

Frank A. Farris
Curriculum Vitae
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1. Education

a) Institutions of Higher Education

B.A. in mathematics, *summa cum laude*, Pomona College, 1977
Ph.D. in mathematics, Massachusetts Institute of Technology, 1981

b) Title of Theses and Dissertations

“Spiralling Chains in CR Manifolds,” Richard Melrose, thesis advisor

c) Academic Honors

Southern California Edison Scholar at Pomona College, 1973–77
Elected to Phi Beta Kappa and Sigma Xi, 1977
NSF Graduate Fellow at MIT, 1977–80
Lilly Postdoctoral Fellow at Brown University, 1983–84
Dr. David E. Logothetti Teaching Award, Santa Clara University, 1997, “In recognition of having established among colleagues and students a well-deserved reputation for an energetic, engaging, and effective teaching style, and having demonstrated the ability to motivate other teachers and learners.”
Trevor Evans Award, Mathematical Association of America, 2002, “In recognition of the publication of the noteworthy expository paper, 'The Edge of the Universe,' in *Math Horizons*.”
2016 PROSE Award in Mathematics, Association of American Publishers, Honorable Mention for *Creating Symmetry, The Artful Mathematics of Wallpaper Patterns*, by Frank A. Farris
Award for Best Photograph, Print, or Painting 2018, American Mathematical Society, awarded at the Joint Mathematics Meetings in San Diego, CA, January, 2018
Section Award for Distinguished College or University Teaching, The Golden Section of the MAA (Northern California, Nevada, and Hawaii), February 2018
Sigma Alpha Nu Book Award for *Creating Symmetry, The Artful Mathematics of Wallpaper Patterns*, Winter, 2018.

1. Teaching and Related Experience

a) Teaching Experience

Tamarkin Assistant Professor at Brown University, 1981–1984
Assistant Professor at Santa Clara University, 1984–88
Associate Professor at Santa Clara University, 1988–2017
Professor of Mathematics and Computer Science at SCU, 2017–

Benedict Distinguished Visiting Professor at Carleton College, Fall 2011

b) Other Academic Experience

Invited participant in “Illustrating Mathematics,” a semester-long workshop at ICERM (the Institute for Computational and Experimental Research in Mathematics), Fall, 2019.

Senior Visiting Scholar at the University of Minnesota, Twin Cities, Fall 2012 and Fall 2016

Invited participant in “Illustrating Mathematics,” a week-long workshop at ICERM, June 2016.

Visiting Mathematician at Pomona College, February 2012

Visiting Scholar at Brown University, Spring 1991, Spring 1998, and Spring/Fall 2006

Visitor to The Geometry Center, The National Science and Technology Research Center for Computation and Visualization of Geometric Structures, Minneapolis, MN, June 15–21, 1997

c) Relevant Non-Academic Professional Experience

Editor of *Mathematics Magazine*, an official publication of the MAA, 2001–2005 (Editor-Elect, 2000); Interim Editor, 2008; and Editor, 2009

Member of editorial board for *Classroom Resource Materials* series of the Mathematical Association of America (AMM), 1996–2001

Member of editorial board of the *Minnesota Journal of Undergraduate Mathematics*, 2015–

Member of editorial board for *Bridges: Mathematics, Music, Art, Architecture, Education, Culture*. (2018–).

Editor of Short Papers track for *Bridges 2021: Mathematics, Music, Art, Architecture, Education, Culture*.

3. Scholarly Work

a) Publications

i) Articles in refereed journals

- 1) FARRIS, Frank A. with R. Elderkin, et al. “On the Steady State of an Age-Dependent Model for Malaria.” In *Non-linear Systems and Applications*, edited by V. Lakshmikantham. New York: Academic Press, 1977, pp. 491–512.
- 2) FARRIS, Frank A. “An Intrinsic Construction of Fefferman's CR Metric.” *Pacific Journal of Mathematics* 123 (1986): 33–45.
- 3) FARRIS, Frank A. with James Ward Brown. “On the Laplacian,” *Mathematics Magazine* 59 (1986): 227–29.
- 4) FARRIS, Frank A. “Classifying Curves in Space and Space-time.” *Expositiones Mathematicae* 6 (1988): 81–89.
- 5) FARRIS, Frank A. with Thomas Russell. “The Geometric Structure of Some Systems of Demand Equations.” *Journal of Mathematical Economics* 22 (1993): 309–326.
FARRIS, Frank A. with Thomas Banchoff. “Tangential and Normal Euler Numbers, Complex Points, and Singularities of Projections for Oriented Surfaces in Four-space.” *Pacific Journal of Mathematics* 161, No. 1 (1993): 1–24.
- 6) FARRIS, Frank A. “Wheels on Wheels on Wheels—Surprising Symmetry.” *Mathematics Magazine* 69, No. 3 (1996): 185–189.
- 7) FARRIS, Frank A. with Thomas Russell. “Integrability, Gorman Systems, and the Lie Bracket Structure of the Real Line.” Includes an appendix by Robert Bryant. *Journal of Mathematical Economics* 29 (1998): 183–209.
- 8) FARRIS, Frank A. “Vibrating Wallpaper.” *Communications in Visual Mathematics* 1 (1998), No.1. (Now appears as Vol. 0 of the *Journal of Online Mathematics*, MAA.)

- 9) FARRIS, Frank A. with Nils Kristian Rossing. “Woven Rope Friezes.” *Mathematics Magazine*, 72, No. 1 (1999): 32–38
- 10) FARRIS, Frank A. with Rima Lanning. “Wallpaper Functions.” *Expositiones Mathematicae*, 20:3 (2002): 193–214.
- 11) FARRIS, Frank A. “The Gini Index and Measures of Equitability.” *American Mathematical Monthly*, December 2010: 851–864.
- 12) FARRIS, Frank A. “Forbidden Symmetry.” *Notices of the American Mathematical Society*, November 2012: 2–6. (Lead article and additional cover image.)
- 13) FARRIS, Frank A. “Symmetric yet organic, Fourier series as an artist’s tool.” *Journal of Mathematics and the Arts*, 7:2 (2013): 64–82. DOI: 10.1080/17513472.2013.819314
- 14) FARRIS, Frank A., with Ryan Tsao (SCU undergraduate student), “Polyhedral Painting with Group Averaging.” *PRIMUS (Problems, Resources, and Issues in Mathematics Undergraduate Studies)*, 26:4 (2016): 312–324, special issue on Mathematics and Art.
- 15) FARRIS, Frank A., “Domain Coloring and the Argument Principle.” *PRIMUS*, 27: 8–9 (2017): 827–844, special issue on Revitalizing Complex Analysis.
- 16) FARRIS, Frank A., “Natural Color Symmetry.” *Proceedings of Bridges 2017: Mathematics, Music, Art, Architecture, Education, Culture*, pages 131–138, Waterloo, Canada, 2017.
- 17) FARRIS, Frank A., “Music from Vibrating Wallpaper.” *Proceedings of Bridges 2018: Mathematics, Music, Art, Architecture, Education, Culture*, pages 287–294, Stockholm, Sweden, 2018.
- 18) FARRIS, Frank A., “Wallpaper Patterns from Nonplanar Chain Mail Links.” *Proceedings of Bridges 2020: Mathematics, Music, Art, Architecture, Education, Culture*, pages 183–190, online, 2020.
- 19) BOYDEN, Wilder and FARRIS, Frank A., “Polyhedral symmetry from ribbons and tubes.” *Journal of Mathematics and the Arts*, 50:1, pp. 76–96. (<https://doi.org/10.1080/17513472.2020.1855574>)
- 20) FARRIS, Frank A., “Wallpaper Patterns from Looping Strands: The Layer Groups.” *Proceedings of Bridges 2021: Mathematics, Music, Art, Architecture, Education, Culture*, pages 71–78, online, 2021.
- 21) FARRIS, Frank A., “Spiral Ruled Surfaces.” Short paper track in *Proceedings of Bridges 2022: Mathematics, Music, Art, Architecture, Education, Culture*, pages 289–292, Helsinki, Finland, 2022.
- 22) FARRIS, Frank A., “Enhancing Polyhedra, Tilings, and Surfaces with Cone-Studding.” *Proceedings of Bridges 2024: Mathematics, Music, Art, Architecture, Education, Culture*, pages 203–210, Richmond, VA, 2024.
- 23) FARRIS, Frank A., “A Rhapsody on Tangency.” *Mathematics Magazine*, accepted, 2025.
- 24) FARRIS, Frank A., “Phantom Symmetry from Wheels on Wheels.” *American Mathematical Monthly*, accepted, 2026.
- 25) FARRIS, Frank A., “Creating cmm Patterns with Local Frieze Symmetries,” accepted to *Proceedings of Bridges 2026: Mathematics, Music, Art, Architecture, Education, Culture*, pages TBA, Galway, Ireland, 2026.

i) *Books*

- 1) FARRIS, Frank A. “Creating Symmetry, the Artful Mathematics of Wallpaper Patterns,” *Princeton University Press*, 2015
- 2) Stephen F. Kennedy, Donald J. Albers, Gerald L. Alexanderson, Della Dumbaugh, FRANK A. FARRIS, Deanna B. Haunsperger, & Paul Zorn, Editors, *A Century of Advancing Mathematics*, Mathematical Association of America, 2015.

ii) *Other mathematical writing*

- 1) FARRIS, Frank A. "Writing Mathematics—A Nut and a Bolt of Style." *Focus*, the newsletter of the MAA, September 2002: 26–27.
- 2) FARRIS, Frank A. "The Edge of the Universe—Noneuclidean Wallpaper." *Math Horizons*, 8, (September, 2001): 16–23. The MAA honored this article with the Trevor Evans Award in 2002. It later appeared in a volume of selected articles from *Math Horizons*, which took its title from the title of my article.
- 3) FARRIS, Frank A. "Five Years at the Magazine." *Focus*, the newsletter of the MAA, December, 2005: 10–11.
- 4) FARRIS, Frank A. "Crafty Counting." *Math Horizons*, February 2008: 12–15. The article illustrates Burnside orbit-counting in an elementary way.
- 5) FARRIS, Frank A. "A Window on the Fifth Dimension." *Focus*, the newsletter of the MAA, November 2008: 1–4.
- 6) FARRIS, Frank A. "A Noneuclidean Universe." Chapter in *Mathematical Expeditions*, Tatiana Shubin, David F. Hayes, and Gerald L. Alexanderson, Editors, MAA, Washington DC, 2010.
- 7) FARRIS, Frank A. "The Editor's Song," *Mathematics Magazine*, October 2011: p. 266–7.
- 8) FARRIS, Frank A., "Mathematical Art Takes a Fresh Look at Wallpaper," invited guest blog for *Scientific American*. June 26, 2015. (See <http://blogs.scientificamerican.com/guest-blog/mathematical-art-takes-a-fresh-look-at-wallpaper/>)
- 9) FARRIS, Frank A., "Patterns Are Math We Love to Look At," invited guest blog for *The Conversation*. September 22, 2015. (See <https://theconversation.com/patterns-are-math-we-love-to-look-at-44390>) 45,954 downloads.
- 10) FARRIS, Frank A., artist's page at *Mathematical Imagery*, a collection of mathematical art maintained by the American Mathematical Society. First page posted September 2013; updated August 2015.
- 11) FARRIS, Frank A., "With new technology, mathematicians turn numbers into art," invited guest blog for *The Conversation*. April 24, 2017. (See <https://theconversation.com/with-new-technology-mathematicians-turn-numbers-into-art-61254>.) 36,583 downloads.
- 12) FARRIS, Frank A., "LGBT Math—Out of the Closet." *MAA FOCUS*, 39:1, February–March, 2018, pp. 38–40. (I was also invited to provide cover art for this issue.)
- 13) FARRIS, Frank A., "Where does 'mathematical making' fit in our community?" Letter to the editor in *Notices of the American Mathematical Society*, 67:5, May, 2020, pp. 614–15. (Contains a "Mathematical Makers Manifesto," signed by 29 semester visitors to the ICERM "Illustrating Mathematics" program.)
- 14) FARRIS, Frank A., "Mathematical Art as a Discipline." Opinion piece in *Notices of the American Mathematical Society*, 68:6, June–July, 2021, pp. 980–86.
- 15) FARRIS, Frank A., "Mathematical Art: A Place to Start." Solicited MathValues blog post. (See <https://www.mathvalues.org/masterblog/mathematical-art-a-place-to-start> .)
- 16) FARRIS, Frank A., "It Takes Seven Colors to Color a Torus." Solicited article for *Math Horizons*, 29:4, 8–10, DOI: 10.1080/10724117.2022.2028521
- 17) FARRIS, Frank A., with G Berzsenyi, T Dray, J Harris, D Lussier, and NA Neudauer, "Yueh-Gin Gung and Dr. Charles Y. Hu Award for 2022 to Barbara Faures for Distinguished Service to Mathematics." *The American Mathematical Monthly* 129 (7), 603–606, 2022. (Lead writer.)
- 18) FARRIS, Frank A., with V Coufal, S Dorée, T Dray, A Shell-Gellasch, D Smith, "Yueh-Gin Gung and Dr. Charles Y. Hu Award for 2023 to Victor Katz for Distinguished Service to Mathematics." *The American Mathematical Monthly* 130 (7), 603–605, 2023. (Lead writer.)

- 19) FARRIS, Frank A., with V Coufal, E Denne, S Doree, P Myers, D Smith, “Yueh-Gin Gung and Dr. Charles Y. Hu Award for 2024 to Michael Dorff for Distinguished Service to Mathematics.” *The American Mathematical Monthly* 131 (7), 555-557, 2024. (Lead writer.)

b) Work in progress

- FARRIS, Frank A., “Fibonacci Spirals: the Mathematics behind Edmark’s Blooms,” projected for submission to *the Journal of Mathematics and the Arts*.
 FARRIS, Frank A., “Piecewise Circular and Piecewise Hyperbolic Curves,” projected for submission to the *American Mathematical Monthly*.
 FARRIS, Frank A., with Ben Chen, Paisley Hou, and Rebecca Chen, “The Artistic Potential of Bessel Functions,” planned for submission to the *Journal of Mathematics and the Arts*.
 FARRIS, Frank A., with Rachel Quinlan, “Local Frieze Symmetries in Wallpaper Patterns.” Major project to build on papers each author has published in Bridges conference volumes.

c) Selected talks

- FARRIS, Frank A. with Thomas Banchoff. “Tangential and normal Euler numbers, complex points, and singularities of projections for oriented surfaces in 4-space.” Paper presented at the national joint meetings of the American Mathematical Society and the Mathematical Association of America, Baltimore, MD, January 1992.
 FARRIS, Frank A. “Vibrating Wallpaper.” Paper presented on numerous occasions 1997-2000, including colloquia at San Jose State University, Pomona College, The Geometry Center, Brown University, Bowdoin College, and St. Olaf College.
 FARRIS, Frank A. “The Edge of the Universe—Noneuclidean Wallpaper.” Paper presented on numerous occasions 1998–2003, including colloquia at Pomona College, Lafayette College, and St. Olaf College, as well as the Allegheny Mountain and Iowa Section meetings of the MAA. I was also invited to give this talk as the Sulski Lecture at Holy Cross College in March 2004.
 FARRIS, Frank A. “Forbidden Symmetries—Relaxing the Crystallographic Restriction” Paper presented (2002-2003) at various colloquia and as an invited address at the following MAA section meetings: Northeastern, Southeastern, Iowa, Missouri, Illinois, North Central, Indiana, and Northern California. At the Northeastern section meeting, this talk served as the Battles Lecture, the principal keynote address of their spring meeting.
 FARRIS, Frank A. “More Examples Like the Figure-8 Sphere in 4-Space,” invited talk for TFBCON 2003, a conference in honor of the 65th birthday of Thomas Banchoff, Brown University, October 2003.
 FARRIS, Frank A. “The Gini Index and Social Equitability,” invited keynote address for the 26th annual Pi Mu Epsilon conference at St. John's University, March 2004. Also given for the Santa Clara University Mathematics and Computer Science Colloquium, May 25, 2004, the Carleton College Mathematics Colloquium September 27, 2011, and four MAA section meetings: Maryland–DC–Virginia, Wisconsin, Southern California, and the Rocky Mountain Section.
 FARRIS, Frank A. “I See Mathematics,” invited Silver and Gold Banquet address for MathFest, 2007, San Jose, CA. (MathFest is the summer meeting of the MAA. The Silver and Gold Banquet closes the conference. A similar talk was given as the Invited Speaker for the Northern California Undergraduate Mathematics Conference at Sonoma State University in April 2006.)
 FARRIS, Frank A. “A Window on the Fifth Dimension,” invited address for annual meeting of the Northern California, Nevada, and Hawaii Section of the MAA. February 28, 2009

- FARRIS, Frank A. “The Edge of the Universe—Noneuclidean Wallpaper.” A new version of this talk was prepared for the MAA Carriage House Distinguished Lecturer series in Washington, DC, sponsored by the NSA. This is a high-profile public event, with a professionally prepared website to highlight the talk afterward. September 9, 2009. A similar talk was given in the series, Steven Goldman Lectures in Mathematical Physics, at the University of Central Florida, September 16, 2010.
- FARRIS, Frank A. “Creating Symmetry.” Invited address at MathFest, Pittsburgh, PA. August 8, 2010.
- FARRIS, Frank A. “Undercover Symmetry.” Colloquium talk given at the University of Minnesota (Twin Cities and Duluth campuses), the College of St. Benedict and St. John’s University, Macalester College, and St. Olaf College (2011), UC Santa Cruz, CSU Sonoma State, and San Jose State (2012), and Claremont Mathematics Colloquium (2013). (The mathematical content of this talk became a chapter in my book.)
- FARRIS, Frank A. “Polyhedral Symmetry—In the Plane?” Invited address at section meetings of the MAA: North Central Section, October 2013; Allegheny Mountain Section, April 2014; EPADEL (Eastern PA and Delaware) and Oklahoma/Arkansas, March/April 2015. I also gave this talk as part of my visit to Oberlin College as their Tamura/Lilly Lecturer, September 2014.
- FARRIS, Frank A. “Symmetric Yet Organic.” Invited address for Bridges Math Art, the international conference on mathematics and art. I was invited by virtue of my publication in the *Journal of Mathematics and the Arts*. July 2014.
- FARRIS, Frank A. “Undercover Symmetry.” Invited address for the Northwest Section of the MAA, April 2013. Also, given as a colloquium talk at Pomona College, February 2013; UC Santa Cruz, January 2013; San Jose State University, February 2013; and Sonoma State University, March 2013.
- FARRIS, Frank A. “Seeing Symmetry: A Talk about a Mathematical Art Show.” Public lecture given in conjunction with exhibitions of my mathematical art at Carleton College, October, 2012; University of Minnesota, Twin Cities, December 2012; Pomona College, February 2013; University of St. Thomas, March 2014. I also gave a version of this talk at Coe College, October 2012; Santa Clara University (Honors 101 series), April 2013; Oberlin College, October 2014; Phi Beta Kappa Northern California Association Asilomar Conference, February 2015; Seattle U. Oct. 2016; Temple University, Oct. 2017; U. of the Pacific, Nov. 2017.
- FARRIS, Frank A. “Creating Symmetry.” Keynote address (an overview of my book) given for the California Mathematics Council of Community Colleges (CMC³) Lake Tahoe Conference, April 2015. Repeated as invited address for joint meeting of the Golden and Southern CA sections of the MAA, November 2015. Given as the Kieval Lecture at Cornell U., Sept. 2016, as a colloquium at Pacific U., Oct. 2016, and Coe College, Nov. 2016. A similar talk was given as the Ebey Lecture at University of the South, Sewanee, Sept. 2018, as the Moody Lecture at Harvey Mudd College, Nov. 2018, and as the Kieval Lecture at Humboldt State University, Apr. 2019. (Kieval Lectures have been endowed at both Humboldt and Cornell; I have done both!)
- FARRIS, Frank A. “When Art and Math Mix It Up.” Public lecture and book signing as part of the Smithsonian Associates program in the Smithsonian Ripley Auditorium. August 2015. Repeated for the Cupertino Library Foundation, March 13, 2016.
- FARRIS, Frank A. “Don’t Be So Discrete! Continuous methods in mathematical art.” Invited address at “Illustrating Mathematics” workshop at ICERM, June 2016. (Available at https://icerm.brown.edu/video_archive/#/play/1090.)
- FARRIS, Frank A. “Spherical Harmonics for Cosmology and Mathematical Art.” Mathematics colloquium talk given at the University of Washington, Seattle (Oct. 2016); the University

- of Arizona (February 2017); University of San Francisco (March 2017); Temple University (Oct. 2017).
- FARRIS, Frank A. “Mathematical Art and Spaces of Function,” invited talk as artist in residence at the Park City Math Institute to kick off a workshop on representation theory, July 2018. (Available at <https://www.youtube.com/watch?v=NNvv-gAkCHg>.)
- FARRIS, Frank A. “Mathematical Art from Complex Analysis,” colloquium talk at Humboldt State, April, 2019.
- FARRIS, Frank A. “Color Symmetry in Plane Patterns,” invited talk for the Computational Textiles Working Group at ICERM, Oct. 2019. (Available at https://icerm.brown.edu/video_archive/?play=2041.)
- FARRIS, Frank A. “Wallpaper and Quadratic Integer Rings,” invited talk for the Visualizing Number Theory and Algebra workshop at ICERM, Nov. 2019. (Available at https://icerm.brown.edu/video_archive/?play=2053.)
- FARRIS, Frank A. “Weaving bands into wallpaper patterns: the layer groups,” invited talk for a GEAR workshop (Geometry: Education, Art, and Research) at the Banff International Research Station, February, 2021. (Available at [this link](#).)
- FARRIS, Frank A., “Lovely Tangles: Fourier series in mathematical art.” Invited talk for the Math and Art Seminar at Kansas State University, Apr. 2023. (Available at <https://mediasite.k-state.edu/mediasite/Play/778c02968d494f44ac3ad339330f05161d>.)
- FARRIS, Frank A., “Curves in Special Relativity.” Colloquium talk at USF, September 11, 2024. Also given for the Illustrating Mathematics online seminar February 14, 2025, as “Curves in Special Relativity: Curves Whose Tilings Trace Tangents.” (Available at https://www.youtube.com/watch?v=2iaJmNcSx_I.)
- FARRIS, Frank A., “It Starts with a Circle.” Invited talk for Ghana Innovations in Development, Education and the Mathematical Sciences (GHIADAMS) by Zoom. July 11, 2025. Repeated for Bay Area Mathematical Adventures (BAMA), September 30, 2025. (Starts with very old material about symmetry of curves, from 1996 paper and continues with work from recent *Phantom Symmetry* paper.)
- FARRIS, Frank A., “Phantom Symmetry.” Invited address for the annual meeting of the Golden Section of the MAA at SCU, March 7, 2026. (Based on the accepted *Mathematics Magazine* paper.)

d) *Academic Exhibitions of Mathematical Art*

- FARRIS, Frank A. with Saewon Eum. *Seeing Symmetry*, an exhibition of mathematical art at Carleton College, Fall 2012. Supported by the VIZ Initiative, funded by the Mellon Foundation. Curator, Margaret Pezalla-Granlund. Exhibition was rented by the School of Mathematics at the University of MN, Twin Cities and the University of St. Thomas.
- FARRIS, Frank A. *Seeing Symmetry*, a completely different exhibition with the same title, at Pomona College, Spring 2013. Sponsored by the Pomona College Department of Mathematics; later rented by UC Irvine.
- FARRIS, Frank A. *SymmetryScapes*, an exhibition of 25 digital prints on aluminum at Cornell U. September-Dec. 2016. (Artworks were subsequently loaned to the Science Center in Ithaca, NY and to Temple University for a slightly expanded version of the exhibition in Oct. 2017.)
- FARRIS, Frank A. *SymmetryScapes West*, an exhibition of 24 digital prints on aluminum at Pacific U., not quite overlapping with the Cornell exhibition. Oct. 2016. [The catalog for this show is available](#).
- FARRIS, Frank A. *SymmetryScapes, Sewanee*, an exhibition of 25 digital prints on aluminum at University of the South, Sewanee, September 2018. (Though there was some overlap with

earlier shows, the invitation to spend a week at Sewanee gave me a chance to add lots of new pieces.)

e) Artwork in Juried Exhibitions

- FARRIS, Frank A., “Hyperbolic Peaches to the Edge of the Universe” and “Imaginary Planets: A Polyhedral Sampler,” digital prints accepted in the juried art exhibition held at Bridges Math Art, the international conference on mathematics and the arts. Baltimore, MD. July, 2015.
- FARRIS, Frank A., four digital prints accepted for the Mathematics and Art exhibition, *In the Realm of Forms*, at Ohio State Mansfield’s Pearl Conard Art Gallery, to run November 9 through December 8, 2015.
- FARRIS, Frank A., two digital prints (“Mossy Frogs and Granite Bugs” and “An Iris Spiral”) accepted in the juried art exhibition held at the Joint Mathematics Meetings, January 2016 in Seattle, WA.
- FARRIS, Frank A., two digital prints (“They Arrive” and “Red Mandala”) accepted for the juried art exhibition held at the Joint Mathematics Meetings, January 2018 in San Diego, CA.
- FARRIS, Frank A., “The Alchemist’s Shelf” and “Platonic Regatta,” digital prints accepted for the general art exhibition at Bridges, the international conference on Mathematics, Music, Art, Architecture, Education, Culture. Waterloo, Canada. July, 2017.
- FARRIS, Frank A., two digital prints (“Art Festival at Filoli” and “A Gooseberry Spiral”) accepted for the juried art exhibition held at the Joint Mathematics Meetings, January 2018 in San Diego, CA. “A Gooseberry Spiral” received the award for Best Photograph, Print, or Painting 2018.
- FARRIS, Frank A., “Clam Landscape: A Mathematical Surrealism (CLAMS),” digital print and 3D printed clamshell with pearl, accepted in the general art exhibition at Bridges, the international conference on Mathematics, Music, Art, Architecture, Education, Culture.. Sweden, Stockholm. July, 2018.
- FARRIS, Frank A., “In a State of Patterns,” film accepted to the Bridges Conference Short Film Festival, shown at at Bridges, the international conference on Mathematics, Music, Art, Architecture, Education, Culture. Sweden, Stockholm. July, 2018. Retrievable at <http://gallery.bridgesmathart.org/exhibitions/2018-bridges-conference-short-film-festival/tenorfrank>
- FARRIS, Frank A., “Earth and Fire Animate the Body,” digital print on aluminum, accepted for the juried art exhibition held at the Joint Mathematics Meetings, January 2019 in Baltimore, MD.
- FARRIS, Frank A., “Steiner Circles and Modular Sequences in a Fountain at Filoli” and “Polyhedral Symmetry from Bands” digital prints on aluminum, accepted for the juried art exhibition held at the Joint Mathematics Meetings, January 2020 in Denver, CO.
- FARRIS, Frank A. and Tihanyi, Timea, “Knit Cylinder #1 (from Stress Test series),” 3D printed porcelain and glaze, accepted in the general art exhibition at Bridges, the international conference on Mathematics, Music, Art, Architecture, Education, Culture. Online, August, 2020.
- FARRIS, Frank A., “Three Manifestations of Polyhedral Symmetry,” 3D printed steel with golden coating, and “Polyhedral Symmetries from Twisted Bands,” digital print on aluminum, accepted for the juried art exhibition held at the Joint Mathematics Meetings, January 2021, online.
- FARRIS, Frank A., “A Hyperboloid from 14 Laced Hyperboloids,” digital print on aluminum, accepted in the general art exhibition at Bridges, the international conference on Mathematics, Music, Art, Architecture, Education, Culture. Online, August, 2021.
- FARRIS, Frank A., “The Temple of Zonohedra: Balcony View,” digital print on aluminum (24” by 20”), juried art exhibition at the Joint Mathematics Meetings, January 2022. Online.

- FARRIS, Frank A., “Tangent Tiling Curves: Circular and Hyperbolic,” digital print on aluminum (24” by 20”), juried art exhibition at the Joint Mathematics Meetings, January 2024. San Francisco, CA.
- FARRIS, Frank A., “The Problem of Apollonius: A Rhapsody on Tangency,” digital print on aluminum (24” by 20”), juried art exhibition at the Joint Mathematics Meetings, January 2025. Seattle, WA.
- FARRIS, Frank A., “Weaving Strands for Approximate Symmetry” and “Views of the Olivewood Bowl,” digital prints on aluminum (24” by 20”), juried art exhibition at MathFest, August 2025. Sacramento, CA.
- FARRIS, Frank A., “A cmm Sampler” and “Fantasy Bowls from Torus Maps,” digital prints on aluminum (20” by 20” and 24” by 20”), juried art exhibition for the Bridges conference in Galway, Ireland, August, 2026.

4. Service to the University and the Profession (selected)

a) *Service to the University*

Chair of the Department of Mathematics and Computer Science, 2018–24
 Bay Area Mathematical Adventures (BAMA), Steering Committee, 2010–26
 Chair of University Coordinating Committee, 2017–18
 Head of departmental assessment team, 2009–2010
 Chair of the SCU Mathematics/Computer Science Colloquium series, 2007–2009
 Sabbatical Review Committee, 2007
 Faculty Affairs Board, elected representative, 2000–2003
 Co-chair of Mathematics Subcommittee of the University Core Curriculum Committee, 1993–2000
 Budget Advisory Committee, 1995–1997, advising the President on budgetary matters
 Rank and Tenure Committee, College of Arts and Sciences, 1991–1994

b) *Service to Profession*

External reviewer for program review at University of San Diego, March, 2026.
 Chair of the committee to organize *MathArt at MathFest*, the first exhibition of mathematical art at the summer meeting of the MAA, 2025.
 Chair of the search committee to select the next Editor of *Mathematics Magazine*, 2022–23.
 Gung and Hu Award Selection Committee, MAA, 2021–24, chair 2024. (Served as lead writer for three prize citations.)
 Frequent referee for the *Journal of Mathematics and the Arts*, as well as *Bridges*, the international conference on Mathematics, Music, Art, Architecture, Education, Culture.
 Co-organizer, with Stacey Speyer and Scott Vorthmann, of BAAM! (Bay Area Art and Math!), a group of artists and mathematicians, 2018–.
 Member of the Gung and Hu Award Committee, to select the recipient of the highest service award presented by the MAA, 2021–, Chair 2023.
 Member of the search committee to select the next Editor of *The American Mathematical Monthly*, 2020
 Member at Large of the MAA Council on Publications and Communications, 2016–22
 Chair of the MAA Council on Publications and Communications, service includes positions on the Executive Committee and Board of Governors of the MAA 2010–2015
 Member of CUPM Subcommittee on Geometry, 2013–4; contributed to writing national guidelines for geometry courses
 Member of judging panel for AMS Mathematical Art Exhibition, JMM 2014 and 2019
 Local arrangements contact for AWM Research Symposium, March 2013

Editor of *Mathematics Magazine*, 2001–2005; Interim Editor, 2008; and Editor, 2009
 External Program Reviewer for St. John University and the College of St. Benedict, winter 2009
 MAA Governor for Northern CA Section, 2008–2011 (elected position)
 Chair of Publications Subcommittee of the MAA Centennial Planning Committee, 2007–2008;
 Member, 2008– (Stepped down as chair to resume work with the *Magazine*.)
 Member, Short Course Committee of the MAA, 2007–2011
 Member, ad hoc Program Committee for MathFest, 2008
 Leader of MAA Strategic Planning Working Group on the American Mathematics Competitions,
 2005–2006
 Chair of MAA Program Committee and member AMS-MAA Committee for Joint Invited
 Speakers Joint Mathematical Meetings, New Orleans, LA, 2007
 MAA Executive Committee (as publications representative), calendar years 2004–2005
 MAA Governor (*ex officio* as editor of *Mathematics Magazine*), 2001–2005
 Member of editorial board, Classroom Resource Materials series of the MAA, 1996–2001
 Member of Dissertation Examination Committee for Ph.D. candidate Dan Dreibelbis, Brown
 University, Spring 1998

Brief Biography Frank Farris is the author of *Creating Symmetry, the Artful Mathematics of Wallpaper Patterns*, published by Princeton University Press in 2015; this book was awarded the Alpha Sigma Nu Book Award in 2018. Farris served as Editor of *Mathematics Magazine* from 2001–2005 and again in 2009, working to continue its tradition of inspiring and challenging teachers and students of mathematics at the undergraduate level. As Chair of the Council on Publications and Communications, he served on the Executive Council of the MAA from 2010 to 2015. Awards include a Trevor Evans Award for his article “The Edge of the Universe” in *Math Horizons* and the AMS award for Best Photograph, Print, or Painting 2018 at the Joint Mathematics Meetings. Teaching awards include the David E. Logothetti Teaching Award at Santa Clara University, where he has taught since 1984, and the Golden Section (No. Cal, NV, and HI) Award for Distinguished College or University Teaching. Interests include mathematical art, 2-surfaces in 4-space, mathematical economics, and symmetry.