



Vera's Mathematic World

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Vera W. de Spinadel Award 2018
Jury Statements about Mathematic & Design
September 26th, 2018

Statements of the jury about the competition

Gina Urazan Razzini

The competition was a great opportunity for a global world to get united around a specific and very inspiring topic. The relation between Mathematics & Design has always been close. Even when the mathematical exploration is not there, mathematics will always be intrinsic within the design process.

However, in our academy somehow that relationship has been neglected, we can study and approach design without deepening our understanding of its mathematical principles. Is like a tree with very small roots.

I see the competition as an opportunity to make a call to renew that relationship, not only for students but as well for designers with more experience. This in order to make it part of a design thinking that will permeate other disciplines and professions

Lisa Schmidt-Colinet

It was a great pleasure to be a jury member for the Vera's Mathematical World '18, to discover how the different projects used the metallic means, as demonstrated by Prof. Vera W. de Spinadel, as productive generator for their design. It was compelling to contribute to a vivid debate amongst women, which all brought in their perspective on the projects. In their different ways, all proposals were inspiring and were able to triggered an intense discussion. The projects were evaluated according the given criteria, additionally their potential was analyzed by the jury members: how could the projects be extended and developed further?

Examining the entries of the competition, it soon became evident, that the biggest challenge was the fantastic and highly ambitious brief, which asks for mathematical experimentation, profound application to an architectonic concept and further an innovative design product. The projects needed to stand criticism in all these different stages. Whereas the four projects, which entered the last round of discussions, offered all interesting mathematical approaches, the final design stage would have needed another revision. It would have been interesting to include feedback from the different fields, the respective projects were located in, such as urbanism, furniture design, structural engineering.

A very essential and fragile moment in the projects is the relation of mathematical means and individual design decisions. We have spoken about this moment in the projects. Often that step seems to be quite arbitrary. Those operations, whether automatic, arbitrary or based on conscious aesthetic decisions need to be carried further by the design, as in the end it is only the strength of the design proposal, which give value to those steps.

I wish for the Board of Vera's Mathematical World that through this competition and its continuation in future this field of exploration will further grow and that the competition can further provide a fruitful environment for young designers, in taking further the metallic means as creative instruments."

M^a Auxiliadora Gálvez Pérez

The frame that Vera's Mathematic World Competition builds is extremely interesting under a transversal point of view.

How different disciplines approach?

How these different concepts and relationships located at the core of different disciplines are indeed joined together closer than we normally realize (!)?

I find on this intertwining the seeds for real research and knowledge... and I think that it is the root of creativity. In this sense I would enhance participants to really make an immersion about how mathematics can create a terrain where linear processes in design are surpassed and a real matrix of possibilities is open.

Probably in the next editions of Vera's Mathematic World we will see more and wider approaches. This edition was interesting but most of the proposals were having some limits in the development of a real creative process, where things unfold and follow different paths inter-crossing and giving rise to novelty and learning, giving rise to unexpected outcomes.

It is my aim anyway to congratulate all these participants for having the generosity to share their ideas and works with us.

Special congratulations to the two winning projects.

Paola Zellner-Bassett

It was an honor to be invited to participate in the jury for the competition Vera's Mathematical World '18, and a great pleasure to share and build with the members of the international jury such an energizing and inspiring conversation prompted by the work submitted. The competition was challenging and I very much appreciated the courage of the participants that committed to exploring the metallic numbers and their potential for design.

It was fascinating to see the scale less nature of the proportional systems applied to a wide range of projects spanning from furniture to urban design. This quality, however, increased the difficulty at the time of jurying the diversity of projects that responded each to different sets of needs and constraints given by their particular scales.

The competition brought to the forefront a perennial design question, "how can we achieve harmony in design?" The metallic series developed by Vera Spinadel, together with this particular competition, invited us to search for the harmony that we can so easily encounter in nature but may find more difficult to accomplish in design. It became apparent that *reading* proportional relationships on existing purposeful objects in nature is very different and simpler than facing infinite possibilities when *generating* new designed objects from these principles.

We discovered during our discussion that the *linear* formulaic application of proportional systems is not enough to generate design or guarantee harmony, but that any application must wrestle with and be tested against the human body and its ultimate goals, the needs and desires for use, function, purpose, and delight.

It also became clear that the power in these proportional systems does not lie only in the forward generation of form but, more so, in their ability to better serve design by partaking in the *cyclical* creative process that helps shape intuitive form and refine ideas.

The possibilities are endless in the quest for harmonious design through the exploration of the metallic series and I very much look forward to a continued development of these provocative questions.

Martha C. Fajardo

Evaluations and Statements to the topic Mathematic & Design today

First, greetings to all and thanking the invitation to conform this jury that exalts and perpetuates the physical and spiritual presence of Dr. Vera Martha Winitzky de Spinadel in our hearts and the value of her studies in the projects presented.

Let's this initiative be grown in the conceptual construction of space and time in architecture, in design, in urban ecology, and a reference for new generations to permeate her proposals with geometry, fractals, golden ratio, metallic numbers, form and design.

The main aim of her effort was not an easy one; convene mathematicians, architects, engineers, designers and experts from different areas of knowledge interested in the interaction between Mathematics & Design, it is very complex. However, it does take some effort to conquer mathematics and a slight faith to let the mathematics enter and influence the art, the design.

Following and evaluating the projects that applied for VERA W. DE SPINADEL AWARD 2018, the fractal geometry provides many avenues of exploration for the architect or artist who is interested in the new complex view of the world that science and mathematics are developing.

I would like to stress that the low participation is conditioned, in general, by the lack of knowledge about the philosophy and objective, or, due to the lack of deepening of this in the academic environments of the faculties and schools related to space, and territory. It is still a personal initiative that is evident as the engine that encourages the participation in this class of calls, so all participants deserve recognition for their interest in the application of mathematics in the conceptualization of art, environments, spaces and objects.

I would like to highlight the various and scales of the proposals, from urban design, architectural application, to the design of objects; this indicates that the relevance of this call is universal and very broad, which encourages us to continue doing it, hopefully diversifying it thematically.

Mariana Renjifo

As a designer we are trained to distinguish the harmonic relationships of elements, sometimes without understanding the profound connections between math, nature and culture.

Pursuing this balance becomes an unconscious and spontaneous skill that we continue through all our work and our life, in everything that we do, big and small independent of its complexity.

I remember fondly when my post graduate research took me to discover those deeper connections across different disciplines. And I am now convinced that this knowledge is continuously brought back in my design process.

This competition is an opportunity to dig deeper into those mysterious relationships between mathematics and beauty. The natural logic that is embedded into all things balanced becomes a discovery and the possibility of reinvention.

Thinking through these possibilities can generate innovative points of view, ideas, and new ways of approaching design. This is the potential that this competition will continue to induce.

As part of the jury I was intrigued and challenged by the difficulties posed by the decision-making process and the application of the mathematical experimentation. This is not a surprise as the competition brief is as interesting as enigmatic and open to a wide application within the design world.

I believe this competition is a journey that is just starting, and I am looking forward to a new round where a bigger and more diverse group of projects can continue to generate new provocative and engaging discussions.

Mina Marefat

Vera Spinadel was a pioneer and this prize is a well-deserved tribute to one who continues to teach, thanks to Laura's initiative. As an architect I am aware and appreciative of the relationship of mathematics to design, which seems so obvious that it is seldom questioned. In reality, despite the digital revolution the relationship of geometry and design is not well understood nor is it explored as it should be especially in design education. If we look at history, architects in ancient times and in distant cultures were much more adept at applying mathematical formulas in almost all aspects of design from structural to decorative treatment and some of the mathematical innovations such as the muqarnas in Persian architecture remain astonishingly innovative and complex. The Vera Spinadel prize is a challenge open to a global audience to participate in exploring this intrinsic and inseparable relationship in anticipation of new innovations. The discussions with the talented and articulate jury that Laura assembled was very fruitful and confirmed that the subject matter is worthy and the exploration itself is indeed challenging. My thanks to Laura, the Board and the Jury for allowing me to be part of this exploration. Congratulations to the winners and to all involved. I look forward to Vera's Mathematical World prize evolving into a continuing process delving deeper into the relationship of mathematics and design.