LETTERS TO THE EDITOR

Letter to the Editor

My name is Christopher Havens, an aspiring mathematician, and incarcerated on a 25 year sentence. My interest in mathematics began early in my prison sentence as a result of a long stay in solitary confinement. I worked on a problem for over a year, only to learn that a solution didn't exist in the terms I was looking for. Through my efforts, I found some interesting new facts about continued fractions and realized that doing mathematics was the only time when I felt in awe of my failures. There was beauty here that I had never experienced and I knew that through mathematics, my life could have new meaning.

During my isolation, I read textbooks on algebra and calculus. Just after I was released from isolation, I began corresponding with Professor Luisella Caire, who introduced me to number theory. As I studied number theory, I realized that I had skipped most of the foundations. So I then I set out to learn trigonometry, linear algebra, discrete mathematics, analysis, abstract algebra, and logic. Most of my learning was by experimentation, coupled with reading books and articles when possible. I would send my "discoveries" to Luisella and her husband, Umberto Cerutti. Of course these were independent discoveries of known results... until, the results I obtained following my previous "failure."

Then one day, Umberto invited me into a collaboration as a member of his research group. Our first project together begat "Linear Fractional Transformations and Nonlinear Leaping Convergents of Some Continued Fractions," now published in *Research in Number Theory*. In this paper, we characterized combinatorial properties of large families of continued fractions of a linear fractional transformation (LFT) and provided closed forms for certain cases. In taking a close look at the convergents, the leaping patterns which are common in some continued fractions behaved in ways which can be described by nonlinear functions. We provided recurrence relations for these new nonlinear leaping convergents. This research moves a step closer to completely generalizing similar results where the determinant of the unimodular matrix corresponding to the LFT is not equal to 0 or ±1.

I don't have access to online sources, so I need books to learn more mathematics. I am writing to ask if anyone would be willing to purchase books for me. I would like to have books on topology, groups, rings, fields, Galois theory, category theory, and philosophy and history of math. Also, it would be helpful to have some current handbooks of special functions and formulae. Only new books can be sent to me and they must come directly from a publisher (including the AMS), or an online bookstore like Barnes and Noble or Amazon. Before you send a book you could write to me at `mathdad@outlook.com` to make sure nobody else has already sent that book to me. The address books should be sent to is:

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I'd also like to find somebody willing to mentor me and help me fine tune techniques and fix conceptual flaws as they arise. Also, if they would be willing to have discussions with me about mathematical topics... maybe even challenge me with thought exercises so that I might gain further insight into what I study, I think I could flourish.

As well, I look for collaborations on any mathematical project, for it allows me to learn and grow in new ways. It helps me to be part of the mathematical community, where I can find a new way in this life which I have begun to rebuild. Broadening my range of research is very important to me, and so I would enjoy any opportunity to work on projects I am unfamiliar with. If someone wants to mentor me or explore possible collaborations in research I can be contacted directly by email at `mathdad@outlook.com`.

I would like to thank the mathematical community for the inclusivity I've felt for these past years in all of my mathematical endeavors. Thank you all so much for allowing me this precious piece of your world.

—*Christopher Havens*

Letter to the Editor

The arrival of COVID-19 has prompted many members of our community to reset and reflect. During this time, I would like to make the urgent request that we learn from this seismic shift and commit to implementing positive changes to our current mode of operation.

As I fall into the Early Career/Graduate Student group, I am particularly mindful of the challenges those of us in this group face and the importance of each decision we make at this fragile point of our career. A budding career,

more often than not, benefits from having a mathematical community, access to the current exchange of ideas, and the resources to bring these two together. To be candid, attending conferences is expensive. For those in more demanding circumstances, such as caretaking for others or having limited financial resources, even participating in nearby workshops may prove burdensome. One often sees advice about the importance of attending conferences, networking with others in the field, and participating in the market of perspectives. These indispensable interactions should not be left to the caprice of one's financial standing, geographical location, or as is often expected, the mercy of one's institution or advisor to demonstrate willingness to assist or provide the necessary resources.

Secondly, the negative environmental impact of frequent academic gatherings has gained increasing attention in recent years. The term *social trap* refers to a situation in which, based on short-term gains, potentially lethal long-term harm is inflicted. Even if one is aware of the calamity ahead, one must participate in these events or face massive concessions to the trajectory of one's career. There have been efforts by some, seeing which way the wind is blowing, to try their hand at implementing incremental changes. Such efforts have included eco-friendly double conferences[1] or, with the current state of affairs, virtual meetings.[2] But these efforts have not gained the necessary traction to address the problem in the long term.

In one fell swoop, virtual meetings offer an opportunity to level the playing field and address the social trap of environmental catastrophe. Local seminars, collegial meetings, and the like that have continued in this crisis have done so through the technological miracles of platforms such as Zoom and WebEx. Circumstances, bleak as they are, have forced our hand. We have been required to adapt to these technologies. Upon exiting this chapter of history, why not perpetuate this adaptation and, as far as is conceivably possible, convert **all** future conferences and gatherings to such virtual formats?

Whether we implement these changes now or in the future, the arc of time will mandate that we update the way we operate.

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—*Michael R. Pilla, PhD student,*
Department of Mathematical Sciences, Purdue University

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[1]*See, e.g.,* `https://www.perimeterinstitute.ca/conferences/higher-algebra-and-mathematical-physics`.

[2]*See the 3rd annual international Applied Category Theory Conference at* `http://act2020.mit.edu/` *for an example of this.*

Letter to the Editor

Yesterday, 6/10/2020, the AMS websites including MathSciNet were shut down. None of the AMS members, even fellows of AMS were consulted or informed about it in advance. This shows how AMS treats its members. So please cancel my AMS membership.

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—*Mark Sapir*
Fellow of AMS
Centennial Professor of Mathematics
Vanderbilt University

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