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Education Notes Editor

Les Notes pédagogiques présentent des sujets mathématiques et des articles sur l'éducation aux lecteurs de la SMC dans un format qui favorise les discussions sur différents thèmes, dont la recherche, les activités, les enjeux et les nouvelles d'intérêt pour les mathématicien.ne.s. Vos commentaires, suggestions et propositions sont les bienvenues.

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One of the objectives of *Education Notes* is to raise awareness of initiatives, resources, or ideas of potential interest to the CMS community. Suggestions are welcomed concerning possible directions with this theme. For starters, we will begin with a journal that crosses many mathematical areas. An introduction of the journal is followed by a selection of titles, abstracts and comments intended to provoke your curiosity to learn more about the journal.

The term *humanistic mathematics* and the nature of this journal are likely unfamiliar to many readers. *Journal of Humanistic Mathematics* is fully accessible online at the link shown here. [here](#).

An effort is made here to introduce more people to this journal. For starters, the following excerpts in italics appear verbatim on the journal's website.

What is humanistic mathematics?

The term humanistic mathematics could include a broad range of topics; for our purposes it means "the human face of mathematics." Thus our emphasis is on the aesthetic, cultural, historical, literary, pedagogical, philosophical, psychological, and sociological aspects as we look at mathematics as a human endeavor. More broadly, we aim to provide a forum for both academic and informal discussions about matters mathematical.

What is the origin of the journal?

The Journal of Humanistic Mathematics was inspired by the work of Alvin White, a former professor of mathematics at Harvey Mudd College. Dr. White was the founding editor of the Humanistic Mathematics Network Journal (HMNJ), a work of love that he almost single-handedly edited and produced for 15 years. Dr. White believed wholeheartedly in the importance of recognizing mathematics as a humanistic discipline and played a significant role in bringing this idea to the forefront of many minds. Though this is an independent enterprise, the Journal of Humanistic Mathematics builds on the spirit and tradition of the HMNJ.

What sort of articles are published?

We publish articles that focus mainly on the doing of mathematics, the teaching of mathematics, and the living of mathematics. We also welcome contributions about the state of the mathematical profession (both in research and in education), underrepresentation issues within the world of mathematics, mathematics across national and cultural boundaries, mathematical fiction and poetry, personal reflections that provide insight to the inner workings of the mathematical mind, and other types of writing which may stimulate discussion among our readers. Overall we are a free platform where many different conversations about mathematics are welcome and encouraged.

Who is the intended audience?

We hope to serve the whole mathematical community and we wish to encourage the development and sustenance of an equitable and welcoming environment for all individuals, independent of their status within and relationship to the community. Occasionally some of our content might make some readers uncomfortable. We welcome reader responses to content that provokes disagreement.

Content

A cross-section of articles from recent issues is highlighted here to offer a sense of the range of content. Two issues appear in each volume. Respectively these articles go chronologically backwards from the recent second issue of Volume 10 through to the first issue of Volume 9. Brief descriptions are included from the abstracts or introductory comments of the authors who are identified in parentheses.

[Inspiring Mathematical Creativity through Juggling](#) (C. Monahan, M. Munakata, & A. Vaidya)

... scheduling of a professional juggling company's performance at our on-campus theater inspired us to create a module connecting mathematics and juggling for both a general education mathematics course and a mechanics course. We drew from research on the mathematics of juggling [2, 3] to develop a module that encouraged students to explore the patterns, notations, and mathematical elements of juggling in a variety of ways. Their final projects, representing further explorations, were displayed in our theater's lobby and featured interactive displays and demonstrations. In this paper we describe our experiences developing and implementing this juggling module, students' experiences with the modules, and their development of final projects.

[Designing Fractal Line Pied-de-poules: A Case Study in Algorithmic Design Mediating between Culture and Fractal Mathematics](#) (L.M.G. Feijs)

Millions of people own and wear pied-de-poule (houndstooth) garments. The pattern has an intriguing basic figure and a typical set of symmetries. The origin of the pattern lies in a specific type of weaving. In this article I apply computational techniques to modernize this ancient decorative pattern. In particular I describe a way to enrich pied-de-poule with a fractal structure...

[A Few Firsts in the Epsilon Years of My Career](#) (H. Goodson)

In this essay, I describe the unexpected ways I achieved some milestones in the early years of my career.

[Incorporating Philosophy, Theology and the History of Mathematics in an Introduction to Proof Course](#) (S. Deckelman)

In this article I describe a project activity for an undergraduate introduction to proof course aimed at mathematics and computer science majors that combines logic and philosophy with a significant dimension of writing. Pedagogically, the project involves a broader range of critical thinking skills than is usual in such courses. Undergraduate students analyze Anselm of Canterbury's and Kurt Gödel's proofs of the existence of God using modal logic.

Most Popular Papers

The idea of popularity and humanistic mathematics may seem to be at odds. Nevertheless the journal, most recently as late December 2020, listed its most popular papers based on "the average number of full-text downloads per day since the paper was posted." That list provided here offers insight into the journal. Connections to poetry, music, and mathematical history are evident. The latest collection of popular papers can be accessed readily from the [homepage](#).

[Raphael's School of Athens: A Theorem in a Painting?](#)

Robert Haas

[Differential Equations of Love and Love of Differential Equations](#)

Isaac Elishakoff

[What Would the Nautilus Say? Unleashing Creativity in Mathematics!](#)

Megan E. Selbach-Allen, Cathy A. Williams, and Jo Boaler

[Book Review: Logicomix by Apostolos Doxiadis, Christos H. Papadimitriou, Alecos Papadatos, and Annie di Donna](#)

Paolo Mancosu

[What Do We Mean by Mathematical Proof?](#)

Todd Cadwallader Olsker

[An Introduction to Fourier Analysis with Applications to Music](#)

Nathan Lenssen and Deanna Needell

[Math in Seventeen Syllables: A Folder of Mathematical Haiku](#)

[Special Issue — Creativity in Mathematics: Foreword](#)

Emily Cilli-Turner, Houssein El Turkey, Gulden Karakok, Milos Savic, and Gail Tang

Working Backwards Further

Continuing backwards would take us to the inaugural issue in January 2011. The opening article aptly named *Welcome to the Journal of Humanistic Mathematics* was prepared by the co-editors Mark Huber and Gizem Karaali. The welcome offers a sense of what is to be found in that issue.

*This inaugural issue contains a good representative sample. Refereed papers on mathematical aesthetics and mathematical proof appear, as well as a personal essay written by a mathematician who participated in Operation Iraqi Freedom. In addition, there are essays that discuss teaching mathematics as a liberal arts course, difficulties faced by young students of mathematics, the concept of entropy as applied to the social sciences, and the poetic nature of mathematics. There is also a review of the graphic novel *Logicomix*, based on the experiences of Bertrand Russell. Finally, we have three amazing poems. Please enjoy our first issue!*

The journal is now in its eleventh year. Most issues consist of an assortment of topics and ideas. Periodically special issues zero in on particular themes. The three special issues to date are listed below. A call for submissions on a fourth special issue is forthcoming. The theme will be math and ethics.

1. [Volume 6 Issue 1 \(January 2016\): Special Issue on The Nature and Experience of Mathematical Beauty](#)
2. [Volume 8 Issue 2 \(July 2018\): Special Issue on Mathematics and Motherhood](#)
3. [Volume 10 Issue 2 \(July 2020\): Special Issue on Creativity in Mathematics](#)

Closing Comments

My experience with this journal has been rather limited in recent years. I was brought back to the journal by considering resources that are underutilized in my own work. Now I am perusing various articles from different issues. In contrast, most of the issues of the journal's predecessor while online now can be found in hardcopy in my office at UNB. Stephen Brown at University of Buffalo introduced me to the *Humanistic Mathematics Network Journal* while I was doing my doctoral program there in the early 1990's. That journal (1987–2004) served as a rich resource for a range of ideas that pushed my own boundaries for both perceiving and thinking about mathematics. The complete collection from that journal can be accessed [here](#).

Poster presentations were incorporated into my mathematical methods course at Memorial University of Newfoundland in the Faculty of Education. One of the projects by Marlene Neff focused on Ramanujan. Her work was impressive and with encouragement she proceeded to submit a paper that was published in 1999 by this journal. Following my single page introductory piece about the idea, her article appeared in *Issue 20 as A Window into the Life of Ramanujan*.

The combination of these two journals contains a treasure trove of rich ideas. You are encouraged to take a look at select issues and see what you find. Search options are in place to look for keywords or authors. Feedback is welcomed. The co-editors assured me that more Canadian readers and contributors are welcomed while noting contributions from several including Nat Banting, Robert Dawson, Matthew Oldridge and Nathalie Sinclair. Meanwhile if you have ideas of other resources that ought to be more familiar to the CMS community, please consider suggesting them or contributing a piece for a future issue.

Acknowledgments: The logo image is credited to Infinito/Pablo Flores/ CC BY-NC-SA 2.0 and used here with the permission of the Journal of Humanistic Mathematics. The co-editors of the Journal of Humanistic Mathematics, namely, Mark Huber, and Gizem Karaali, provided helpful feedback and assistance with the article.