Newsletter

BELGIAN MATHEMATICAL SOCIETY

127, March 15, 2020

Comité National de Mathématique CNM

NCW Nationaal Comité voor Wiskunde

Newsletter of the Belgian Mathematical Society and the National Committee for Mathematics

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Contents

The next edition of this newsletter will appear on May 15th, so from now till May 8th all content can be sent to wendy.goemans@kuleuven.be.

Any information that you qualify as interesting to be spread among the Belgian Maths community is very much welcomed! Examples of such information are: PhD defenses, seminars, conferences, workshops, meetings, interaction with other sciences or business companies, popular lectures, school initiatives, math exhibitions, job opportunities, . . .

Foreword

Dear BMS members,

Together with Philippe and Wendy we were particularly glad to boast a March edition of the Newsletter blooming with mathematical activities of all sorts: Pi-day events, the BMS General Assembly, Award ceremonies, workshops, seminars and colloquia and even a MAth.en.JEANS conference. Sadly all these activities have been cancelled because of the recent outbreak of COVID-19 which has brought much of our country's activities to a halt.

We hope that you and your families stay safe and healthy, and that our next Newsletter will better reflect the vivacity of Belgium's mathematical scene.

Yours sincerely,
Philippe, Yvik and Wendy

1 News from the BMS & NCM

1.1 General assembly: postponed to a later date, TBA

1.2 Bulletin of the Belgian Mathematical Society - Simon Stevin

In December 2019, Volume 26, Number 5, of the Bulletin of the Belgian Mathematical Society - Simon Stevin appeared with the following table of contents:

- **Rita Jiménez Rolland** Linear representation stable bounds for the integral cohomology of pure mapping class groups. 641–658.
- **Filiz Yıldız, Hans-Peter A. Künzi** Symmetric connectedness in T_0-quasi-metric spaces. 659–679.
- **Tuncer Acar, Mirella Cappelletti Montano, Pedro Garrancho, Vita Leonessa** On Bernstein-Chlodovsky operators preserving e^{-2x}. 681–698.
- **Vinícius V. Fávaro, Ariosvaldo Jatobá** Hypercyclicity, existence and approximation results for convolution operators on spaces of entire functions. 699–723.
- **Román Sasyk** Permanence properties of the second nilpotent product of groups. 725–742.
- **H. M. Barakat, E. M. Nigm, E. O. Abo Zaid** Asymptotic Distributions of Record Values under Exponential Normalization. 743–758.
- **Abdelwahab Bensouilah** L^2 concentration of blow-up solutions for the mass-critical NLS with inverse-square potential. 759–771.
- **Jun Zhou** Blow-up and exponential decay of solutions to a class of pseudo-parabolic equation. 773–785.
- **Cesar Valverde** The non-split symplectic period of a residual Eisenstein series on Sp_{2n}. 787–799.

For the table of contents of previous issues, see https://projecteuclid.org/all/euclid.bbms.

Remember, as a member of the BMS you can ask for electronic access to all electronically available issues of the bulletin, if you don't have a login yet, contact pcara@vub.ac.be.

1.3 Call for comments on the new AMS index 2020

The editors of Mathematical Reviews MathSciNet of the American Mathematical Society (MR) and the Zentralblatt Mathematik (zbMath) recently put a call to mathematical community to find the errors remaining in the new Mathematical Subject Classification 2020 (MSC2020) of the AMS. The present revision MSC2020 is a result of extensive work of the Editors with mathematical community and was announced in particular in the EMS Newsletter on September 2016 (101), p. 55. The call is available under the link https://mathscinet.ams.org/msc/pdfs/classifications2020.pdf and our final corrections to polish it are requested to be send to feedback@msc2020.org.

The members of the society once again are welcome to have a look on the MSC2020 and send corrections w.r.t. their area(s) of mathematical research.

As a result of recently emerged necessity of strengthening the areas such as computational immunology (the subject PDEs in connection with computational immunology) and global economical models during an alert status by WHO and necessity of possibilities of mutual support of national economies as a country enters and exits certain special economical state our contribution may still try to include new subjects, or, if it is not any more possible for the present version – prepare them for the coming MSC2030.

Tatiana Berres-Vojtovic (Vierjulliena)

2 Meetings, Conferences, Lectures, ...

Even more than in previous editions of this newsletter, always check whether the activities listed below will take place. Seen the current situation some of the following activities might be cancelled or postponed due to newly issued safety measures to slow down the further spread of COVID-19.

2.1 π-day 2020

International Day of Mathematics

March 14, 2020

Unfortunately, the initiatives planned at the occasion of π-day and the first International Day of Mathematics originally listed at https://www.idm314.org/ are cancelled due to the increased safety measures installed to slow down the further spread of COVID-19.

Thanks to Paul Levrie however, luckily we still have the pi-trivia, found at the end of this newsletter, to celebrate this year's π-day!

2.2 April 2020

Mathematics Research Day

April 27, 2020

University of Antwerp

We invite you to the second edition of the **Mathematics Research Day** of the University of Antwerp. In this event, young researchers of the Department of Mathematics will introduce their field of study. Besides that, other aspects of a research career in mathematics will be discussed.

The event is targeted at students, fellow researchers and teachers and will take place on the afternoon of **Monday, April 27th 2020** on the **Campus Middelheim, room M.G.010**. Participation is free, but registration is mandatory.

The programme consists of a number of talks and pitch presentations about research done at the department. Afterwards we will talk about mathematical research done in the industry and about the obstacles that women sometimes have to face in science. The presentations will be held on the level of knowledge of our bachelor students. There will be a coffee break and a short reception afterwards. More details can be found on the webpage of the event:

https://www.uantwerpen.be/en/departments/mathematics/research/mathematics-research-day/

2.3 May 2020

2-day minicourse event on Singularities in Geometry and Dynamics

May 7-8, 2020

Hasselt

This is a joint 2-day event taking place on May 7-8, 2020 in Hasselt/Belgium, organised by the dynamical systems group in Hasselt (headed by Peter De Maesschalck), the geometry group at KU Leuven (headed by Joeri Van de Veken and Marco Zambon), and the analysis group in Antwerpen (headed by Sonja Hohloch).

There will be

- 4 minicourses by Peter De Maesschalck, Sonja Hohloch, Joeri Van der Veken, Marco Zambon on selected topics in geometry and dynamics;
- 2 external speakers: Marie-Amélie Lawn (Imperial College London), [tbc];
- talks by PhD students and postdocs from Hasselt, Leuven, and Antwerpen.

More details TBA soon at

https://www.uantwerpen.be/nl/personeel/sonja-hohloch/private-webpage/conference-workshop/minicourse-on-singul/

2.4 June 2020

Workshop on multisymplectic geometry

June 18-19, 2020

KU Leuven

A two-day workshop on multisymplectic geometry and related topics.

The list of speakers includes:

- Christian Blohmann (MPIM Bonn)
- Frédéric Hélein (IMJ-PRG)
- David Iglesias (Universidad de la Laguna)
- Thomas Bruun Madsen (University of Buckingham)
- Narciso Román-Roy (Universitat Politècnica de Catalunya)
- Leonid Ryvkin (IMJ-PRG)
- Christian Saemann (Heriot Watt University)

Registration is free but compulsory, see all information at:

https://wis.kuleuven.be/events/multisymplectic

2.5 July 2020

18th Workshop on Advances in Continuous Optimization - EUROpt 2020

July 1-3, 2020

Toulouse, France

EUROpt 2020, the annual workshop of the continuous optimization working group of EURO, will be held in Toulouse, France on July 1-3, 2020. We took this opportunity to organize a stream dedicated to **Advances in mathematical optimization for machine learning**.

This stream invites contributions on all aspects of mathematical optimization (incl. stochastic, nonlinear, nonconvex, multi-objective) applied to large-scale inverse problems, variational inference, nonlinear regression, probabilistic classification as well as nonlinear dimensionality reduction, clustering, and association problems.

Topics include -but are not limited- to

- Formal/mathematical and experimental/numerical studies
- Performance and stability incl. regularization methods
- (Pre-)conditioning methods

- New methodological and algorithmic developments incl. data-driven approaches, approximate/ inexact methods
- Exploratory studies related to new research directions
- etc.

We still have a couple of open slots for contribution to this stream. Interested authors are invited to submit their contribution through the EURO submission system available at http://www.euro-online.org/conf/europt2020/ using the following **code 63bf0aa9**.

Important Dates:

- Submission deadline: March 22, 2020
- Acceptance notification: April 5, 2020
- Registration deadline: May 6, 2020
- Workshop: July 1-3, 2020

All information available at: http://europt2020.recherche.enac.fr/

2.6 September 2020

Second Antipode Workshop - 2020 - A workshop on (partial) representations and related topics

September 10-11, 2020

Université Libre de Bruxelles

This second ANTIPODE workshop aims at being an occasion to gather together international experts and young researchers in the theory of partial actions and representations as well as in related topics such as inverse semigroups, groupoids, Hecke algebras.

Confirmed speakers:

- Alessandro D'Andrea (Rome)
- Martina Lanini (Rome)
- Mark V Lawson (Edinburgh)
- Juan Jacobo Simon (Murcia)

Anyone who is interested is invited to attend the workshop. Registration is obligatory and can be done at the website quoted below. There is a registration fee of 40 euro, covering the coffee breaks and 2 lunches. There is a (limited) number of slots for contributed talks. We encourage you to register as soon as possible. The deadline for abstract submission is June 15, 2020; deadline for registration (without contribution) is September 1, 2020.

All information can be found at:

http://homepages.vub.ac.be/ hopfalgb/ANTIPODE2

2.7 Seminars and colloquia

Methusalem colloquium talks

KU Leuven

Scheduled talk:

- 23.04., 16:15-17:15, 200B 00.18: Thierry de Pauw (East China Normal University)

The scheduled mini-course *From random walks to q-deformed operator algebras* by Mateusz Wasilewski is postponed to a later date, tba at https://wis.kuleuven.be/methusalem-pure-math/methusalem-lecture-series/methusalem-lecture-series

For all information, see https://wis.kuleuven.be/methusalem-pure-math/activities/.

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3 Job announcements

3.1 From universiteit Leiden

The Mathematical Institute of the universiteit Leiden has a job opening for a researcher at the level of UD who next to research and teaching performs activities as study coach. The details are here:

https://www.universiteitleiden.nl/vacatures/2020/q1/20-081-universitair-docent-en-studiecoach-wiskunde-en-statistiek

The deadline for applying is originally set on March 15, but will be extended to March 29.

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

4.1 π-trivia

Next follow some surprising π- trivia, a contribution by Paul Levrie, to celebrate π-day!

4.2 Adhemar's corner

To conclude the newsletter, at the end follows a review of Adhemar on a fictional diary of Sophie Germain in her teenage years by Dora Musielak, **Sophie's Diary**, enjoy reading it!

pi trivia

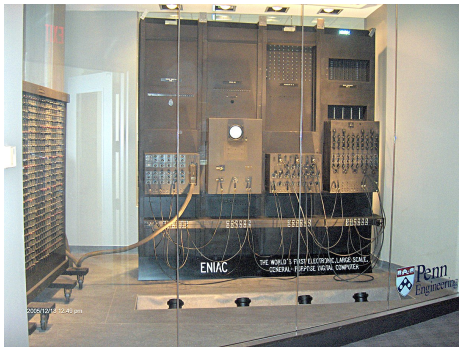
Did you know that . . .

- . . . today is π-day?
  Why? Because in America they write 3/14 for the date of today, March 14, and 3.14 is an approximation to the number π.
  Today you should eat pie, as everyone does. Or you should buy some pie for someone!
- . . . since 26 November 2019 thanks to Unesco:

- . . . the number π is a mathematical constant that is the ratio between the circumference of a circle and its diameter? The first 500 decimal digits of π are given by:

  3.14159265358979323846264338327950288419716939937510582097494459230781
  64062862089986280348253421170679821480865132823066470938446095505822317
  25359408128481117450284102701938521105559644622948954930381964428810975
  66593344612847564823378678316527120190914564856692346034861045432664821
  33936072602491412737245870066063155881748815209209628292540917153643678
  92590360011330530548820466521384146951941511609433057270365759591953092
  18611738193261179310511854807446237996274956735188575272489122793818301194913

  Note that there is no regularity at all in the decimals of the number π, so calculating many decimals of π is not obvious. Fortunately, there are algorithms that allow you to calculate (a number of decimals of) π relatively quickly.
- . . . since March 7, 2020 the European record memorization of digits of π is held by the Swede Jonas von Essen (29 years old), with 24063 digits? The world record has been in the hands of the Indian Suresh Kumar Sharma (now 24 years old) since 2015, with 70030 digits.
- . . . the November 2016 π-record has been broken twice since the last π-day ? In 2016, Peter Trüb calculated π^e trillion decimal places of π: 22 459 157 718 361 digits. The computer started the calculation on July 29th and finished it on November 11th, 2016.
  Note that in 1946, ENIAC, the first real electronic computer, calculated 2037 decimals of π in 70 hours.



The Machin formula was used in 1946:

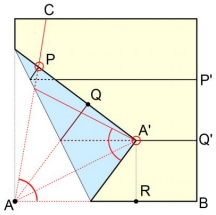
$$\frac{\pi}{4} = 4 \cdot \arctan\frac{1}{5} - \arctan\frac{1}{239}.$$

On π-day 2019, it was announced that Emma Haruka Iwao, Developer Advocate at Google, had calculated 31 415 926 535 897 (i.e. 31.4 trillion) decimals of π in the cloud. Calculation time: 121 days.
On January 29, 2020, Timothy Mullican ended his calculation (and verification) of the first 50 trillion digits of π. Calculation time: 303 days. For both records, the following formula of the Chudnovsky brothers was used:

$$\frac{1}{\pi} = 12\sum_{k=0}^{\infty}\frac{(-1)^k(6k)!}{(3k)!(k!)^3}\frac{13591409 + 545140134k}{640320^{3k+3/2}}$$

- . . . in O.J. Simpson's infamous trial, the credibility of FBI witness special agent Roger Martz (an FBI Forensic Science Research Unit chemist in Quantico) was questioned because he was unable to give the value of the number π?
- Cartoon by Tegan Phillips:

- ... if you enter (1.5)! on the most commonly used calculators (1.5 factorial, ! is in MATH/PRB), that you get a number that has to do with π? What value do you get?
- ... M38 is a large cluster of stars in the constellation Auriga where you will recognize the Greek letter π in the constellation of the brightest stars? And that in 1995 Robert Matthews used the position of the stars in the sky to find an approximation of π (title of the publication: Pi in the sky)?
- ... of the three ancient Delian problems (use only compass and ruler to (1) divide an angle into three equal parts, (2) double a 'cube' i.e. construct $\sqrt[3]{2}$ and (3) construct the number π) only (3), also known as *squaring the circle*, is not solvable with origami? Below is a solution for (1).



- ... weatherman Armand Pien was born exactly 100 years ago this year, and that he is the BV that did the most for the fame of the number Pi?
  If we can count cartoon characters with BV's, it would be Piet Pienter.
- ... you can memorise the first 127 decimals of π using the following French poem (the author of which is unknown)?

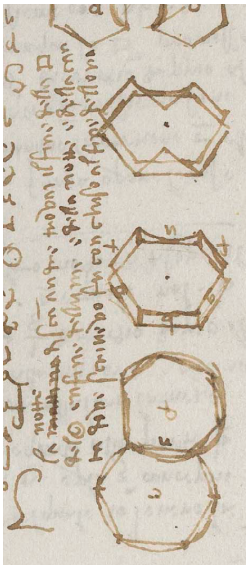
Que j'aime à faire apprendre un nombre utile aux sages.
Glorieux Archimède, artiste ingénieux!
Toi, de qui Syracuse, aime encore la gloire,
Soit ton nom conservé par de savants grimoires.
Jadis, mystérieux, un problème existait.
Tout l'admirable procédé, l 'œuvre étonnante!
Que Pythagore découvrit aux anciens Grecs:
Ô quadrature ! Vieux tourment du philosophe!
Sibylline rondeur, trop longtemps vous avez
Défié Pythagore et ses imitateurs !
Comment intégrer l'espace plan circulaire?
Former un triangle auquel il équivaudra?
Nouvelle invention: Archimède inscrira
Dedans un hexagone; Appréciera son aire
Fonction du rayon. Pas trop ne s'y tiendra!
Dédoublera chaque élément antérieur;
Toujours de l'orbe calculée approchera;
Définira limite; enfin, l'arc, le limiteur
De cet inquiétant cercle, ennemi trop rebelle!
Professeur, enseignez son problème avec zèle...

There's also this poem, by Amanda Gefter:

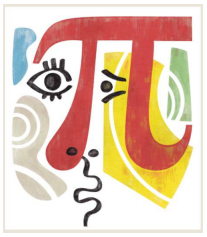
It's a clue.
A never repeating or ending chain, the total timeless catalogue,
elusive sequences, sum of the universe.
This riddle of nature begs:
Can the totality see no pattern, revealing order as reality's disguise?

(A 10-letter word stands for the digit 0.)

- ... it was shown in the 19th century that squaring the circle (see earlier) is impossible, but before that time there were many great scientists who tried it? Among them Leonardo Da Vinci, who writes in the margin of one of his notebooks that he has finished the problem: "In the night of Saint Andrew's Day, I put an end to squaring the circle." This was probably in the year 1504.
  Here you see a detail (mirror image;-).

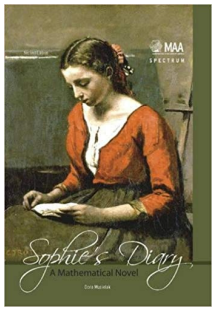


- ... there are limericks about π?
  There once was a girl who loved pi
  I never could quite fathom why
  To her it's a wonder
  To me just a number
  Its beauty revealed by and by
  (Tom Wilson)
- ... Picasso, despite his name, has not made a painting of the number π (left?), but that other artists have been inspired by π (right: Squared Circle (1968), Crockett Johnson)?



(2020 - see http://www.eoswetenschap.eu/wiskunde-sexy/)

Sophie's Diary. A Mathematical Novel (2nd ed.) by *Dora Musielak*. MAA, 2012 (xii+279 p.) isbn: 978-0-88385-577-5.



Dora Musielak

Sophie Germain (1 April 1776 – 27 June 1831) is one of those women in mathematics who had to fight for being accepted as a mathematician. Her father was a wealthy merchant in Paris. He represented the bourgeoisie in the États-Généraux before the French Revolution that was sparked in 1789 by the fall of the Bastille (Sophie was then 13). In the subsequent social agitation radical sans-culottes, roamed the streets of Paris during a Reign of Terror, were it became common practice to imprison and/or kill anyone with the slightest suspicion of being anti-revolutionary. Especially clergy and nobility were targetted, but many of the bourgeoisie were terrorised as well. The last king and queen of France, Louis XVI and Marie-Antoinette, were guillotined in 1793. Sophie and her two sisters grew up in Paris in this turbulent and violent period.

According to her biographers, Sophie studied mathematics in that period on her own from books that she found in her father's library, which was originally not to the liking of her mother. It was in those days "not done" for a young girl to study mathematics that was still a "men only" privilege. So she had to study during the night in an unheated bedroom with candle light. She had to master also Latin and Greek to read the books by Newton and Euler.

When she was 18 in 1794, the École Polytechnique opened, still women-not-allowed, but the lecture notes were public. Under the alias of M. LeBlanc (a former student), she sent her work to Lagrange, who was impressed and when he requested a meeting, learned the real identity of the author. Later she worked on Fermat's Last Theorem (FLT) and corresponded with Legendre and Gauss. She also attempted several times to win a prize from the Académie about the vibration of Chladni plates, where she was in competition with Poisson. Eventually she won the prize in 1816 with her third attempt. Her work on FLT in which she proposed a general method for proof was however more relevant than her work on elasticity, but it was neglected for a long time since she did not publish it herself, but it was used and published by others. She died from breast cancer in 1831 at the age of 55.

Musielak in this book includes at the end a biographical sketch of Sophie Germain with more details than what I gave above. There is also the list of Sophie's publications and a list of references for further reading. The larger part of the book is however about a fictional Sophie in which Musielak imagines how a young girl like Sophie would have experienced the turmoil in Paris and learned mathematcs between 1 April 1789 (her 13th birthday) and 29 December 1794 (when she was 18). She does this in the form of diary entries written by Sophie. There are many entries dealing with the politics, the riots and the anarchy that ruled the streets of Paris and how she had to go against the dissuading measures from her mother (her father was more supportive as was also the philosopher and mathematician Marquis de Condorcet, who was a friend of the family). Those entries are genuinely credible as written by an emotional young girl. However many (if not most) of the entries are about mathematics. There I have more a problem to see this as realistic diary entries of a teenager. Here it is more Musielak who is instructing the reader about the mathematics that Sophie is learning, including proofs and historical remarks, and using mathematical notation

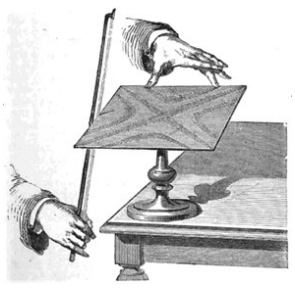
and ideas that we know from current mathematical schoolbooks. Most of them are about number theory and towards the end also about elasticity when Sophie detects calculus in the books by Newton, Euler and Kepler.

Many of the mathematical topics that this fictional Sophie writes about are the same as those found in books written for the popularization of mathematics, but of course the historical aspect is respected because only reference can be made to topics that are older than Sophie. So Sophie (i.e. Musielak) is writing about perfect numbers, Pythagorean triples, prime numbers and (approximations of) π, irrational numbers, Diophantine equations, the solution of linear, quadratic and cubic equations (including the Fior-Tartaglia dispute), the square root of -1, exponential growth, compound interest and the logarithm, Euler's constant, e^{ix} and the formula of de Moivre, infinite series and their convergence, Pascal's triangle, Fibonacci numbers, Goldbach's conjecture, and we see how Sophie is making her first steps in formulating her program she later develops in her attempt to prove FLT. She also tells about Hypatia of Alexandria (c. 360-415), Émilie de Châtelet (1706-1749, who translated Newton's work into French) and Maria Gaetana Agnesi (1718-1799) three other female mathematicians. With *Mécanique Analytique*, Lagrange's lecture notes that she obtains via a student Antoine LeBlanc, she learns about differential equations and equilibrium problems. She learns about the calculus of variations and finds the equation of tautochrone and brachistochrone curves.

For her work on FLT Sophie Germain considers two cases for $x^p + y^p = z^p$. Case 1 when p does not divide x, y, or z, and case 2 when p does divide one of them. If p and $2p+1$ are both primes, then p is now called a Germain prime (of course she did not call it so). The first Germain primes are 2, 3, 5, 11, 23, 29, 41, 53, 83, 89, 113, and 131. She proved that in case 1, if p is an odd Germain prime then $x^p + y^p \neq z^p$. Legendre extended this soon to odd primes p such that $kp + 1$ is prime, $k = 4, 8, 10, 14$, and 16.

It is interesting to read about her interaction with Gauss (this is not in the diary but it is in the biographical notes). Gauss had published his *Disquisitiones Arithmeticae* in 1801 and some three years later when she was 25, Sophie Germain wrote her first letters to Gauss using the pseudonym of M. LeBlanc. After a period of silence she got worried and in 1806 she asked General Pernety to find out about the well-being of Gauss. Pernety was camped in Breslau (Wrocław) during the French occupation and he sends an officer to Gauss who was then in Brunswick to ask at the instance of Demoiselle Sophie Germain in Paris about Gauss and if needed offer protection. Gauss was perplexed, knowing only M. LeBlanc and he never heard of General Pernety or Demoiselle Germain. He only knew Madame Lalande in Paris, the wife of the famous astronomer.

Some of her work on Chladni's plates (plates sprinkled with sand showed particular patterns when the plate vibrates) that won the *Prix de Mathematiques* from the *Académie* was included in a memoir by Legendre in 1823. She never went to collect her prize (one kilogram of gold). Poisson, her prime competitor for the prize, was member of the committee and wrote to her that her work was lacking mathematical rigour. Poisson never sought further contact and ignored her in public. She continued working and published on the problem but never solved it completely. It was eventually successfully tackled by Kirchhoff (1850).



Chladni plate

Musielak writes in her justification that the diary is fictional and nothing justifies that Sophie has learned the mathematics in the way she describes. She also writes that "any errors in the mathematics are her own" but then adds that she never wanted to give it the rigour of a textbook and that some errors are intentional to reflect Sophie's learning steps. However, even though this is the second edition of the book there are several typos which I suspect not to be intentional. A superfluous power n in $\sum_{n=1}^{\infty}(\frac{1}{n})^n = 1+\frac{1}{2}+\frac{1}{3}+\frac{1}{4}+\cdots$ (p. 67); an extra factorial in $\frac{3n!}{(n+1)!} = \frac{3}{(n+1)!}$ (p. 147); an extra prime in $\dot{x} = \frac{dx}{dt'}$ (p. 163); a dx under the square root in $L[y] = \int_{x_0}^{x_1}\sqrt{1+y'(x)^2dx}$ (p. 220); spelling typos: *mémoirés* instead of *mémoires* (p. 189); *uvres* should be *Œuvres* in the footnote (p. 242); Chadlin instead of Chladni (p. 248). Also *étés* is misspelled when Sophie writes to Gauss: *Je vous aurez la plus grande obligation si vous étés assez bon pour prendre la peine de me dire ce que vous pensez de la marche que j'ai suivie.* (p. 260).

Père Lachaise

But all in all the whole book reflects very well how Sophie Germain fought her way into science, basically all on her own. It is probably a good thing that Musielak is a woman and hence may be better suited to get under the skin of a teenage girl. Also the description of the striking events of the French revolution are entries of the diary that stay with you after closing the book. The only illustrations in the book are historical gravures illustrating these events. The picture on the cover is a painting by Camille Corot from the mid 19th century, called *A girl reading*. It is not representing Sophie Germain. Although fiction, this book is an inspiring read about a remarkable woman in mathematics.


Sofia Kovalevskaya

Cecilia Payne-Gaposchkin


Marie Curie


Emma Noether

I have some afterthoughts about how women in mathematics are "mistreated" in pictures. The picture of the young girl in the beginning of this review is made by Auguste Leray and appeared in a book "l'Histoire du Socialisme" c. 1880 and it shows "Sophie GERMAIN à l'age de 14 ans". The statue is by Zacharie Astruc and is reconstructed from her death mask in the museum of the Louvre. It is located at a school in Paris named after her. The medal is a made to commemorate Sophie Germain and has an inscription to confirm that. The pictures above can be found on the web and are claimed to be Sophie Germain, but that has a lot of fake info. The two leftmost pictures are from Sofia Kovalevskaya. Since this is also a "Sophie" and given the ressenblance with the portrait of the young Sophie, the confusion is understandable. However the next pictures are less acceptable. We see on the first of them Cecilia Payne-Gaposchkin, an English Astonomer that is a popular Sophie on Spanish sites. Next are Marie Curie and Emmy Noether and on the right Mary Fairfax Greig Somerville, all pictures commonly mistaken for Sophie Germain. I think that the few women (and their pictures) that we have in mathematics should be treated a bit more carefully.


Mary Somerville

Adhemar Bultheel