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Rediscovering the Artistic Side of Mathematics

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Rediscovering the Artistic Side of Mathematics

Bogdan G. Nita¹ and Ashwin Vaidya²

Welcome to the inaugural issue of the *LASER*, a journal devoted to the problems at the interface of math and art. The terms 'math' and 'art' are to be broadly construed to encompass all quantitative sciences and forms of art. The journal's name, acronym for **Linking Art and Science through Education and Research**, suggests our interest in the theory, practice and pedagogy of this interdisciplinary subject.

The recognition of the intersection between math and art dates back to Pythagoras, whose work related consonant sounds to ratios of small integers or the famous sketch by Leonardo da Vinci, *The Vitruvian Man*, that examined the proportions of the male human form. Johann Sebastian Bach's famous work, *The Art of Fugue* was a deliberate attempt at incorporating symmetries into his composition, while Van Gogh's *Starry Night* engendered deep discussions about his insights into fluid turbulence. Continuing to modern times, the soon to be built, *Mobius Strip Temple* in China will be shaped like the famous geometric shape to represent the immortality of the soul and the Buddhist idea of reincarnation. Keeping with the spirit of this long tradition, this journal is a celebration of the long recognized fact that math and art are everywhere, appearing in very diverse forms, waiting to be unraveled.

There are a handful of very good scholarly journals on this theme, such as *Leonardo*, *Journal of Mathematics and the Arts* or the *Journal of Mathematics and Music* etc. However, the idea to create another journal devoted to this theme, is not redundant since this journal aims to highlight the synergy between art and all science, provided of course, it is describable in the language of mathematics. Furthermore, *LASER* aims to also cater to the education researchers who are working on issues of teaching and learning of STEAM related topics. Mathematics educators are well aware of the problem of *math anxiety* in our society [1]. A key outcome of a study done by one of the editors [2] in 2012 on students' perception of different disciplines indicated that students viewed science and math as possessing low levels of creativity. While practicing mathematicians and scientists see aesthetic value in their work, much of it is lost among students and the general public, who appreciation of mathematics is restricted to its utilitarian ends. Therefore a key aim of this journal is to highlight math and science as *creative* endeavors which we hope will motivate and excite a young generation of students and scholars to see the hidden beauty of mathematics.

We are excited to initiate this new platform for like-minded mathematicians, mathematics educators and artists who think about these issues and invite you to contribute

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to this initiative through your submissions or by encouraging colleagues and students who work on topics of relevance to submit their work to *LASER*. With the eventual growth of the journal we will also seek out help from the community of mathematical artists and artistic mathematicians to serve on the editorial board of the journal. We come to this project with several years of work on problems that touch up different aspects of art and math [3, 4, 5, 6, 7] and are excited to meet and interact with a world of like-minded thinkers.

Finally, we would like to thank the following people for their help in making this happen. We are very grateful to Karen Ramsden and Siobhan McCarthy from the Sprague Library, Montclair State University, for helping us with the logistics and administrative aspects of setting up the journal. We also deeply appreciate of Kelly Kuaniec at Digital Commons for her continued technical assistance.

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