

## Editorial

Dear Readers,

welcome to this year's first issue of *Parabola*!

In this issue, I am excited to bring you three excellent and interesting articles. The first, by Trevor Tao, provides an elegant and useful method, based random walks, for determining whether Spider Solitaire is designed to cheat through bias. The result is surprising, and the method simple and clearly described so that you too, dear Reader, can test whether other online games and software might cheat through bias. Or you might just enjoy a game of Solitaire next week, on (US) National Solitaire Day, May 22.

To introduce the second article, by Martina Štěpánová, we might start by asking: how much can be said about a triangle? As it turns out: a lot. You might know that each triangle has a "centre" at its centre of mass – but did you know that each triangle has hundreds of other "centres"?<sup>1</sup> Martina Štěpánová provides a beautiful introduction to some of these centres and to the associated Adam's Circle, discovered 176 years ago. Adding new to old, Martina Štěpánová proves new and surprising symmetries and transformations among the geometries here involved.

The third article, by Anthony Wang, provides the framework for counting paths in rectangular grids. Step by step, the article shows combinatorial insights that get woven together with Pascal's Triangle and the Inclusion-Exclusion Principle, to form a method, culminating with a formula, that shows how path-counting, binomial coefficients and the 'Principle are all connected.

And, as always, there is yet another set of David Angell's beautifully crafted mathematical problems, and, as bonus, there is yet another happy dose of Robert Schneider's punny comics.

In each their way, these items remind me of some of the many reasons for why I love mathematics: maths is elegantly useful and usefully elegant; it is beautifully surprising and surprisingly beautiful; and it provides insights into connections and connections between insights. It challenges; it entertains and it provokes much humour.

Maths is also both a solitary endeavour and a communal enjoyment, and I hope that you, dear Reader, will enjoy this issue too - and please feel welcome to submit your own work that you would like published in *Parabola*!

Warm regards,

Thomas Britz  
Editor

---

<sup>1</sup>See Clark Kimberley's Encyclopedia of Triangle Centers - ETC.