# Editorial

Dear Readers, welcome to this issue of *Parabola*!

As I wrote in the editorial of the last issue, it has been exciting and edifying to see the steady growth in numbers of readers and authors of *Parabola*. It was once only possible to publish three articles per issue by cajoling colleagues to submit articles. Now, with so many excellent articles submitted from all around the world, the challenge is instead to select the best articles for publication from so many good submissions.

It is thus a pleasure to here present seven excellent articles. The first article, by Daniel Chioffi, Stefan Nita, Vlad Nita and Bogdan Nita, explores fascinating links between maths and music, to find equally-tempered scales by continued fractions.

In the second article, Jonathan Hoseana and Handi Koswara show how to elegantly and effectively deal with square roots with quadratic radicands and their infinite limits. The third article also deals with infinity, namely infinite products. By Sarthak Sahoo, this article shows really beautiful applications to infinite series. In the fourth article, Hafsa El Ibrahimi gently introduces one of the oldest and most curious unsolved questions in maths: do odd perfect numbers exist and what might they look like?

Turning to more modern and applied maths, Noah Bergam and Teodora Kolarov introduce in the fifth article the Black-Scholes model and econophysics. Although these models serve pragmatic purposes in the realms of finance, we are also led to deeply philosophical questions. In the aggregate, do we behave according to simple formulæ?

In the sixth article, Eeshan Zele extends results of Xiaoyan Hu in the previous issue of *Parabola*; these extended results by Randell Hayman in the issue previous to that. Can you, dear Reader, further extend this progression of extensions?

In the seventh and final article of this issue, John Pollard, asks: What is the probability that the COVID-19 virus might eventually be completely eliminated? One answer to this question may be found by considering an old and simple mathematical model.

Despite so many excellent articles, my favourite content of this issue is not an article; it is the set of *Parabola* Problems that Arnaud Brothier, David Angell, and Sin Keong Tong have set. In May, my partner Ania gave birth to two beautiful twins, and the three Problem Editors decided to celebrate this happy event by dedicating this issue's Problems to Ania, me, and our twins, Alexander and Ben. Ania and I are really touched, grateful and a little overwhelmed by this lovely gesture, and the ten Problems, each presenting a beautifully-crafted mathematical story about Alexander and Ben, are a joy to read and to solve. Thank you, Arnaud, David and Sin Keong! I hope that you, dear Reader, will enjoy reading and solving these special Problems too!

As always, please feel free to submit your own articles and problems, and I hope that you and yours are well, wherever in the world you might be!

Warm regards to you all, and please enjoy this issue of *Parabola*!,

Thomas Britz
Editor