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A New Look at Euler and his Contemporaries

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A New Look at Euler and his Contemporaries

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Welcome to Euleriana

Leonhard Euler (1707-1783) is a monumental figure in the history of mathematics. Over his 56-year career, he published over 700 papers, wrote more than 30 books, and in doing so invented or reinvented many mathematical fields of inquiry. Since 2003, the [Euler Archive](#) has served as a repository of these writings, with over 97% of his works now available online.

As the Euler Archive grew, the value of Euler-centered scholarship became apparent. And so, *Euleriana* was born—an open access eJournal focused on Euler’s work (in mathematics, physics, astronomy, and beyond), the mathematicians whose careers were roughly contemporaneous with Euler (Lagrange, Goldbach, the Bernoullis, etc.), and the institutions and academies where he worked.

We conceive that *Euleriana* will carry many different types of content: translations, historical and archival notes, book reviews, articles, and more. In this first issue, we are excited to introduce Euler and his world to a wider audience, and we think you’ll enjoy what we have to offer.

In This Issue

We are fortunate to be able to offer here a variety of translations as well as articles and notes. The mathematical content areas of these writings span a wide range from geometry and number theory to mathematical modeling in biology and music.

In the [From the Editors](#) section, Erik R. Tou, Christopher Goff, and Michele Gibney describe their recent updates to the underlying structure of the Euler Archive, making it into a more modern digital resource, complete with increased content and even connections to social media.

There are several entries in the [Translations & Commentary](#) section, each of which includes significant explanatory information about the work in question. First, Daniel J. Curtin describes various mathematicians' approaches to the surface area of a scalene cone, and then translates a work of Euler on the subject. Next, Christopher Goff and Michael P. Saclolo tell the story of a number theory problem posed by Pierre de Fermat, solved partially by Euler, and then solved completely by Lagrange in his last number theory paper. They include a translation of this paper as well.

From here we move to mathematical modeling. Sylvio R. Bistafa describes a piece Euler wrote in 1742 for a Dijon Academy contest, in which Euler models the flow of blood through arteries. This is followed by Bistafa's translation, one of many he has provided to the Euler Archive. (Look for more examples of Bistafa's work to be highlighted in future issues.) In the final entry of this section, Larry G. Blaine and Susan Ferré translate and explain one of Euler's lesser-known papers on tuning systems, one of only a few works that Euler wrote on the subject of musical theory.

The [Articles and Notes](#) section contains two pieces. First, Cynthia Huffman shines a light on three works in the Euler Archive: one in graph theory (which is also the most downloaded paper from the Archive), one in geometry, and one in number theory. Then, Erik R. Tou studies the Euler Archive's metadata to analyze Euler's record of publications during the Seven Years' War.

We hope that you enjoy reading these articles as much as we have enjoyed gathering them here. Please spread the word about *Euleriana* so that we can increase our readership. And if you have ideas or articles to submit for subsequent issues, please let us know; we are always [accepting submissions](#). The next issue is scheduled to appear in summer 2021!

Acknowledgments

We would like to thank all the authors for their contributions to this issue and for their patience as we have been working out the kinks behind the scenes. Another thank you goes to those who have already submitted towards the next issue!

In addition, we thank the editorial board members for giving so much of their time and positive energy towards launching *Euleriana*.

Speaking of starting a journal, a big thank you goes to Michele Gibney. Her endless knowledge of and expertise with the Scholarly Commons platform—not to mention her patience—turned the overwhelming task of beginning a new journal into an attainable goal.

Finally, we are grateful for you, our readers. May you find something interesting, meaningful, or new in these pages.