Women and Mathematics Ambassador Report: Institute for Advanced Study, Princeton
Ambassador: Shanna Dobson, University of California, Riverside

Conference Synopsis.
The *Women in MathArt: Research, Creativity, and Teaching Conference Joint with UCR DIversity and Excellence Workshop, in cooperation with the Association of Women in Mathematics (AWM)* was held fully online October 16-17, 2021. The conference was a two-day virtual symposium of talks, group projects, two lunch and learn events, and a concluding talent show, to promote our forthcoming AWM Research Network, Women, Art, and Mathematics (WAAM). The aim of the conference was to amplify variations in mathematical thinking, showcase women researching mathematics and the arts and creative pedagogies in the spirit of Universal Design, and to create a dynamically inclusive environment for researchers at all stages of their career to share their recent twerk and any living-proof retrospectives. The conference is the first step in formalizing WAAM via an AWM Research Collaboration Conference for Women (RCCW), whose goal is to be a resource for the artistic math community celebrating the empowering intersections between mathematics and the arts and inviting space for members to learn from each other.

AWM Springer Nature Series: Women in Mathart - Research, Creativity, and Teaching Proceedings.
Associated with our conference is an accompanying AWM Springer Series, which we are extremely excited about. As the lead editor of the AWM Springer Series journal, I have already formally announced a call for submissions to the journal and submissions will be accepted until May 31st, at the end of which the peer review process will begin.

Virtual Format.
The conference was a real success and the future of Women in MathArt is so bright! The speakers and guests were very happy with the online format, as it allowed for multi-modal interactions from participants across different time zones, including Austria, Ottawa, and Italy. The conference began promptly at 9.00am Pacific Time, opening with Maggie Hendrie and Dobson's *Langlands Opera Imaginarium*, and concluded Saturday at 6pm with the community session and social hour, and Sunday around 7pm with the evening ball.

Advertisement.
I was appointed Chair of UCR's Diversity & Excellence Workshop Committee. UCR selected our conference as its designated Diversity & Excellence Workshop for 2022. As such, we advertised our conference amongst the UCR Department of Mathematics main website, UCR student listserv channels, UCR graduate discord channel, and UCR Department of Mathematics social media networks. We also advertised along the main AWM channels and social media networks and along the AWM Chapter at UCR social networks and listservs. Since we received in cooperation with the AWM affiliation, we appeared on the 'in cooperation with' meetings page, in the e-newsletter, and in the global listservs.

Speakers.
Invited speakers.
Dr. Michel L. Lapidus, Distinguished Professor of Mathematics and Burton Jones Endowed Chair of Pure Mathematics (2015 - 2021), University of California, Riverside
Dr. Moira Chas, Stony Brook University
Dr. Dr. Gershom Spruijt, ArtCenter College of Design
Dr. Elizabeth Donovan, Murray State University
Dr. Lesley Wiglesworth, Centre College

Dr. Istem Ozen, ArtCenter College of Design, University of Applied Arts Vienna

Invited panelists.
Dr. Michel L. Lapidus, Distinguished Professor of Mathematics and Burton Jones Endowed Chair of Pure Mathematics (2015 - 2021), University of California, Riverside
Dr. Nika Hogan, Pasadena City College
Dr. Dr. Gershom Spruijt, ArtCenter College of Design
Shanna Dobson, MSc, University of California, Riverside

Invited Artists.
Maggie Hendrie, ArtCenter College of Design
Nathan Rolander, ArtCenter College of Design
Dr. Dr. Gershom Spruijt, ArtCenter College of Design
Shanna Dobson, MSc, University of California, Riverside

AWM Chapter Talks.
Dr. Weitao Chen, University of California, Riverside, Faculty Advisor AWM Chapter at UCR
Camille Korbut, University of California, Riverside, President AWM Chapter at UCR
Shanna Dobson, MSc, University of California, Riverside, Vice President AWM Chapter at UCR

Research Group Project Leaders.
Dr. Maiko Serizawa, University of Ottawa
Dr. Stephanie Lewkiewicz, Temple University
Claudia Maria Schmidt, California State University, Los Angeles
Shanna Dobson, MSc, University of California, Riverside

Speakers in the parallel sessions.

Dr. Maiko Serizawa, University of Ottawa
Dr. Stephanie Lewkiewicz, Temple University
Claudia Maria Schmidt, California State University, Los Angeles
Shanna Dobson, MSc, University of California, Riverside
Corrine Yap, Rutgers University
Alice Major
Drake Dong, ArtCenter College of Design
Faith King, ArtCenter College of Design
Dr. Daniel May, Black Hills State University
Rachel Gillis, Black Hills State University
Dr. Yazdan Pedram Razi, San Jose State University
Christian Williams, University of California, Riverside
Nathan Rolander, ArtCenter College of Design

Speaker Abstracts.

Plenary Talks, Saturday October 16th

WHAT DO ALICIA BOOLE STOTT, ANCIENT INDIAN POETS AND COLORING MAPS HAVE IN COMMON?

Dr. Moira Chas

Saturday, October 16th, 9:45 AM - 10:45 AM

Alicia Boole Stott was a Victorian housewife who developed a deep grasp of four dimensional geometry and managed to express it with marvelous drawings and models.

Ancient Indian Poets counting the rhythms of verses found sequences of integers which are very familiar to nature, to art and to mathematicians.

The history of coloring maps is intricate, colorful and occasionally confusing but it will be hopefully clarified during this talk with the help of crocheted mathematical art.

These are just three instances of the enriching dialog of mathematics and art.

IMAGINING OTHER WORLDS

Dr. Gershom Spruijt

Saturday, October 16th, 2:00 PM - 3:00 PM

Imagination is not the opposite of rationality; rather, rationality is just one particular way we imagine the world. In this presentation we will survey the world of the imagination, and present neurological correlates for the mental processes involved. The imagination is our capacity to simulate alternative realities. These alternative realities might be considered realistic, or might be called fantastical, but in both cases the mind is constructing new worlds. There are relevant similarities between mathematical worlds and daydreaming, and hallucinating and being absorbed in a romantic comedy.

RESEARCH LABORATORIES OR WONDERLANDS: THE SCIENTIST AS ALICE

Dr. Istem Ozen

Sunday, October 17th, 9:30 AM - 10:30 AM

Is there a strict line where Science stops and Art begins or vice versa? Should there be? Could there be? Where do the two overlap and where not? How do you interact with matter as a scientist versus as an artist? How do "thought, knowledge empiricism" vs. "feeling, experience and intuition" play out during research? What can we take away from these interactions? This talk will pose arguments around these questions, intertwined with current examples from the field of "Art & Science" and personal stories.

USING ACTIVE LEARNING TO PROMOTE RISK-TAKING IN THE CLASSROOM

Elizabeth Donovan and Lesley Wiglesworth

Sunday, October 17th, 12:00 PM - 1:00 PM

Several studies have shown that students often prefer pedagogical strategies that use active learning as opposed to lecture. However, as faculty, we are all too familiar with students who grow terrified when pushed out of their comfort zones and are faced with new challenges in the classroom. In this talk, we will share active learning strategies that encourage students to be intellectually uncomfortable in the classroom and take risks, all while recognizing the importance of failure in the learning process. We will also share findings from literature as well as focus groups conducted with college first-years and seniors.

POETRY, BEAUTY AND MATHEMATICS: A PERSONAL JOURNEY THROUGH MIND PAINTING

Dr. Michel Lapidus

Sunday, October 17th, 2:00 PM - 3:00 PM

Traditionally, mathematics is thought of, by the non-expert, to be the dry land of numbers, logic and proofs. However, it is much less well known to the public that imagination, intuition and poetry, along with colorful and powerful mental images, play a key role in the creative process leading to the discovery of new mathematics. In this talk, I will briefly describe my personal journey through mathematics and other competing artistic endeavors, via “mind painting” and “poetic illuminations”.

Parallel Talks.

Saturday, October 16th, Session I (10:45 AM - 11:45 AM)

ARTEMIS BLU II: INFINITY DIAMONDS IN INFINITY DIAPSALMATA

LITERARY INCARNATIONS OF DIAMONDS

Shanna Dobson

10:45 AM - 11:05 AM

In this two-part talk, we present our exciting literary incarnations of perfectoid diamonds, in the sense of Scholze, appearing in our newest fantastical mathematical-fiction novel, Artemis Blu II: Infinity Diamonds in Infinity Diapsalmata. The first incarnation is a new idea of a perfectoid-diamond hourglass, which measures emergent time as a Carrollian "looking-glass" of perfectoid diamonds, which are certain pro-'etale sheaves on

the category of perfectoid spaces of characteristic p. The second is a reinterpretation of the Deleuzian concept of 'haecceity' as a pro-diamond, when Artemis awakens inside the diamond hourglass.

A TOPOLOGICAL JOURNAL OF THE PLAGUE YEAR

Claudia Maria Schmidt

11:05 AM - 11:25 AM

In this dance piece, five salient experiences and events of the first year of the COVID 19 pandemic – the shutdown and social distancing, the course of COVID infections, the events around the death of George Floyd, the so-called New Normal everyday life, and the vaccines and mutations – are matched with metaphors form basic point-set topology – nowhere dense sets, compact spaces, the product topology, norms as related to metrical spaces, and group actions. The dance moves and the stage images depict a blend of the relevant topological definitions and the related fragments of reality.

UNIFORM CONVERGENCE: A ONE-WOMAN PLAY ABOUT MATHEMATICS

Corrine Yap

11:25 AM - 11:45 AM

Uniform Convergence is a play written and performed by Corrine Yap. It juxtaposes the stories of two women trying to find their place in a white male-dominated academic world. The first is historical mathematician Sofia Kovalevskaya, and the second is a fictional Asian-American math professor teaching a present-day real analysis course. In this talk, we will discuss the creation and development of the performance and how it has catalyzed conversations about race and gender in the mathematical community today.

Saturday, October 16th, Session II (10:45 AM - 11: 45 AM)

MATHEMATICS AND EMOTIONS

Maiko Serizawa

10:45 AM - 11:05 AM

In this 20 minutes expository talk, I will explore how emotions play a vital role in a person's mathematical endeavour through a collection of personal stories. Considered as the most logical subject, mathematics is usually completely separated from emotions in our conscious practice. As a consequence, the emotional

aspect of one's mathematical experiences is almost never discussed throughout formal education. However, if we turn our attention to our experiences, we may discover that vital moments of our mathematical work are greatly impacted by our emotions, and hence consciously integrating them to our daily work could help us to boost productivity and to enrich our internal experiences of doing mathematics. This talk marks the beginning of the new project "Emotive Math."

GENERATIVE ADVERSARIAL NETWORK TWO-PROTOTYPE DIAMOND-NANOTHREAD AND CARBON NANOTUBE ELEVATOR with LIFE SUPPORT SYSTEM FOR ASTEROID BELT

Shanna Dobson, Drake Dong

11:05 AM - 11:25 AM

In this talk, we present the results of our independent study, which are threefold and a continuation of our work in our Fall 2020 independent study: first, we explored the AI language of Generative Adversarial Networks (GANs) and the underlying mathematics (generator/discriminator approximation, Inverse transform, complex random variable neural networks, rejection sampling); second, we used the neural networks of the life form we developed in the fall (fully autonomous life form capable of existing at interstellar scales) to design a GAN two-prototype diamond-nanothread and carbon-nanotube elevator-transport system and accompanying life support system from Earth to the asteroid belt; third, we investigated a new reciprocity law from our new model of GANs to Grand Unified Theories (GUTs) of Mathematics and GUTs of AI and automata, realizing new symmetries created through the GANs, which required discovering new meta-symmetries connecting these already-universal symmetries.

HALE: ON MATHEMATICAL NONLINEARITY IN RELATIONS BETWEEN SENSORY CHANNELS

Shanna Dobson, Faith King

11:25 AM - 11:45 AM

Hale is a study project centered on three primary goals: to explore nonlinear relationships between sensory channels and any complexity theory underlying sensory disabilities utilizing the AI language of Generative Adversarial Networks (GAN's), to apply network theory and active inference in order to examine the

nonlocality of scent and smell in the realm of shared action and embodied cognition, and finally to use symmetries across sensory channels to compress multi-dimensional information into an aesthetic visualization for individuals with sensory disabilities, possibly suitable for a medical device. The uncertainties and gaps in our understanding in relation to the interconnectedness of the senses, specifically smell with taste and memory, present a fertile space for higher math to forge clarity and new paths of understanding. We look forward to sharing and expanding our paradigms on what might be possible.

Sunday, October 17th, Session I (10:45 AM - 11:45 AM)

MATH MEETS METAPHOR

Alice Major

10:45 AM - 11:05 AM

Metaphor is not mere literary decoration but central to creative thinking. It is frequently used to generate mathematical terminology, and helps probe potential relationships among different fields of thought and between abstract ideas and the physical world. In turn, metaphors based on math concepts can be useful to poets because mathematics inhabits a liminal space between abstract ideas and real-world applications. The author, a distinguished Canadian poet who draws on math and science for inspiration, will share examples from her work.

CREATIVE WRITING IN UPPER-DIVISION MATH: POETRY BAKED INTO PI

Dr. Dan May, Rachel Gillis

11:05 AM - 11:25 AM

In the Fall 2020 semester, Dan offered his Number Theory students some small amount of class credit for writing mathematical poetry. The goal was to make the class more flexible, friendly, and open during what was sure to be a trying semester. Rachel was a student in the class, and has expanded her mathematical poetry from the class into an Honors project. In this talk, Dan will briefly talk about including poetry in an upper-division math class, and Rachel will talk about her experiences with math poetry. She will share one of her pieces (called a cadae) that overlaps math and confessional poetry. A cadae is a poem structured by the mathematical constant pi in two different ways.

CONSTRUCTAL LAW

Yazdan Pedram Razi

11:25 AM - 11:45 AM

With constructal law, we can find the optimum geometries, find solution to complex problems ranging from mechanical, chemical, aerospace, ... to pure industrial problems.

Sunday, October 17th, Session II (10:45 AM - 11:45 AM)

ARTEMIS BLU II: INFINITY DIAMONDS IN INFINITY DIAPSALMATA

LITERARY INCARNATIONS OF DIAMONDS

Shanna Dobson

10:45 AM - 11:05 AM

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NEUROAESTHETICS AND CREATIVE ARTS THERAPIES: MODELING THE THERAPEUTIC EFFECTS OF ART

Stephanie Lewkiewicz

11:05 AM - 11:25 AM

Aesthetic experiences--that is, the creation, consumption, and appreciation of art--are as fundamental to our human existence as eating, sleeping, and breathing, and, moreover, understood by psychologists and neuroscientists to be an essential component of physical and mental health. The still-emerging field of neuroaesthetics aims to develop a mechanistic understanding of the neuroscience underlying our emotional relationship with art. In this talk, we will review recent experimental and modeling advances in neuroaesthetics, and discuss the potential for applied mathematics to take a lead role in the effort to employ art therapy to treat physical and mental health disorders.

COLORS, STRINGS, AND BEADS: A VISUAL LANGUAGE FOR MATH

Christian Williams

11:25 AM - 11:45 AM

There is a colorful two-dimensional language called "string diagrams", which we can use to visualize basic forms of abstract thinking. It offers a very different approach to math education, simply giving students a powerful language and allowing them to explore and express their own thinking about the world intuitively and creatively. I will present some beginning lessons, and discuss a broader vision for its development; I appreciate all feedback and ideas.

Sunday, October 17th, Lunch & Learn

THE ALL-POWERFUL AND ALMIGHTY SHAPE

Nathan Rohlander

1:00 PM - 2:00 PM

Through life drawing we will explore how shapes are the building blocks of all two-dimensional art. Amorphous shapes are similar to the primordial soup. From which all life and existence started. As excess is trimmed and specified, identity starts to rear its head. We must not lose site of the past but allow it to help shape the future. An amorphous shape shifts to an abstract shape to create a representational shape. Let's explore how interlocking shapes create form and identity through the drawing process. Through shape wonderful things are possible!

Research Group Projects.

Literary Incarnations of (Infinity,1)-Category Theory
Shanna Dobson

Our project lies at the universal intersection of mathematics and the literary arts. The intersectional mathematics herein proposed is the intersection of category theory and literary writing, specifically the universal constructions of n-morphisms in n-categories, in concert with the aims of the Reading Apprenticeship approach to increasing mathematical literacy. The project is inspired by our recent work The Literary Incarnations of Perfectoid Diamonds based on our recent fantastical fiction novel Artemis Blu II: Infinity Diamonds in Infinity Diapsalmata, book two in the series The Artemis Chronicles of Imaginarium.

Aim: Our project invites participants to investigate the universality of category theory by first creating their own literary incarnation of a 2-category in the form of a 1-page short story, and then collectively refining each other's short-story incarnation into a collective novella. As a 2-category contains objects, 1-morphism relations between the objects, and 2-morphisms between the 1-morphisms, participants will write their short story establishing characters as objects in a category that interact via 1 and 2-morphism relations, the entirety of which is structure preserving, and then collectively figure out how to universally compose together all the short stories.

Prompt Questions: Potential questions we can explore are: evaluating the correlations between the strength of reader identity and the increase in mathematical literacy; cross-investigating the universality of category theory using constructions of grammatology; cross-investigating the universal construction of mathematical definitions using constructions of grammatology and mathematical logic; evaluating evidenced-based learning at the intersection of mathematics and the arts using category theory (or number theory) as a test case; using the universal structure of category theory to discover the similarities in how mathematical knowledge is constructed and how reader identity is constructed.

Long-Term RCCW: This project is a small-scale prototype of our intended 5-day project apropos for our forthcoming RCCW, wherein participants will create a literary incarnation of the n-morphisms in any n-category, and up to, for advanced and exceptionally curious participants, infinity-morphisms in any infinity-category.

Categorical Dance

Claudia Maria Schmidt

Category theory is a major step towards unifying mathematical theory and has applications reaching into the fields of computer science and quantum physics. Categories, such as vector spaces, topological spaces, groups, fields, or logical deductive systems, are defined as sets of objects and three basic relations (morphism - for example group operations, continuous maps etc -, identity, composition) with the properties of associativity and existence of an unique identity morphism. By introducing the notion of functors between categories (that is, structure-preserving maps relating objects to objects and functions to functions), different categories can be related to each other. So the identity functor detects identical objects and morphisms. Moreover, the idea of adjoint functors that reverse the action of a functor reveals when one morphism or object in one category is the inverse of one morphism or object in another category. For example, if a functor related a Hausdorff space to a topological space, the information about separation gets lost, but an adjoint functor such as Stone Czech compactification reverses the process. In this way, several distinct categories form via the functor relating them together a common category of their categories.

In consecutive stages of the project, dancers will, by depicting objects and their relationships by body shapes, spatial relations and their changes between them through movement, visualize fundamental concepts, theorems and selected challenge problems pertinent to the development of the theory. One specific proposal how this might be approached is outlined in Maria Mannone / Luca Turchet 2019: 87 ff, but we want here to be more open to explore rather than to theoretically prescribe how categories, morphisms and functors may be represented through the parameters of dance.

Benefits Enhancing the understanding of the subject in nonverbal imaginative ways. Inspiring mathematical intuition to develop new ideas from creative movement.

Short term goal during this conference Creating a virtual group dance visualizing the categorification of selected systems (in the sense outlined above), including their relationships through functors, and illustrate major theorems, such as the fundamental theorem of category theory stating that each object can be uniquely determined to the other objects in its category.

Longer term goal Visualizing challenges of the theory, such as the infinity categories and cosmoi proposed by Emily Riehl. By developing further the movement created, the resulting dance might inspire mathematical intuition to find further ideas, conjectures and solutions.

Expressing Women's Experiences in Math Through Theatre
Stephanie Lewkiewicz

In this project, we will create an original theatre piece to express the diverse and complex experiences of women working in the field of mathematics. During our first group session (Saturday, October 16th), group members will share thoughts on their experiences, wants, needs, hopes, disappointments, fears, and dreams. Prompts will be given to help motivate our conversation. After our sharing period, participants will be asked to contribute written text reflecting their own and others' experiences and sense of identity, purpose, belonging, etc. We will shape our work into a poetry piece spoken by the members of the group. The poetry piece will be delivered by our group members during the Final Presentation portion of the conference on Sunday evening. Group members can share and participate to the extent to which they feel comfortable!

Those wishing to continue with the project in the long term will develop a woman mathematician character to serve as the lead in our play, and build the arc of her story by developing a setting, supporting characters, and a concrete plot, eventually working up to a full text. This piece will focus on capturing and honoring the experiences of trailblazing individuals working to uplift themselves and those around them in mathematics and the mathematical community. All those interested are welcome to participate in the long term project, even if they did not participate in this project during the conference. (Note: Although the main character will be a woman mathematician, all are welcome and encouraged to participate. We look forward to hearing about a diversity of experiences!)

Emotive Math
Maiko Serizawa

From the beginning of math education at school, we are implicitly taught that math is about intellect and logic and has little to do with our emotions. Instead of sharing the experiences of understanding or solving a problem with others by dialing into our emotions, we are constantly encouraged to dial out of ourselves under the pressure to compete with others. This is also reflected in the languages we hear and use in the space we engage in mathematics: clever, stupid, good, bad, etc. These languages are more about external judgement and less about our internal experiences. However, our personal experiences show us that emotions are what strongly affect our mathematical endeavours. Many of the breakthroughs in our learning and research come with emotions (joy, excitement, etc.) which fuel further work, and many of our mental breakdowns and burnouts stem from and result in other kinds of emotions (depression, anger, loneliness, etc.). There are also different ranges of emotions we have while interacting with others in the work which affect the way we think and feel about ourselves. In this project, we will explicitly talk about and investigate the emotional aspect of our mathematical work based on each individual's personal experiences. By deepening the understanding of

our emotional dimension, we aim to reach a new insight into what experience brings us fulfillment and what not, thereby allowing us to become a more conscious creator of our own mathematical research experiences.

Project End Goal:

The end goal of this project is to collaboratively produce a play performance that describes the internal experience of problem solving in math. In the process, we aim to gain a better understanding of the emotions we experience and the impact they have on us and our work. We will also investigate how our work can be affected by external human factors (both constructive and destructive).

- *What does **it feel** like within each of us when we are trying to solve a problem or understand something completely new in mathematics?*
- *What do we experience internally?*

Goal for this Conference (1st Stage):

In this October conference, we will share and collect participants' voices. Together in a safe environment we will experiment with expressing our unique internal experiences using words.

Participants.

We had 48 registered participants and 42 out of the 48 attended the virtual conference. The participants ranged from undergraduate and graduate students to adjuncts to full-time tenured and emeritus professors. The feedback we received was wonderfully positive: thanking us for organizing a place that felt like home, it felt like a real community, an honest gathering of thinkers and creators, a true display of diversity of thinking. Everyone is especially excited to submit for the forthcoming *AWM Spring Series Women in MathArt.*

Budget Breakdown: $800 honorarium, $1500 gifts and prizes (~$22 for a T-shirt + cost of shipping).

Upcoming Events.

I am organizing a Women, Art, and Mathematics Special Session for the upcoming AWM Research Symposium taking place at the University of Minnesota June 16 - 19, 2022. The confirmed invited speakers are: Dr. Maiko Serizawa, University of Ottawa; Dr. Stephanie Lewkiewicz, Temple University; Claudia Maria Schmidt, California State University, Los Angeles, and Shanna Dobson, MSc, University of California, Riverside.

I am organizing and co-instructing a reading course at UCR on mathematical poetry, (*Math 194 Independent Reading Course - Mathematical Poetry)* for undergraduate students, the focus of which will be translating various poetic forms into mathematical language and structure, for potential submission to the Proceedings journal, as a compendium survey. Camille Korbut and I are co-authoring a survey manuscript that is a compendium of student mathematical poetry for submission to the AWM Springer Series.

I advertised the Women in MathArt community in a recent chapter I submitted to a Cross-Curricular Applications volume, specializing in highlighting the intersections of mathematics with cross-curricular disciplinaries in action.

I am also proud to announce that I was selected to be on the organizing committee for the MSRI May 12th event commemorating women in mathematics and celebrating Mirzakhani's birthday. I have suggested Women in MathArt ideas for the breakout room sessions, including a build a bear project (featuring bears and unicorns, since mathematics is magical), where we get to make little WAAM t-shirts for the bears and unicorns. The lead organizer really liked the idea and she is asking me to present these ideas to the entire committee at our next meeting in late February 2022.

Finally, I showcased the Women in MathArt budding network in my UCR Grad Slam competition video submission, for which I was selected to advance to the semi-finals competition.

Overall, the Women, Art, and Mathematics community is receiving so much support! We are all very happy about it and greatly looking forward to its next incarnations.

Next Action Steps.
We are currently sending out a complimentary gift to our speakers and participants, which is a T-shirt custom designed by myself featuring my own images from my fantastical fiction series, Artemis Blu.

Once we have collected all submissions for our AWM Springer Series by the end of May, we will work with Springer to begin the peer review process and finalize preparation of all drafted manuscripts for their eventual appearance in the volume, which is estimated to be available in print December 2022.

AWM has recently announced a collaboration with the Banff International Research Station (BIRS), the AWM-BIRS Partnership, which has hosted many AWM RCCWs. As stated on the AWM website, "*AWM and Banff International Research Station (BIRS) together will sponsor small group follow-ons to the Women in X conferences proposed by women who have multiple intersectional identities. These include, but need not be limited to, women from BIPOC (black, indigenous, people of color) communities, women with visible or invisible disabilities, women who are neuro-diverse, gender-diverse or gender fluid. AWM will provide travel funding for these groups, and BIRS will provide research space and lodging through its Focused Research Groups and Research in Teams programs.*"
As we strongly feel our network is a perfect match under the AWM-BIRS Partnership, we are now applying to BIRS and submitting our proposal for a 5-day fully virtual workshop. It is estimated that our RCCW will take place at most 2 years from now, given the BIRS workshop and proposal delineated deadlines.

We thank you and Lisa Simonyi for your generous support and for giving us the indelible opportunity to grow, to inspire, to make excellent, and to nurture this mathart community.

We greatly look forward to future collaborations with the esteemed Women and Mathematics Program at the Institute for Advanced Study.

Most Sincerely,
Shanna Dobson