

## BELGIAN MATHEMATICAL SOCIETY

Comité National de Mathématique CNM

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NCW Nationaal Comité voor Wiskunde



### **BMS-NCM NEWS: the Newsletter of the Belgian Mathematical Society and the National Committee for Mathematics**

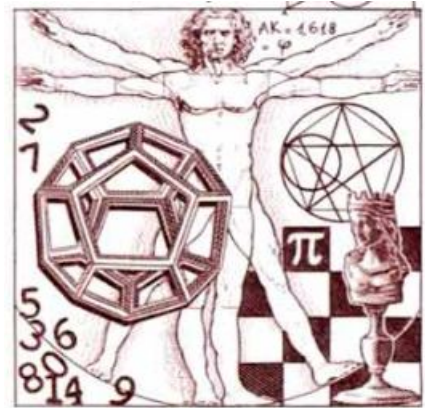
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## **BMS-NCM NEWS**

No 84, September 15, 2011

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## Letter from the editor

*Hello! I do hope you had a nice summer time.  
Welcome to this September issue of our Newsletter!*

Regards, Françoise

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## 1 News from the BMS

Next November, the **BMS and the National Committee** are organizing a meeting with the Société Belge des Professeurs de Mathématique d'expression française (**SBPMef**) and the Vlaamse Vereniging voor Wiskundeleraars (**VVW**):

*Mathematics in secondary schools: now... and afterwards?*  
*Les mathématiques dans l'enseignement secondaire: quel futur?*  
*De toekomst van de wiskunde in het middelbaar onderwijs?*

Place: Royal Academy, auditorium Rubens

Date: Saturday, November 19, 2011, 10.00-13.00

Program:

- 09.30: Welcome coffee
- 10.00: Speaker: Gilles Godefroy (Paris)
- 11.00: Speaker: Frans Keune (Radbout University Nijmegen)
- 12.00: Panel discussion chaired by Alain Verschoren, rector of UA
- 13.00 : Reception

Details are available (directly from the societies web sites of SBPMef, VVW, BMS) and **registration are open at the url**

<http://bms.ulb.ac.be/MathSecSchools2011/>

Note that the

### *General Assembly*

of the BMS will also take place on November 19, 2011, at the end of the discussions (around 13:00) at the Academy. On this occasion, elections for President and Vice-president (2011-2013) will be organized.

## 2 Meetings, Conferences, Lectures

### 2.1 November 2011

**Mathematics in secondary schools: now... and afterwards?**

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**De toekomst van de wiskunde in het middelbaar onderwijs?**

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This meeting is co-organized by the **BMS and the National Committee**, the Société Belge des Professeurs de Mathématique d'expression française (**SBPMef**) and the Vlaamse Vereniging voor Wiskundeleraars (**VVW**). It will take place at the Royal Academy, auditorium Rubens.

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The March 2011 issue of the Notices of the AMS is a special issue on education. It can be interesting to read it in view of the planned meeting! See at the pages <http://www.ams.org/notices/201103/>

### **Conférence dans le cadre de l'EDT à l'UMH**

**Développements mathématiques autour de l'oeuvre scientifique de Blaise Pascal.**

November 22, 2011, 10.30-Pentagone, UMons

The speaker is **Sophie Malecki** from IREM de Nancy-IUFM de Lorraine. More information will be available in the next Newsletter but you can already contact C. Finet ([catherine.finet@umons.ac.be](mailto:catherine.finet@umons.ac.be)) or K. Grosse-Erdmann ([kg.grosse-erdmann@umons.ac.be](mailto:kg.grosse-erdmann@umons.ac.be))

### 2.2 February 2012

**Incidence geometry and buildings**

**February 6-10, 2012, GHENT**

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

### 2.3 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-organize a meeting (in Liège) with the Real Sociedad Matemática Española and the Luxembourg mathematical society. A web page and the first announcement will soon be available.

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)

### 3 Miscellaneous

#### 3.1 From EMS

Here are some news from the EMS:

1. The call for nominations of candidates for the EMS Prizes has been already published at [http://www.euro-math-soc.eu/ems\\_prizes.html](http://www.euro-math-soc.eu/ems_prizes.html)  
The deadline for submission is 1 November 2011.
2. The call for nominations of candidates for the Otto Neugebauer Prize for the History of Mathematics has been published at <http://www.euro-math-soc.eu/node/995>  
The deadline for submission is 31 December 2011.
3. The EMS is willing to play an active role in the discussions on the Strategic Framework for Future EU Research and Innovation Funding. We have written a Position Paper that can be downloaded at <http://www.euro-math-soc.eu/index.html> and also at [http://ec.europa.eu/research/csfr/index\\_en.cfm?pg=responses](http://ec.europa.eu/research/csfr/index_en.cfm?pg=responses)  
Everybody can contribute to the EC debate by filling out an online questionnaire at [http://ec.europa.eu/research/csfr/index\\_en.cfm?pg=questionnaire](http://ec.europa.eu/research/csfr/index_en.cfm?pg=questionnaire)
4. The EMS has become a partner of the project Mathematics of the Planet Earth 2013, see <http://www.mpe2013.org/>

Marta Sanz-Solé  
EMS President  
<http://www.euro-math-soc.eu/>

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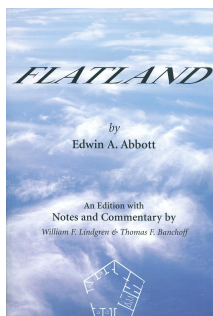
Office phone: +34 934021655, Fax: +34 934020172, [www.mat.ub.edu/sanz](http://www.mat.ub.edu/sanz)

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

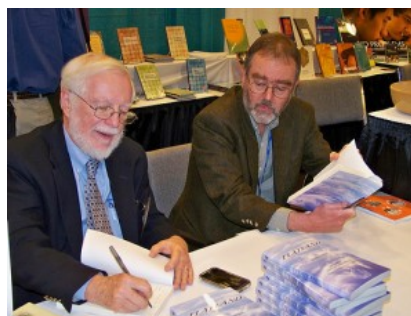
**Flatland.** by *Edwin A. Abbott* an edition with **Notes and Commentary** by *William F. Lindgren & Thomas F. Banchoff*; Cambridge University Press, 2010 (ix+294 p.), soft cover, ISBN 978-0-521-75994-6.



E.A. Abbott

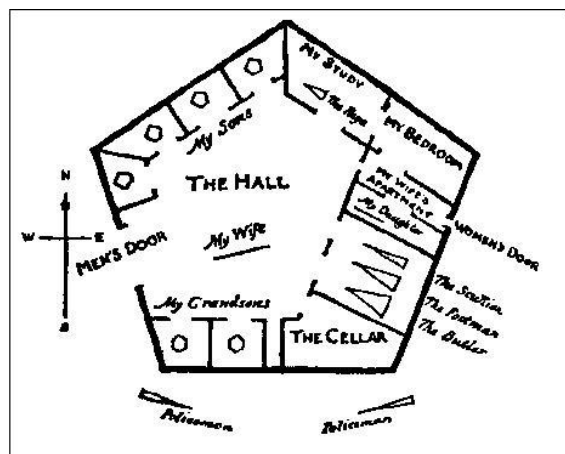


cover



T.F. Banchoff (left) and  
W.F. Lindgren (right)

*Flatland* by Edwin A. Abbott is probably as well known as *Alice in Wonderland* written by his contemporary Lewis Carroll (pseudonym of G.A. Dodgson). Flatland is the story told by A. Square, who lives in a two-dimensional world. The middle class inhabitants in Flatland are regular polygons, starting with the equilateral triangles whose children are squares, and they get pentagons as their offspring. These have a better status of Professionals and Gentlemen. The  $n$ -gons for larger  $n$  are Nobility, and for  $n$  large, they are almost as circles having the order of Priests. The female inhabitants are needle-like: long thin and pointy. In a two-dimensional world they will see one another always as lines, but they can recognize each other by touching and “feeling” the angle of the partner.



A house in Flatland

The sketch on the left shows the house of A. Square. The house is oriented North-South, where the two top “walls” are called “roof”. The men’s door is on the left, while the women’s door is a very narrow entrance on the right. The wife (needle) is in the hall, and the sons (pentagons) are in their rooms against the Western roof and there is one daughter (short needle) in the narrow room near the women’s entrance. The two grandchildren (hexagons) are in the rooms on the Southern wall. The large room against the Eastern wall is for the servants

(isosceles triangles). At the bottom we see two policemen (pointy isosceles triangles).

Females are close to the lowest cast of Soldiers and Workmen (isosceles triangles). If their angle shrinks below 10 degrees, they can become Criminals, totally devoid of intellect and used for warfare, but if they are not even good enough for war, they are used for education. Isosceles cannot raise their status by birth, unless by exceptional merits, they may grow more equilateral. As an individual is from a higher cast, he learns to recognize the other by “sight”. Living in a foggy world, they can develop a highly sensitive depth sight and estimate how fast the sides of their opponent slopes away from them and thereby estimate the angle and hence the status of the other one.

During a dream A. Square had a vision of Lineland, a one-dimensional world, in which he is an external observer who can see the whole land, whereas the inhabitants of Lineland cannot pass each other. Linelanders can only communicate with a distant relative by sound. The king of Lineland is trying just as hard to explain his world to A. Square who is both so ignorant and yet so superior to his world, as A. Square is trying to explain his world to, us, the readers of this book.

Moreover when Sphere from Spaceland enters his Flatland, it appears as a perfect circle of varying size. A. Square, instructed by Sphere is taken outside his flat world and given a view of Flatland from within Spaceland. Then things that were unexplainable before, becomes obvious: how Sphere can see



the complete house in Flatland, and take something out of the closet without opening a door. In fact since houses in Flatland only have walls (i.e., lines), even though they call the two northern sides of the house a roof, the house has no roof in the third dimension, and so Sphere can see and enter everywhere. When A. Square is back, he tries to explain his three-dimensional insights but he is not understood by his cohabitants and eventually locked away for his theories. He writes this book in prison.



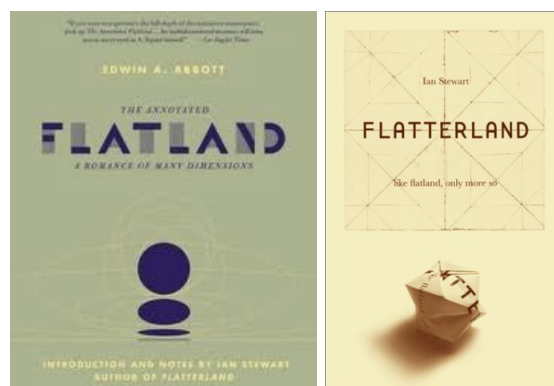
Flatland:the film & Flatland : the movie  
 critique saying that a Flatlander cannot “see” in Flatland, since indeed perfectly flat things are in fact invisible, since they do not have any volume. With a pseudo scientific style Abbott argues that Flatland-items do have some “height” that they are not aware of and wouldn’t know how to measure it anyway. Since the reader has to know Flatland to understand these comments, an epilogue is the proper place.

The subtitle of *Flatland* is *A romance of many dimensions*, and there are many dimensions indeed. Not only the mathematical satire, but also the a critique of the Victorian and the classical Greek societies. The parallels between true history and Flatland with its casts, its civil war about the Color Bill, etc., are very clearly explained by the editors W.F. Lindgren and T.F. Banchoff. Both of these are mathematicians, the first one at Slippery Rock University and the second at Browns. They add general comments about the mathematical aspects, but also about historical and philosophical aspects, and even on the meaning of English words and expressions as the language of Abbott is not exactly the same as what is used today. The original text is printed on the left page and the comments on the right page. The comments are mostly very helpful, but in my opinion they are sometimes a bit over the top. For example they explain the word “rhetoric” as “the art of using language to persuade or influence others”. I believe this is known to readers of the 21st century, unless they hope it becomes a prescribed book in secondary schools.

The editors are really specialists of Flatland and of Abbott. They also edited previous releases of *Flatland* and wrote papers and published books on related topics. Most appreciated are the appendices with a summary of the early reviews of *Flatland* (which triggered the preface by Abbott, mentioned above). There is also a chronology of Abbott’s life. Not exactly a biography, but nonetheless good enough for this edition. They do include however what they call “a mathematical biography”, some facts about the education of girls in Victorian England (females are teated in a politically very incorrect way in Flatland), and Abbott’s obituary. This edition can be used as a study book in secondary school, but with suggestions for further reading and indexes, it can also be a starting point for a further thorough study of some of the aspect dealt with. But you may as well just want to enjoy the fantasy.

Flatland, like *Alice in Wonderland* has had a big influence on many generations and inspired many editions and authors of sequels (e.g., *Flatterland: Like Flatland, only even more so* by Ian Stewart) and moviemakers (*Flatland: the film* by Ladd Ehlinger Jr., a computer animation (2007)).


Edwin A. Abbott (1838–1926) studied at the City School of London and got degrees from St. Johns College, in Cambridge. He graduated in Classics (first class honors), Mathematics (second class honors)<sup>1</sup> and Theology. He became headmaster of the City School of London. He wrote several books on literature and on theology but he is best known among a broader audience as the author of *Flatland*. The first edition appeared in 1884, and a second edition was printed shortly after. The current book contains this second edition. The original had an introduction which is added here as an epilogue, which seems a natural place to put it. Indeed, it was written by Abbott because there came some cri-



Flatland edited by Ian Stewart and the sequel Flatterland

Adhemar Bultheel

<sup>1</sup>Lewis Carroll studied in Oxford and got first class honors in mathematics and second class honors in classics.

The background image shows the interior of the Auditorium Rubens, a grand hall with a high ceiling, ornate architectural details, and rows of red upholstered chairs facing a stage area with a large white screen. The lighting is warm and focused on the stage.

# Mathematics in secondary schools: now... and afterwards?

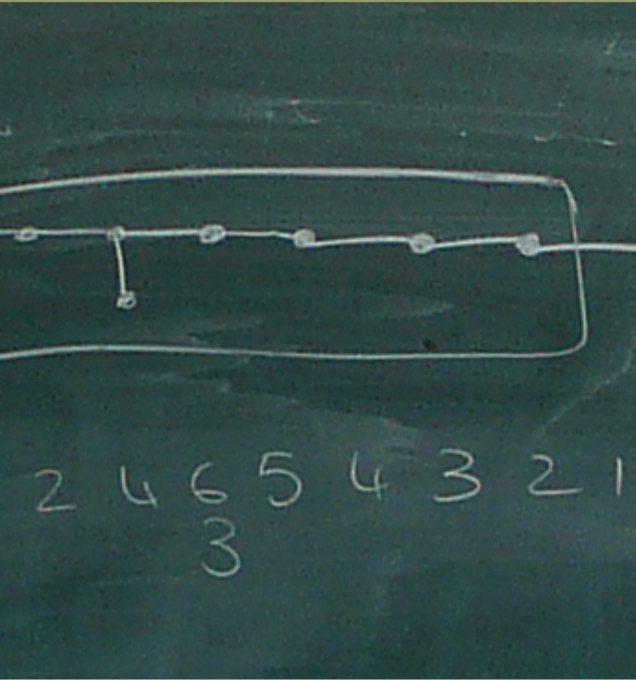
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**Royal Academy, Auditorium Rubens**

**Lectures by  
Gilles Godefroy (Paris)  
Frans Keune (Nijmegen)**

**Panel discussion chaired by  
Alain Verschoren (University of Antwerp, Rector)**

# INCIDENCE GEOMETRY AND BUILDINGS



## Organizers:

Bart De Bruyn

Tom De Medts

Jef Thas

Koen Thas

Hendrik Van Maldeghem

February 6-10, 2012  
Ghent (Belgium)

## 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>