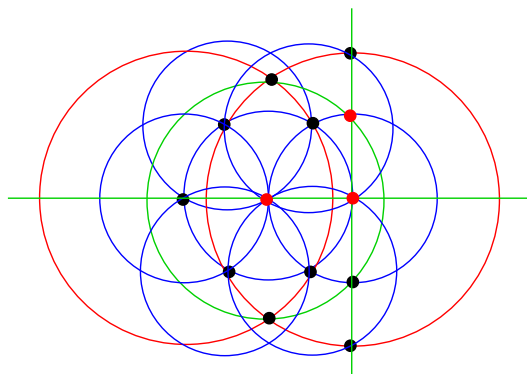

Mascheroni circles to construct orthogonal lines

Once you know the rules of the game it makes sense and you will see the pattern. However reverse engineering, i.e., trying to find the rules that constructed the song, given only the song, is practically impossible unless you get a lot of hints. So here is another explanation that can be found on Stutz's website `synthesist.net/music/`. He has a fascination for the link between geometrical concepts and composing music. By mapping points, lines, intersections etc to certain musical counterparts, one may come a long way. However when he tried to compose a musical version of the proof of Pythagoras' theorem, something that could not be put aside in the framework of Anathem's music, the problem was to translate the geometric notion of 'length'. As long as it concerns integers, it could be represented by rhythm, but for rational numbers or transcendental numbers (and these are obviously needed in Pythagoras' theorem) he got into trouble. So he had to find another approach.

Traditionally Euclidean geometry uses only ruler and compass. *Georg Mohr* proved in 1692 that one can do without the ruler. However this fact went by unnoticed by *Lorenzo Mascheroni* who published the same result in his *Geometria del compasso* in 1797. That's why it became known as Mascheroni circles. The figure above shows how to construct (points on) orthogonal lines, and if the radius of the blue circles is the unit, one is halfway in constructing the (red) corners of a unit square. The explicit notion of length has been removed since one does not have to 'measure' any length. The relevant points result as intersection of circles. In the other plot to the right there are 22 circles and 22 points that are relevant in the construction of the shaded right triangle. Stutz made a map of these points (centers and/or intersections)
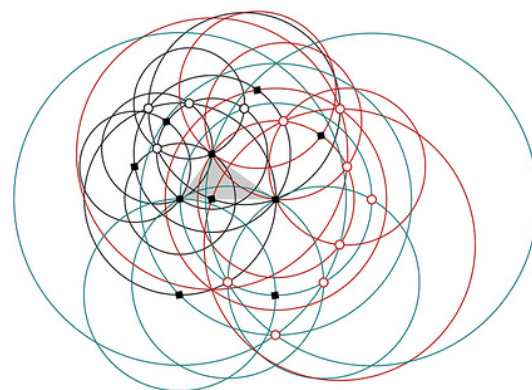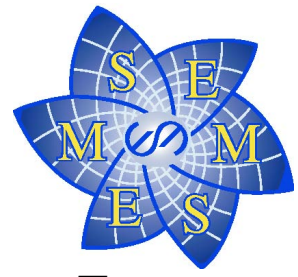

Mohr-Mascheroni circles

and radii, and used this to turn it into a musical pattern that sounded pleasing to his ear. For obvious reasons this piece is called *Mascheroni circles* on the CD. It would be a hard 'calca' for the 'fids' in *Anathem* to find a proof of the 'Adrakhonic Theorem' in this labyrinth of circles.

Adhemar Bultheel
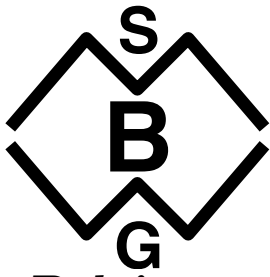
**Belgian
Mathematical
Society**

**European
Mathematical
Society**

Be a member of the
Belgian Mathematical Society (BMS)
and of the
European Mathematical Society (EMS)

As a member of the *BMS*

You will receive five times a year **BMS-NCM NEWS**, the Newsletter of the **BMS** and of the National Committee for Mathematics (**NCM**), containing information on what's going on in mathematics in Belgium.

You will receive the "**Bulletin of the BMS - Simon Stevin**", a periodical containing peer reviewed papers as well as book reviews. The Bulletin of the BMS–Simon Stevin will also be made available electronically for members of the BMS.

You will benefit from reciprocity agreements with the AMS, DMV, LMS, RSME, SMF, SBPMef, VVWL and WG.

As a member of the *EMS*

You will receive a Newsletter of high interest containing papers, interviews, European meeting announcements, book reviews, . . .

You will benefit from a large discount on the "**Journal of the EMS**".

As a member of the *BMS* and the *EMS*

You are taking part in the mathematical life in Belgium and in Europe.

You give the two Societies the possibility to develop their actions: organizing meetings and lobbying with the authorities.

You provide more strength to the two Societies, enabling them to promote mathematics and its financing.

The *BMS* and the *EMS* help you

The **BMS** has conceived and promoted the on line access to the **Zentralblatt** in the Belgian Universities.

The **EMS** seeks to promote mathematics in the program of the European Union.

Activities of the *BMS* and of the *EMS*

The ***BMS*** has been active in organizing international congresses and other meetings: "The mathematics of ranking" (Royal Academy Brussels), December 4–5, **2009** Leuven: joint meeting with the London Mathematical Society, September 13 **2010** Ph.D. day Royal Academy Brussels, November 9 **2011**: Mathematics and Teaching (Royal Academy Brussels). Future plan: joint meeting with RSME (Real Sociedad Matemática Española) and SML (Luxembourg Mathematical Society June 6–8 **2012**.

The ***BMS*** and the National Committee for Mathematics has published official standpoints in the BaMa discussion and in the use of the Science Citation Index and Impact Factors for the evaluation of mathematicians. This has been approved by the ***EMS***.

The activities of the ***EMS*** are numerous and of high quality with the organization of the European Congress of Mathematics (ECM) every four years (Paris in 1992; Budapest in 1996; Barcelona in 2000, Stockholm in 2004, Amsterdam in 2008, 6th ECM, Krakow, July 2–7, 2012), with the Forum Mathématique Diderot, with the publication of the **Journal of the *EMS***. The ***EMS*** as also created its own publishing house and offers a large and well-maintained collection of non-commercial journals and books on ***EMIS***, the European Mathematics Information Service (www.emis.de).

Committee of the *BMS*

Françoise Bastin (ULg) (president)	Hendrik Van Maldeghem (UGent) (vice-president)
Jan van Casteren (UA) (secretary)	Guy Van Steen (UA) (treasurer)
Stef Caenepeel (VUB) (editor in chief of the Bulletin)	Philippe Cara (VUB)
Andreas Weiermann (UGent)	Eva Colebunders (VUB)
Pierre Bieliavsky (UCL)	Camille Debiève (UCL)
Jean Van Schaftingen (UCL)	Pascal Lambrechts (UCL) (Book Review Editor)
Frédéric Bourgeois (ULB)	Paul Godin (ULB)
Catherine Finet (UMons)	Christian Michaux (UMons)
Gentiane Haesbroeck (ULg)	Renaud Lambiotte (FUNDP)
Michel Van den Bergh (UHasselt)	Freddy Dumortier (UHasselt)
Adhemar Bultheel (KUL)	Stefaan Vaes (KUL)

Further information on the *BMS* and on the *EMS*:
`http://bms.ulb.ac.be/` (***BMS***) and `http://` www.euro-math-soc.eu (***EMS***).

BMS and *EMS* membership dues for 2011

BMS membership:	**EUR 20.00**
BMS* + *EMS membership:	**EUR 43.00**

Note that the ***EMS*** membership fee of **EUR 23** is allowed only to persons belonging to an ***EMS*** corporate member society. The ***EMS*** individual membership fee is 60 EURO otherwise.

For details on memberships: `http://bms.ulb.ac.be/membership/reciproc.php`
Dues are to be paid on account number **000-0641030-54** (for EU members not residing in Belgium: IBAN BE42 0000 6410 3054; BIC BPOTBEB1)

<div align="center">

Belgian Mathematical Society
Campus Plaine, CP. 218/01
Bld. du Triomphe, B-1050 Brussels.

</div>

Payment by credit card is not possible anymore, but payment via PayPal will be accepted. Use `http://bms.ulb.ac.be/membership/paypal.php`
Registration: Use the Membership Application form below or **register on line** at `http://bms.ulb.ac.be/membership/appl-form.php`

The last year you have paid your membership dues can be found on the address label.

Membership Application/Renewal Form 2012

to be sent to
Belgian Mathematical Society
c/o Jan van Casteren
Campus Plaine, CP. 218/01
Bld. du Triomphe, B-1050 Brussels.

Name: ....

Address: ....

Postal code: .... **City:** .... **Country:** ....

E-mail: ....

Occupation: .... **Place of Work :** ....

Please tick the appropriate lines:

☐ I want to be an ordinary member of the **BMS** (EUR 20.00).

☐ I apply for a BMS reciprocity membership (EUR 18.00); I am a member of the ....
(see page 1 for the list of the reciprocating societies).

☐ In addition to my BMS membership, I want to be a member of the EMS (add EUR 23.00).

☐ I do not agree that the Newsletter BMS-NCM News be sent to me by e-mail (as an attached
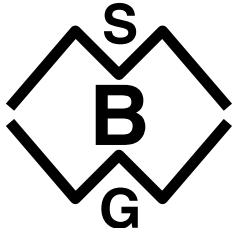.pdf file). Members are strongly advised to have the Newsletter sent by e-mail.

☐ I do not agree that my affiliation and e-mail address are published.
affiliation: ....
address: ....
e-mail: ....

☐ I do not agree that my affiliation and e-mail address are made available on the web site
of the BMS.

☐ I shall pay my dues, which in total amount to ...,... EURO on account number
000-0641030-54 of the BMS: (for EU members not residing in Belgium: IBAN BE42 0000
6410 3054; BIC BPOTBEB1)

☐ I will pay via PayPal and use `http://bms.ulb.ac.be/membership/paypal.php`. BMS
members residing in one of the EU countries at the time of billing are invited to transfer their
membership dues via the account number mentioned above.

Date: Signature: ....

Minutes of the General Assembly of the Belg. Math. Soc. of November 19 2011

Place: Royal Academy, Academy House, Hertogsstraat/Rue Ducale 1, Brussels. Time: 1.00 PM.

There was only one item on the agenda: Election of the new Executive Committee of the BMS. The following proposal was unanimously adopted by those members of the BMS who were present at the meeting.

For the coming 3 years the Executive committee of the BMS is composed as follows:
Françoise Bastin (ULg) (president, editor of BMS-NCM NEWSLETTER)
Jan van Casteren (UA) (secretary),   Guy Van Steen (UA) (treasurer)
Stef Caenepeel (VUB, editor in chief of the Bulletin)
Hendrik Van Maldeghem (UGent, vice-president)   Andreas Weiermann (UGent)
Catherine Finet (UMons),   Christian Michaux (UMons)
Camille Debiève (UCL) (managing editor of the Bulletin)
Jean Van Schaftingen (UCL),   Pierre Bieliavsky (UCL)
Philippe Cara (VUB),   Eva Colebunders (VUB)
Freddy Dumortier (UHasselt),   Michel Van den Bergh (UHasselt)
Paul Godin (ULB),   Frédéric Bourgeois (ULB)
Gentiane Haesbroeck (ULg),   Renaud Lambiotte (FUNDP)
Stefaan Vaes (KUL),   Adhemar Bultheel (KUL)
Pascal Lambrechts (UCL, editor of the book reviews)

There were words of thanks for those people who left the committee and devoted some of their valuable time and energy to matters related to the BMS.

Report: Jan Van Casteren

Vrije Universiteit Brussel

Faculteit Ingenieurswetenschappen
Vakgroep Wiskunde

ULB — UNIVERSITÉ LIBRE DE BRUXELLES, UNIVERSITÉ D'EUROPE

Faculté des Sciences
Département de Mathématique

Hopf Algebra Workshop

Brussels, January 31, 2012

Morning session	Vrije Universiteit Brussel, Room 6G324 (building G, 6th floor)
10.00 - 10.50	**Eliezer Batista** (Santa Catarina, Brazil) *Partial Representations of Groups and Hopf Algebras*
11.00 - 11.50	**Kevin Coulembier** (Ghent) *Invariant integration on supergroups*
	Lunch
Afternoon session	Université Libre de Bruxelles, Salle des professeurs 2NO906 (building NO, 9th floor)
14.00 - 14.50	**Adrian Vazquez Marquez** (Mexico) *Kleisli objects in Monoidal Categories*
15.00 - 15.50	**Guohua Liu** (Nanjing) *Graded Morita Theory For Group Coring and Graded Morita-Takeuchi Theory*

All talks take place at campuses "Pleinlaan"/"Plaine", for directions see
http://www.vub.ac.be/english/infoabout/campuses/index.html
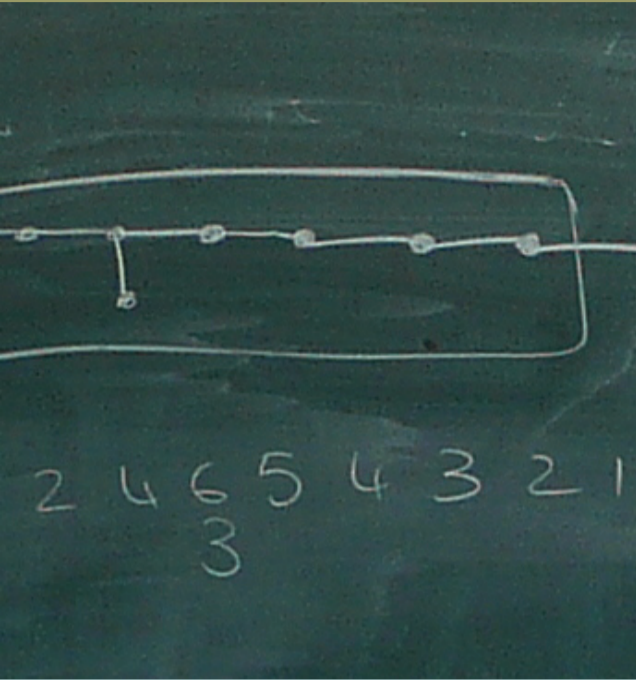http://www.ulb.ac.be/campus/plaine/plan-en.html

Lunch will be offered to participants who register by email to scaenepe@vub.ac.be before January 25.

Everybody is cordially invited!

S. Caenepeel & J. Vercruysse

INCIDENCE GEOMETRY AND BUILDINGS

February 6-10, 2012
Ghent (Belgium)

Organizers:

Bart De Bruyn
Tom De Medts
Jef Thas
Koen Thas
Hendrik Van Maldeghem

Main speakers:

Pierre-Emmanuel Caprace
(U Louvain, BE)

Arjeh Cohen
(TU Eindhoven, NL)

Stefaan De Winter
(Michigan Tech. U, US)

Gary Ebert
(U Delaware, US)

Anna Kasikova
(Bowling Green State U, US)

Bernhard Mühlherr
(U Giessen, GE)

Akihiro Munemasa
(Tohoku U, JP)

Antonio Pasini
(U Degli Studi Siena, IT)

Bertrand Rémy
(U CB Lyon 1, FR)

Special lecture by Hendrik Lenstra Jr.
(U Leiden, NL)

http://java.ugent.be/igb