

Mathematical Poetry in the Time of COVID

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POETRY FOLDER



Mathematical Poetry in the Time of COVID

The COVID-19 pandemic has affected mathematicians and teachers in many ways. In our January 2021 issue, we invited our community to submit essays and reflections, as well as fiction and poetry, based on their experiences during this globally unsettling (and still ongoing) event.¹ Along with several essay contributions, many of which appear in this July 2021 issue, we have also received a wide range of poetry on this theme. This folder presents a select collection of poems from among these, by Christopher Caruvana, Marion Cohen, Lawrence M. Lesser, Dan May, Vanessa Sun, and Michele R. Willman, ordered alphabetically by poet last name.

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We hope you will enjoy this poetry folder reflecting some of the many facets of the pandemic as experienced by these mathematical poets.

EDITORS OF THE *Journal of Humanistic Mathematics*

¹See Huber, M. and Karaali, G. “Math in the Time of COVID: An Open Call for Contributions,” *Journal of Humanistic Mathematics*, Volume 11 Issue 1 (January 2021), pages 495–496 (available at: <http://scholarship.claremont.edu/jhm/vol11/iss1/32>).

THE VISITOR by Christopher Caruvana

Let us not go, then,
even when the evening is aburst with
a loaded implication.

Let us worry, instead.
Permutations, combinations.
(Lest a factorial!)
The probability of exposure.

Let us remain
as the implication rendered us
where we are more like islands.

*At my window,
still,
there is song.*

The Visitor dresses the part
to the table,
to bed.
And some rooms have new names.

I've discovered a debt
the Visitor has accrued
that neither can repay.

Have I ever cared for myself?
How long do I listen for?
Do I always sound like this?

*At my window,
still,
there is song.*

The Visitor scribbles.
Each day.
Each minute.
Yet somehow, in a year's time
I've only blinked.

Professionally, I serve as an instructor and researcher of mathematics, but, like all of us perhaps, I am a student. I earned a B.S. in mathematics from Midwestern State University in 2011 and a Ph.D. in mathematics from the University of North Texas in 2017. I hope to inspire anyone to see that mathematics is truly a human inquiry and that they benefit from the deep insights about the self that may be glimpsed from its study.

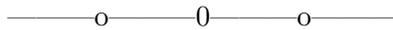
–CHRISTOPHER CARUVANA
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4,000 STEPS by Marion Deutsche Cohen

A hypnotist once caused someone to forget the number 8 so now I sometimes forget 8. In fact, I forget 9, 10, all the way to 20.

I have lots of occasions to count. Zen meditation, daily exercises, in particular walking 4,000 steps a day, indoor walking because I'm quarantining to the max and because I read somewhere that if you walk 4,000 steps a day you'll live longer. I guess, even if I skip from 9 to 19, I'll still live longer and still not catch covid. But maybe not when I skip 19 to 59.

How did I get to 4,000 so fast? What's the big hurry? I'm a mathematician, I love all the integers so why do I keep skipping so many? I'm not into denial so why am I denying? I wasn't hypnotized so why am I forgetting? What do I need wishful counting for? I know how to count correctly so how come I don't?



THINGS I LIKE ABOUT ZOOM TEACHING by Marion Deutsche Cohen

I don't have to keep turning my head.
They're all directly in front
as directly in front as a highway
or as a baby small enough to be admired head and toes simultaneously.
Here they all are
a feast for my eyes.

And I don't have to memorize names.
Their images come with names
as surely as they come with faces.
True, some of them, the ones without cameras
are invisible
but their names aren't.

No, I don't have to look about the room.
Nor do I have to count them.
I need only multiply length times width
add the remainder at the bottom
remember to subtract the rectangle that is me.

I don't have to keep turning my head.
But I do have to keep darting my eyes
and avoiding that extra rectangle
the one that got subtracted

the placeholder, the zero
the non-counting number
the one that doesn't count.

— o — 0 — o —

Marion Deutsche Cohen is a poet / mathematician / mathprof whose “math-teaching limericks” appeared in the January 2021 issue of this journal.² She recently taught the Zoom version of a course she developed, Mathematics in Literature. Her prose poetry book, *Truth and Beauty* (Word Tech Editions), is about the interaction in that course among students and teacher. She also has a book, *Crossing the Equal Sign* (Plain View Press), about the experience of, and her passion for, math.

—MARION COHEN
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²See Cohen, M. D., “Permission to Add: Math-teaching Limericks,” *Journal of Humanistic Mathematics*, Volume 11 Issue 1 (January 2021), pages 425–436 (available at: <https://scholarship.claremont.edu/jhm/vol11/iss1/23>).

THE POINT OF INFLECTION by Lawrence M. Lesser

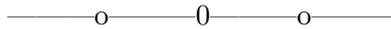
The point of inflection
is where towering terror of
cumulative cases
finally
slows its rise.

The point of inflection
of that logistic curve
needs logistics
of testing, tracing,
and distance.

The point of inflection
is to let words show number, person,
mood, tense:
distinguishing *case* and *cases*, *infect* and *infected*,
dense and *denser*.

The point of inflection
is how voices rise and fall,
showing tone
beyond typing
in the chat.

The root of inflection
is the Latin word meaning *bending*,
like an arc
of the moral universe
or us.



MIXED MESSAGES ABOUT PANDEMIC YIELD CONSPIRACY by Lawrence M. Lesser

$$p \wedge \neg p \rightarrow Q$$

Lawrence (Larry) Lesser is profoundly grateful to have (so far) made it through this pandemic time of polarization, isolation, and loss (including the sweeter of his hairless rescue dogs) with most of his sanity and health intact and even some meaningful professional (2021 Waller Distinguished Teaching Career Award from the ASA) and personal (Finalist in four categories, including Best Album, in the 2021 New Mexico Music Awards) recognitions. Background on his diverse backgrounds is at <https://larrylesser.com>. An earlier version of his longer poem, “Point of Inflection”, was first published in *Radical Statistics* (Number 126 (June 2020), page 74).

–LAWRENCE M. LESSER
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A FIBONACCI POEM FOR AFTER by Dan May

The
Change
Of the
Season is
A sacred cycle.
But would bears rather stay asleep?
Do tulip blooms ever prefer the dark underground?
Long hours of winter's nights are harsh but lucid: do what is required
to survive.
Early spring trades snow's simplicity for a tangled snarl of broken
twigs, greys and tans and muds and last fall's leaves revealed in
the dirty ground.
Rabbits frolic between April thaw and frost, but I know some didn't
survive September. Is it easier for some creatures to settle into
hiding than to climb out of it? I never missed large gatherings
and small talk.
Theorem: If everyone is missing out, then I don't fear I alone am miss-
ing out. Proof: By contradiction, suppose the room is crowded.
It will be hard to forget how good it felt to have a real excuse to not
see you,
Hard to remember why I used to do things that way.
Two shots plus two weeks equals my
Former self - maybe.
But what if
I can't
Change
Back?

Author Note. This is a Fibonacci poem, in which the number of syllables per line follows the sequence 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 34, 21, 13, 8, 5, 3, 2, 1, and 1.

Dan May is an Associate Professor of Mathematics at Black Hills State University in Spearfish, South Dakota, where he enjoys teaching all levels of undergraduate mathematics. He is interested in connections between mathematics and the arts, in particular mathematical poetry. Dan has spent the last several summers working with Bridge to Enter Advanced Mathematics (BEAM), a mathematics enrichment program for underserved middle school students in New York City and Los Angeles.

–DAN MAY
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A LOT CAN HAPPEN IN A YEAR! by Vanessa Sun

Before the COVID-19 pandemic, I felt completely alone in math.
Before the COVID-19 pandemic, I did not know a single math major at my school who wanted to do a PhD in mathematics.
Before the COVID-19 pandemic, a professor told me I did not look like I would be a researcher and asked if I considered teaching.
Before the COVID-19 pandemic, I had to take Calculus 3 four times and a professor made me feel ashamed for it.

Before the COVID-19 pandemic, I loved my abstract algebra class.
Before the COVID-19 pandemic, I was accepted into my dream REU.

During the COVID-19 pandemic, my abstract algebra stopped lecturing and just sent us notes I could not understand.
During the COVID-19 pandemic, I got a 24 on my first graduate midterm and dropped out of the class.
During the COVID-19 pandemic, I barely learned any mathematics.
During the COVID-19 pandemic, I did not apply to PhD programs.
During the COVID-19 pandemic, I cried almost every day during my REU.
During the COVID-19 pandemic, I did not feel like a mathematician anymore.
During the COVID-19 pandemic, I did not love math anymore.
During the COVID-19 pandemic, I almost died.

During the COVID-19 pandemic, my abstract algebra professor said my proofs were creative and stood out from the class, a far cry from not being able to write a single proof in linear algebra the semester before.
During the COVID-19 pandemic, the first mathematicians that made a positive impact on me were people of color, whose faces I see when I try to picture a mathematician.
During the COVID-19 pandemic, I presented at my first research conferences.
During the COVID-19 pandemic, I found a great math community on Twitter.
During the COVID-19 pandemic, I embraced the mantra “people over mathematics” after I heard it on the podcast, *Mathematically Uncensored*.

During the COVID-19 pandemic, I gained mentors through the AWM mentorship network, the Math Alliance, the SACNAS conference, and my REU.

During the COVID-19 pandemic, I worked for a math circle that I am an alumna of.

During the COVID-19 pandemic, I built a new “fam” and a new conference, called OURFA2M2 or the Online Undergraduate Resource Fair for the Advancement in Academia of Marginalized Mathematicians, with 4 of my friends.

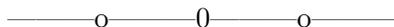
During the COVID-19 pandemic, I wrote an AMS blog post (with friends) about applying to REU’s that was shared over 500 times.

During the COVID-19 pandemic, I got mathematics internships at Lawrence Livermore National Lab and MIT Lincoln Lab, my first STEM internships.

During the COVID-19 pandemic, I wrote a memoir of one of my most painful moments as a math major and read it to someone who believed in me.

During the COVID-19 pandemic, I will graduate with my bachelor’s in mathematics, with honors, and studio art.

After the COVID-19 pandemic, I will leave mathematics, or rather, mathematics will lose me, but the mathematics community will not.



Vanessa is a recent graduate of Macaulay Honors College at Hunter College, City University of New York (CUNY), where she majored in mathematics and studio art. She participated in the Mathematical Sciences Research Institute Undergraduate Program (MSRI-UP) in Summer 2020. She is passionate about sharing resources with undergraduate math students and in creating a more inclusive and diverse mathematics community. She is also a Math Alliance predoctoral scholar and a proud member of various organizations such as the National Association of Mathematicians (NAM) and the Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS).

—VANESSA SUN

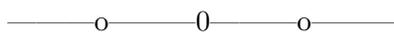
VANESSA.SUN52@myhunter.cuny.edu

THIS IS PANDEMIC WEDNESDAY by Michele R. Willman

It's 6:45 a.m.; get up & ready
Bring E to school
Set out breakfast for kids
Take care of pets
Unload & load dishes
Check work email (Check, check, check, emergencies averted)
Get three kids on Zoom calls
Rotate laundry, fold a load, bring upstairs & put away
Check on kid school & make sure everyone is on task
Sit with kid who needs help: Long division (I know this)
Divide, Multiply, Subtract, Repeat, the teacher said
Does McDonald's Sell Burgers, the teacher said
Message with piano teacher to schedule lessons
Check soccer schedule to see how soon I need to get new soccer shoes
for S (Tomorrow...)
Get work station set up & organized on main floor
Message with teachers to find out what materials need to be dropped
off at school, gather materials
It's now 10:00 a.m.
Rotate laundry
Quick pick-up of stuff in living room & kitchen: books, a shoe, fluff,
why is there fluff?
Go through library books & movies that are due & overdue so I can
drop off when I'm out
Check work email (Check, check, check, crisis averted)
Get kids' lunches at school & simultaneously call friend for moral
support
Stop to get mail, sort, discard, & organize
Come home with lunches
Check work email to see if student still wants to meet on Zoom
Take care of pets
Check on kid school; give directives for schoolwork
Sit with kid who needs help: Adding fractions (I know this)
Common denominators. Boom.
Dividing fractions (...)
Isn't there something about flipping? Cross multiple and divide? Try
to draw a picture
Meet with student on Zoom

Forgot to pick up kids' class materials, quick check-in with kids; leave again
Eat snack in car: rejected breakfast bar (I don't think it's been here too long...)
Drop-off & pick up materials at school; swing by library & return overdue materials
Return home
Supervise lunch clean-up; load dishwasher; quick sweep of messes
Eat some of kids' rejected lunch that was left on plate (chicken nuggets and I don't like chicken)
Rotate laundry
Check personal email; deal with emails from kids' school
Check work email; add two more meetings to next week's calendar
Sit at computer while kids are on Zoom & try to prep for class that meets this afternoon; this is not largely successful; print a few papers and tell myself that I will look at them quick before class
It's now 1:15 p.m.
Sit with C to supervise school project during Zoom school; simultaneously fold laundry and try to look at printouts to prepare for class
Social studies, no more fractions (thank you)
Ponder opting kids out of standardized testing that is to take place over four days after school in the next weeks as this would interfere with work and kid activities; investigate this; find out I need to complete five forms to opt them out; debate which is more work—driving them there and back or filling out five forms
Take care of pets
Check work email (Check, check, check)
Chase down wayward child who's hiding in closet watching Youtube
Supervise kid Zoom calls
Add spring & summer kid activities to calendar
Fold clothes & put away
School & kid attention devolves & is largely irretrievable; kids keep googling how to say things in foreign languages: Chinese, Italian, & Welsh
Pick up E and bring home
It's 3:15 p.m.
Kids have not completed schoolwork; sit with kids to finish schoolwork
Sentences, reading notebook, more math (I thought we finished this?)
Realize I am running out of time to prepare for class

Have screaming fit meltdown directed at kids who aren't finished with schoolwork; feel bad
Email instructor that I can't attend class; cry a little about missing fun class where I get to be the student and not the teacher (or crying about meltdown? Or just crying.)
Continue to help kids with schoolwork
Rotate laundry & fold
Start dinner; Feel panicky that I should be in class or working
Spouse comes home from work
Finish schoolwork with kids
Direct kids to pick up schoolwork & other messes
Decide to opt out of kid testing and will need to fill out forms
It's 5:20 p.m., 50 minutes late for class—go or not?
Check work email (Check, check)
Go to class for last half hour; enjoy it
Start working; Have a hard time focusing
Eat supper alone after everyone has eaten
Rotate laundry; load & start dishwasher
Sit at desk and work
Brush S hair while reading computer screen over shoulder; intermittently check in with B, C, E
Sit at desk and work
Pet care and get more tea
Clean up dog pee because I missed a pet check-in somewhere
Sit at desk and work
Fall asleep at desk briefly
Sit at desk and work
Count number of papers left to grade—269
Realize I didn't count all of them, too demoralized to recount
Time to sleep; it's 12:22 a.m.; need to get up at 6 a.m. for PT
Listen to audiobook for half hour to wind down
Sleep



I would not consider myself part of the mathematical world as I am something else altogether: an English instructor. I did take algebra, geometry, and trigonometry back in the day and I imagine they haven't changed that much, but I sure have. Who could have foreseen that after twenty years in English I would become (thanks to a worldwide pandemic) an elementary math helper, an algebra tutor, and an all-around math cheerleader? My course on the Scientific

Revolution in college, though it counted for a math credit, didn't really prepare me for teaching a 4th-grader long division, or dividing fractions with a 5th-grader, or working through algebraic expressions with a 9th grader. Yet, I am happy to report, I am quite adept at adding numbers under ten and counting dimes and nickels, so the 1st grader is in luck! Amongst so many other things, the pandemic has been a lesson in how flexible we can be, how we can draw on our resources (like 9th-grade algebra!), even while living in what feels like a time warp. Days blend together and mundane tasks seem so trivial, yet so necessary. We're angry, but sad, and frustrated, but panicked, and just trying to keep it together for our families.

–MICHELE R. WILLMAN
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