Els matemàtics, uns poetes fraudulents

Poesies i altres materials de la xerrada de Josep M. Brunat
al Seminari del Cargol celebrat a la Universitat de Lleida el
25 d'octubre de 2025

Françoise Marie Arouet, Voltaire (1694–1778)

A Madame du Chatelet

Sens doute vous serez célèbre
Par les grands calculs de l'algèbre,
Où votre esprit est absorbé.
J'oserais m'y livrer moi-même;
Mais hélas! $A+D-B$
N'est pas = à je vous aime.

Josep Pla (1897–1981)

Reparada

Tu, Reparada, tens unes aparences
plenes de secrets i d'encants,
llargues, plenes, vives
com les corbes d'un corball.
Ai, Reparada, si sabessis
les combinacions que es podrien fer
amb les teves el · lipses concretes
i el meu pensament!
Si tu i jo, Reparada, poguéssim
anar un vespre, carretera avall,
et dibuixaria les premisses
de la geometria elemental.
Tu hi posaries les corbes
i jo el càlcul integral
i passaríem llargues estones
fent equacions de segon grau.
Et convenceries, Reparada,
que la geometria és important
i que, per treure el suc de les coses,
s'ha d'haver llargament meditat.
El corball és un peix negroide
que, sobre el llom esquitxat de blau,
hi té la rojor del crepuscle
entelat per un gris suau.
Però tot això són somnis i quimeres
de la cuina de Mon Amador.
Tu seràs una excel · lent carnissera
i jo un enze sense to ni so.
Però si la menestralia et fatiga algun dia
i vols una sensació rutilant,
jo vindré a ensenyar-te geometria,
mentre el retard no sigui exagerat;
posa la direcció; ben exacta,
escriu-me una postal!

Gabriel Ferrater (1922–1972)

Literatura

Tan vehement, va dir-se un calamar,
faig el ridícul: un raig fi de tinta
ja desvia aquests monstres, ben poc crítics.
Perduda l'abundancia del cor,
va descobrir la voluptat formal:
mentir-se objectivat en l'arabesc
i fer-s'hi encara veure, subjectiu.
De l'urc de no amagar-se gaire, en deia
sinceritat: de la por de trobar-se
massa exposat, sentiment de l'estil
Lliurat a l'esperança que els espasmes
de l'aigua li anirien a favor,
deia fe en el llenguatge. Va morir
devorat: l'inefable el va temptar.

Poema inacabat (fragments)

Ell no jugava. Ben despert,
havia hagut de prohibir-se
els prohibits que ens permetíem
...
No era pas nou d'aquell temps
ni ho canvien els de després,
que l'orient del viure ens rodi amb
la plataforma giratòria
dels casos: *alles, was der Fall*
ist, és el món de Wittgestein.
Els casuals que som els homes
potser rodàvem aleshores
tanmateix molt centrifugats

Enric Casasses i Figueres (1951)

Un cinquè

Un cinquè un sisè un dotzè
un vintè mitja meitat
i la meitat de mig terç
i mig terç és la unitat.

Enric Casassas i Simó (1920–2000)

Figures

Sempre ha estat com treballar al circ.

Abans feia els signes de les quatre regles:
un, els braços en creu; dos, l'horitzontal;
tres, camaobert i braços enlaire un xic oberts;
quatre, ben tibat, inclinat cap a la dreta a punt de caure.

Però van venir els ordinadors i les calculadores de butxaca
i he hagut de perfeccionar l'espectacle.

Ara em penjo d'un punt fix
i amb una mica de força centrífuga als peus
giravolto a l'entorn d'un eix vertical que inclou aquell punt
i faig la figura d'un con.

El públic diu que això no és res.

M'entortolligo sobre la superfície del con
cames i braços penjant, en un pla paral.lel a mi mateix,
i faig una paràbola.
D'un cop de cul em poso paral.lel a l'eix del con,
i faig una branca d'hipèrbola.

El públic aplaudeix, no gaire.

Deixo el con (podria fer altres còniques),
em penjo de mans i de peus de sengles punts,
relaxat, em deixo vèncer per la gravitació
u- ni- ver- sal
i faig la catenària

Aplaudiments, ara.

Immòbil sobre el punt d'una roda
que roda sobre el pla de l'escenari
faig la cicloide;
i sobre un punt d'una roda que roda sobre una altra roda
faig l'epicicloide;
i sobre un punt d'una roda que gira dins una altra roda
faig la hipocicloide.

Aplaudiments.

I bo i seguint giravoltant amb la roda que roda al voltant del seu centre
em projecto sobre un diàmetre,
com aquell qui fa un moviment harmònic simple,
i el diàmetre el començo a desplaçar uniformement
paral.lel a ell mateix en tot moment,
i faig la sinusoide.

Aplaudiments.

I quan prenc dos diàmetres perpendiculars
i dos moviments harmònics simples
de dues rodes que rutllen a velocitats diferents
i els combino en un sol moviment per on cavalco,
em surten tot de figures de Lissajous
canviants amb la fase i la freqüència.

El públic ara m'adreça una ovació,
a mi, nàufrag en la solitud.

James Albert Lindon (∼1915–1979)

A Positive Reminder

A carpenter named Charlie Bratticks
Who had a taste for mathematics,
One summer Tuesday, just for fun,
Made a wooden cube side minus one.

Though this to you may well seem wrong,
He made it *minus* one foot long,
Which meant (I hope your brains aren't froting)
Its length was one foot less than nothing.

In width the same (you're not asleep?)
And likewise minus one foot deep;
Giving, when multiplied (be solemn!).
Minus one cubic foot of volume.

With sweating brow this cube he sawed
Through areas of solid board;
For though each cut had minus length,
Minus times minus sapped his strength.

A second cube he made, but thus:
This time each one foot length was plus:
Meaning of course that here one put
For volume: *plus* one cubic foot.

So now he had, just for his sins,
Two cubes as like as deviant twins:
And feeling one should know the worst,
He placed the second in the first.

One plus, one minus–there's no doubt
The edges simply cancelled out;
So did the volume, nothing gained;
Only the surfaces remainded.

Well may you pen wide yours eyes,
For these were now of double size,
On something which, thanks to his skill,
Took up no room and mesured nil.

From solid ebony he'd cut
These bulky cubic objects, but
All that remainded was now a thin
Black sharply-angled sort of skin

Of twelve square feet–which though not small
Weighed nothing, filled no space at all,
It stands there yet on Charlie's floor;
He can't think what to use it for!

Niccolo Fontana o Tartaglia (1499–1557)

Resolució de la cúbica

Quando ch'l cubo con le cose apresso,
Se agguaglia à qualche numero discreto
Trouan dui altri, differenti in esso.

Dapoi torrai, questo per consueto,
Ch'l lor produtto sempre sia eguale
Al terzo cubo, delle cose neto.

El residuo poi suo generale
Delli lor lati cubi, ben sottratti
Verrá la tua cosa principale.

In el secondo, de contesti atti;
Quando ch'l cubo restasse lui solo,
Tu osserverai quest'altri contratti,

Del number farai due, tal part'à uolo,
Che l'una, in l'altra, si produca schietto,
El terzo cubo della cose in stolo;

Delle qual poi, per comun precetto,
Torral li lati cubi, insieme gionti
Et total simma, sara il tuo concetto;

El terzo, poi de questi nostri conti,
Se solue col secondo, se ben guardi
Che per natura son quasi congionti

Questi trouai, et non passi tardi
Nel mille cinquecent'è quattro è trenta;
Con fondamenti ben saladi, e gagliardi.

Nella Città del mar' intorno centa.

Paul Richard Halmos (1916–2006)

ADVICE

If you think that your paper is vacuos,
Use the first-order functional calculus.
    It then becomes logic,
    And, as if by magic,
The obvious is hailed miraculous.

Ralph P. Boas (1912–1992)

Spelling Lesson

Weep for the mathematicians
Posterity acclaims:
Although we know their theorems
We cannot spell their names.

Forget the rules you thought you knew—
Henry Lebesgue has got no Q.

Although it almost rhymes with Birkhoff,
Two H's grace the name of Kirchhoff.

The Schwarz of inequality
And lemma too, he has no T.

The "distribution" Schwartz, you see
is French, and so he has a T.

In Turing's name—no German, he—
An umlaut we should never see.

Hermann Grassmann–please try to
Spell both his names with 2 N's, too

If you should ever have a quote
A Harvard Peirce, be sure to note
He has E before the I;
And so does Klein. Rules still apply
To Wienner: I precedes E;
The same for Riemann, as you see.
But Weierstrass, you must agree,
Has it both ways, with EIE.

Fejéjer, Turán, Cesàro, Fréchet-
Let's make the accents go that way:
Don't lose the squiggly little bits:
They don't mark stress-they are diacrits.

And as for (radon)-Nikodým.
Restore the accent, that's my dream.

But there is one I leave to you.
Whatever you may choose to do:
Put letters in or leave them out,
Garnish with accents round about,
Finish the name with -eff or -off:
There is non way to spell Чебышёв.

If you would have a friend in me,
Spell "Boas" thus, not with a z.

Tom Mike Apostol (1923–2016)

Where are the zeroes of $\zeta(s)$?...

Where are the zeros of zeta of s?
G.F.B. Riemann has made a good guess,
They're all on the critical line, said he,
And their density's one over $2\pi \log t$.

This statement of Riemann's has been like trigger
And many good men, with vim and with vigor,
Have attempted to find, with mathematical rigor,
What happens to zeta as mod t gets bigger.

The efforts of Landau and Bohr and Cramer,
And Littlewood, Hardy and Titchmarsh are there,
In spite of their efforts and skill and finesse,
(In) locating the zeros there's been no success.

In 1914 G.H. Hardy did find,
An infinite number that lay on the line,
His theorem however won't rule out the case,
There might be a zero at some other place.

Let P be the function pi minus li,
The order of P is not known for x high,
If square root of x times $\log x$ we could show,
Then Riemann's conjecture would surely be so.

Related to this is another enigma,
Concerning the Lindelof function $\mu(\sigma)$
Which measures the growth in the critical strip,
On the number of zeros it gives us a grip.

But nobody knows how this function behaves,
Convexity tells us it can have no waves,
Lindelof said that the shape of its graph,
Is constant when sigma is more than one-half.

Oh, where are the zeros of zeta of s?
We must know exactly, we cannot just guess,
In order to strengthen the prime number theorem,
The path of integration must not get too near 'em.

Saunders MacLane (1909–2005)

What Tom Apostol Didn't Know

Andre Weil has bettered old Riemann's fine guess,
By using a fancier zeta of s.
He proves that the zeros are where they should be,
Provided the characteristic is equal to p.

There's a moral to draw from this long tale of woe,
That every young genius among you should know.
If you tackle a problem and seem to get stuck,
Just take it mod p and you'll have better luck.

What fraction of zeros on the line will be found,
When mod t is kept below some given bound?
Does the fraction, whatever, stay bounded below,
As the bound on mod t is permitted to grow?

The efforts of Selberg did finally banish,
All fears that the fraction might possibly vanish.
It stays bounded below, which is just as it should,
But the bound he determined was not very good.

Norm Levinson managed to show, better yet,
At two-to-one odds it would be a good bet,
If over a zero you happen to trip,
It would be on the line and not just in the strip.

Levinson tried in a classical way,
Weil brought modular means into play.
Atiyah then left and Paul Cohen quit,
So now there's no proof at all that will fit.

But now we must study this matter anew,
Serre points out manifold things it makes true.
A medal might be the reward in this quest,
For Riemann's conjecture is surely the best.

Blanche Descartes (∼1935–2002)

Unicurse

Some citizens of Königsberg
Were walking on the strand
Beside the river Pregel
With its seven bridges spanned.

"O Euler, come and walk with us,"
Those burghers did beseech.
'We'll roam the seven bridges o'er,
And pass but once by each."

Ït can't be done,"thus Euler cried.
Here comes the Q. E. D.
Your island are but vertices
And four have odd degree."

From Königsberg to Konig's book
So runs the graphic tale
And still it grows more colorful
In Michigan, and Yale.

Enumerational

Pólya had a theorem
(Which Redfield proved of old).
What secrets sought by graphmen
Whereby that theorem told!

So Pólya counted finite trees
(As Redfield did before).
"Their number is exactly such,
And not a seeding more."

Harary counted finite graphs
(Like Redfield, long ago),
And pointed out how very much
To Pólya's work we owe.

And Read piled graph on graph on graph
(Which is what Redfield did).
So numbering the graphic world
That nothing could be hid.

Then hail, Harary, Pólya, Read,
Who taught us graphic lore,
And spare a thought for Redfield too,
Who went too long before.

Hymne to Hymen

The wind was blowing soft, the sun was sending
along their space-time geodesics wending
millions of photons, orange, green and yellow,
making the scene enchanting warm and mellow,
as by reflection and refraction they're diverted
into the eye, and so to sight converted.

Hector Pétard that noted big game hunter
feared that his intellect was growing blunter
A variation problem had him nettled,
he could not to see how it could be settled.
Who was it maximised charm, wir and grace,
and was the fairest of the human race,
yet minimised, under those same conditions,
all horrible and spiteful dispositions?

Cupid, from his pedestal in Piccadilly,
was duly energised, and willy-nilly
a million arrows sent with high velocity
(for he's a chap of great precocity)
a million?–more in the vicinity
of unnumerable infinity.

The fotons, $h\nu = E$ obeying,
send many orbital electrons swaying.
The arrows, which ignore Dirac's equations,
cause sinusoidal cardiac palpitations
in every youthful bachelor and spinster
within a neighbourhood of old Westminster

An arrow, flying staright without deflection
with Hector Pétard's heart made intersection,
as well it might, with probbility p,
there's arrows almost everywhere you see.

Feeling a sudden break in his dejection,
he gave a look in a north east direction,
direction cosines $(\theta, \theta, 0)$
where $\theta^2 = 1/2$, our hero
saw there a lovely maiden, smiling gailey,
reading the *Telegraph*, or some such daily.
Sensing his glance, she too felt quite elated,
and so his greetings were reciprocated.

Their conversation gave great satisfaction,
they had a strong Newtonian attraction.
Her dazling figure, when it was in focus,
beat hollow any algebraic locus.
Her limbs, enveloped gracefully in nylon,
she solved his problem to within ϵ,
and when his feelings he had truly sounded,
he found his love for her quite unbounded.

'You are my true reciprocal', quoth she,
'and you my contragradient', said he,
'My image, inverse in the sfere of life,
for future time, why not become my wife?'
'Your company is very sweet communion,
I think our meet ought include our union.'

'The union is included in the meet
only of equal sets. The proof is neat.
Come, charming one, let's be identified,
I'll be the bridegroom, you the blushing bride.

Our couple at this moment hail a carriage,
'Hey, driver, speed to church, we want a marriage.'
The vicar, seeing Hector,questioned whether,
they're sure that he and she could live together
connectedly, as long as they drew breath,
and never separated but by death.

'Oh, yes, we're positive, oh absolutely,
and swear by Harold Jeffreys resolutely,
this is no deviation due to chance,
it has statistical significance.'

And as he handed him the golden torus,
the vicar, quickly marrying them before us,
explained, as he performed the operation,
'this is an irreversible transformation.
You, Hector, owe to her in calm or storm,
convergence absolute and uniform.
By involution you're uniquely mated,
in fact, harmonically conjugated.

Then Hector turned to her after the mating,
and ceased to oscillate, but osculating,
declared, 'beloved one, now you are mine,
and I am ever yours, this ring's a sign
of an implicit perfect right ideal.
Of us two conjugates, the sum is real,
the difference is pure imaginary,
and ever negligible it shall be,
we two are definitely integrated,
and never shall be differentiated.

The moral of this episode is sweet,
their hearts in unison together beat.
In harmony, and equal in persuasion,
they solve the biharmonical equation.

And, step by step, proceeding by induction,
a happy family is in construction.
Best wishes from their friends in Trinity
mount steadily towards infinity.

P.S. Je regrette infiniement que je dois ajouter
que cette famille heureuse n'est jamais arrivée.

Rafael Alberti (1902–1992)

La divina proporción

A ti, maravillosa disciplina,
media, extrema razón de la hermosura
que claramente acata la clausura
viva en la malla de tu ley divina.

A ti, cárcel feliz de la retina,
aúrea sección, celeste cuadratura,
misteriosa fontana de mesura
que el Universo armónico origina.

A ti, mar de los sueños angulares,
flor de las cinco formas regulares
dodecaedro azul, arco sonoro.

Luces por alas un compás ardiente.
Tu canto es una esfera transparente.
A ti, divina proporción de oro.

Dante Alighieri (1265–1321)

La divina comèdia, cant XXXIII, (final)
Traducció de Josep M. de Segarra

La roda que es diria concebuda,
llum reflexa semblava en ta claror
en jo clavar-hi la mirada aguda,

i dintre seu, del mateix color,
pintada em va semblar de nostra cara,
i per'xò vaig forçar l'atenció.

I al geòmetra igual, que s'aclapara
volent mesurar el cercle, i no retroba,
pensant, cap forma que ho resolgui encara,

era jo enfront d'aquella vista nova:
volia jo comprendre com s'unia
la imatge al cercle, i com son lloc hi troba;

Mancà la fantasia en tal moment;
però a desig i a voluntat, novelles
rutes marcà, fent-los rodar igualment,

l'Amor que mou el sol i les estrelles.

Joan Fuster (1922–1992)

> Els matemàtics són una mena de poetes fraudulents que, de fet, intenten l'única poesia possible.

El quadrat antimàgic de James A. Lindon

2	15	5	13	→	**35**
16	3	7	12	→	**38**
9	8	14	1	→	**32**
6	4	11	10	→	**31**
↙	↓	↓	↓	↓	↘	
34	**33**	**30**	**37**	**36**		**29**

Georg Friedrich Philipp von Hardenberg, Novalis (1772–1801)

> L'àlgebra és la poesia.
> La vida més alta és la matemàtica.

La participació de casament de Hector Pétard i Betti Bourbaki

Monsieur Nicolas Bourbaki, Member Canonique de l'Académie Royale de Poldévie, Grand Maitre de L'Ordre des Compacts, Conservateur des Uniformes, Lord Protecteur des Filtres, et Madame, née Biunivoque, ont l'honneur de vous faire part du mariage de leur fille Betti avec Monsieur Hector Pétard, Administrateur -Délégué de la Société des Structures Induites, Membre Diplômé de l'Institute of Class-field Archacologist, Secrétaire de l'Oevre du Sou du Lion.

Monsieur Ersatz Stanislas Pondiczery, Complexe de Recouvrement de Première Classe en retraite, Président du Home de Rééducation des Faiblement Convergents, Chevalier des Quatre U, Grand Opératéur du Groupe Hyperbolique, Knight of the Total Order of the Golden Mean, l.u.b., c.c., h.l.c., et Madame, née Compactensoi, ont l'honneur de vous faire part du mariage du leur pupille Hector Pétard avec Mademoiselle Betti Bourbaki, ancienne élève des Bienordonnées de Besse.

L'isomorphisme trivial leur sera donné par le P. Adique, de l'Ordre des Diophantiens, en la Cohomologie principale de la Variété Universelle, le 3 Cartembre, an VI, à l'heure habituelle

L'orgue sera tenu par Monsieur Modulo, Assistant Simplexe de la Grassmannienne (lemmes chantés per la Scholia Cartanorum). Le produit de la quête sera versé intégralement à la maison de retraite des Pauvres Abstraits. La convergence sera assuré.

Aprés la congruence, Monsieur et Madame Bourbaki recevront dans leurs domaines fondamentaux. Sauterie avec la concourse de la fanfare du 7e Corps Quotient.

Tenue canonique
(idéaux à gauche à la boutonnière). c.q.f.d.