

PINO TROGU

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EDUCATION

Rhode Island School of Design 1983–85 Master of Fine Arts, graphic design
 Istituto Superiore Industrie Artistiche, Urbino, Italy 1979–1983 Bachelor of Fine Arts, graphic design
 Istituto Statale d’Arte, Oristano, Italy 1973–1979 Diploma, industrial design

AWARDS

Fulbright Scholar, Rhode Island School of Design 1983–85

COURSES TAUGHT SINCE 2007

DES 523 Information Design 1: Data Visualization
 DES 524 Information Design 2: Exhibits
 DES 425 Graphic Design 2: Typography
 DES 420 Rapid Visualization
 DES 300 Design Process
 DES 320 Drafting & Sketching for Design
 DES 226 Modern Letterpress Printing
 DES 220 Introduction to Drawing for Designers

PEER-REVIEWED PUBLICATIONS

Trogu, Pino. [Giorgio Scarpa’s Model of a Sea Urchin Inspires New Instrumentation](#) | 2019
Leonardo 52.2 (MIT Press), pp. 146–151. (Featured article). “Leonardo is the leading international peer-reviewed journal on the use of contemporary science and technology in the arts and music and, increasingly, the application and influence of the arts and humanities on science and technology.” In print.

Trogu, Pino. [Counting But Losing Count: the Legacy of Otto Neurath’s Isotype Charts](#) | 2018
Visible Language, 52.2 University of Cincinnati, pp. 83–109. Featured article. “Visible Language is the oldest peer-reviewed design journal ... first published in 1967” In print.

Trogu, Pino. [The Landscape of the Physical Book: Space and Memory in the Printed Page](#) | 2018
TEXT – The Book Issue, Academic Press Leiden & Amsterdam University Press, pp. 90–99. The advantages of physical books versus digital books as an aid to memory. In print.

Trogu, Pino. [The Image of the Book: Cognition and the Printed Page](#) | 2015
Design Issues, 31.3 MIT Press, pp. 28–40. “The first American academic journal to examine design history, theory, and criticism, *Design Issues* provokes inquiry into the cultural and intellectual issues surrounding design.” In print.
 Trogu, Pino. [Working Memory and Background Knowledge: Cognitive Science in the Design Classroom](#)
FORMakademisk, 8.1, Oslo, Norway, pp. 1–17 (Featured article). | 2015 In print.

Trogu, Pino. [The Four-Second Window: How the Time Constraint of Working Memory and Other Psychological Principles Determine the Success of a Graphic Design](#), *International Journal of Humanities and Social Science*, 3.9, pp. 19–33. | 2013 In print.

INVITED PUBLICATIONS

Trogu, Pino, [The Shop at 300 Broadway](#) | 2021. Book chapter in: [Only On Saturday: The Typographic Prints of Jack Stauffacher](#), San Francisco: Letterform Archive. In press.

EDITOR-REVIEWED PUBLICATIONS

Trogu, Pino, [Jack Stauffacher, a typographer and printer who mixed classicism and the avant-garde](#). A profile of this important Bay Area designer and printer. Published, shortly after he died at the age of 97, in [DomusWeb](#), the “Magazine for Architecture, Design and Art Lovers.” | 2017

Trogu, Pino, [Jack Stauffacher tipografo stampatore, tra classicismi e avanguardie](#) | 2019
An Italian translation of the Jack Stauffacher profile published in DomusWeb in 2017. Reprinted as a book chapter in [Graphic Novel](#), by Mauro Panzeri. Milano: Ledi Publishing. In print.

INVITED PRESENTATIONS

Trogu, Pino, [Leonardo Book Club. Live webinar discussion with Pino Trogu, author](#) | 2019
Giorgio Scarpa’s Model of a Sea Urchin Inspires New Instrumentation, *Leonardo*, 52.2 MIT Press. (Featured article) April 24, 2019. Video: 58:29. The interview covers in detail the print article as well as Scarpa’s other work.

Trogu, Pino, [Giorgio Scarpa’s Transformable Objects: Geometry as Art, Science, and Play](#) | 2018
[ReMAR2018, 4th IEEE/IFTOMM International Conference on Reconfigurable Mechanisms & Robots](#), 20–22 June 2018, Delft University of Technology, The Netherlands.

Trogu, Pino & Filip Jelínek, [Origami Design and Engineering](#) | 2016
[SMIT 28th Conference of the International Society for Medical Innovation and Technology](#)
Co-chair of technical session and workshop, October 2016, Delft University of Technology (TU Delft), The Netherlands. Session and workshop (Trogu, principal author) on bio-inspired origami models that show certain kinematic principles and parallels to existing and future medical devices.

Trogu, Pino, [Little Men, Little Boxes: Limitations of Otto Neurath’s International Picture Language as a Tool for Statistical Visualization](#) | 2015 The 7th International Conference on Information Design, Brasilia, Brazil. A critique of Otto Neurath’s system of statistical graphics (Isotype: International System Of Typographic Picture Education), which employs small, repeated pictorial symbols of people or objects to represent quantities.

[Michele Provinciali: The Imprinting of a Master](#) | 2012
Conference: Michele Provinciali: a World Imagined Through Artifacts. Contributed a video and text on Italian designer Michele Provinciali, who was art director of design magazines and collaborated with the Castiglioni brothers, among others. He was also a recipient of the Compasso d’Oro, the highest design award in Italy. Pesaro, Italy.

[Jack Stauffacher: The Master of Types](#) | 2012
San Francisco Design Week, June 2012. Sponsored by Swissnex San Francisco, featuring the master printer from the Bay Area, in a conversation about his experimental work. Jack Stauffacher was the 2004 American Institute of Graphic Arts (AIGA) medal recipient. His work is in the San Francisco Museum of Modern Art.

PEER-REVIEWED PROCEEDINGS AND PRESENTATIONS

Bocca, Lorenzo & Pino Trogu, [Giorgio Scarpa’s Transformable Objects: Geometry as Art, Science, and Play](#), 31st National Symposium: Meetings with Mathematics | 2017 Full paper presentation to teachers of mathematics on teaching geometry through transformable shapes. Presented as part of “cultural evenings” open to all attendees

(keynote, 350 attended). (Co-authors contributed equally; in Italian – English abstract) Mathematics, Education & School: Between Research and Everyday Practice, Castel San Pietro Terme, Italy.

Trogu, Pino, [Bioinspired Design: Aristotle's Lantern and Models of Rotational Geometry by Giorgio Scarpa](#) | 2015 *DMD EU 2015 — Design of Medical Devices Conference, Europe Edition*, Vienna, Sept. 8–9. Rapid prototyping for the efficient design and validation of medical devices. Extended abstract in conference proceedings.

Trogu, Pino, F. Lodato & C. di Bartolo, [Rotational Geometry and the Creation of Bionic Models: The Pioneering Work of Giorgio Scarpa](#) | 2014 *Living Machines, 3rd International Conference on Biomimetic and Biohybrid Systems*, Milan, Italy. Workshop: *Bionics and Design, Pure and Applied Research*. Workshop was noted in the proceedings published by Springer.

Trogu, Pino, [The Double Constraints of Convention and Cognition in Successful Graphic Design](#) | 2013 CIDI2013 6th Information Design International Conference, Recife, Brazil, September 2013. Full paper presentation, Brazilian Society of Information Design, Blucher Design Proceedings, 2.1. São Paulo: Blucher.

Trogu, Pino, [The Image of the Book: The interplay of the fixed sequence of pages \(the visual-spatial\) with the printed text \(the aural-verbal\) in the context of recent cognitive psychology research on working memory.](#) | 2013 *Resurrecting the Book Conference*, November 15–17. Library of Birmingham, England.

Trogu, Pino, [Rotational Geometry as a Teaching Tool: Applying the Work of Giorgio Scarpa](#) | 2013 Design Research Society // Cumulus – 2nd International Conference for Design Education Researchers, Full paper presentation at DRS // CUMULUS Oslo, Norway.

Trogu, Pino, [Rotational Geometry as a Teaching Tool: Applying the Work of Giorgio Scarpa](#) | 2012 Sixth International Conference on Design Principles and Practices, UCLA, Los Angeles.

PEER-REVIEWED WORKSHOP PRESENTATIONS

Bocca, Lorenzo & Pino Trogu, [Giorgio Scarpa's Transformable Objects](#) | 2017 **31st National Symposium: Meetings with Mathematics**. Workshop for teachers of mathematics on teaching geometry through transformable shapes. (Co-authors contributed equally.) Two workshops of 45 minutes each; 25 participants each. Mathematics, Education & School: Between Research and Everyday Practice, Castel San Pietro Terme, (Bologna) Italy.

CITATIONS

Work cited in:

- Burns, A. et al, 2021. *IEEE Transactions on Visualization and Computer Graphics*.
- Perricone, V., et al, 2020. *Bioinspiration & Biomimetics*, 16 011001.
- Frank, M., 2017. *Materials Science and Engineering*, UC San Diego.
- Frank, M. et al, 2016. *Journal of Visualized Experiments*, 110, e53554.
- Jelínek, F., Smit, G., Breedveld, P., 2014. *Journal of Medical Devices*, 8 (1).
- Jelínek F. et al, 2014. *Journal of Medical Devices*, 8 (4).
- Fry, A., et al, 2013. *Art, Design & Communication in Higher Education*, 12 (2).
- Sonnenwald, D. H., McElligott, J. 2017 *Interaction Design and Architecture Journal*, 32.
- Kucirkova, N., 2019. *Croatian Association of Researchers in Children's Literature*, Zagreb, Croatia.
- Gulliksen, M. S., 2016. *FormAkademisk*, Oslo, Norway, 9 (1)
- Perin, M., et al., 2019. *Brazilian Journal of Information Design*, 16.

COMPETITIONS

[“Academia is an Iceberg”](#) | 2011

Juried competition – *Data in Sight San Francisco*, June 2011. First prize in the category “best fusion of multiple data sets.” Sponsored by Swissnex, the Netherlands Office for Science and Technology, and Creative Commons. The interactive double bar chart depicted a sample of 500 Mendeley biology authors, and showed that few authors (the tip of the iceberg) had an account on LinkedIn. Other team members: Giorgio Caviglia, Milan Polytechnic, visiting scholar at Stanford University; William Gunn, biologists and researcher at Mendeley. View interactive visualization: [datainsight](#).

GRANTS & AWARDS

[SF State – Sabbatical year](#) | 2017–2018

Visiting scholar, Delft University of Technology (TU Delft), The Netherlands. Conducted research on bio-inspired design and transformable origami structures (metamaterials); hosted by the bio-mechanical engineering department (BITE Group, minimally invasive surgical instrumentation). Advised and mentored graduate students and gave public lectures and workshops. Ongoing research.

[SF State – Development of Research and Creativity Award \(DRC\)](#) | 2018–2019

Received \$13,917 from SFSU’s Research and Scholarly Activity Fund, to research and design new metamaterials. Also called architected materials, metamaterials employ novel macro- or microscopic geometries with unusual physical properties. Some of their applications include medical devices and aerospace engineering. P. Trogu, P.I., S. Linn, collaborator. Ongoing research.

CURRICULAR INNOVATIONS

[Drawing, sketching, and instructional technology](#) | 2009–2021

Since 2009, I expanded the traditional drawing and visualization techniques to include rotational geometry, geometric folding techniques, and model making. The Drafting & Sketching for Design course (DES 320), and more recently the Introduction to Drawing for Designers course (DES 220) are supported by more than 85 online videos. One of the core units in the drawing class, the cube section, is related to my research on rotational geometry and metamaterials.

[Letterpress Printing](#) | 2016–2019

Resurrected the letterpress class after a 15-year hiatus. The class, open to all students, satisfies the arts segment for general education (GE) at SFSU. The class teaches the centuries-old method of letterpress: setting metal type by hand, dating to Gutenberg’s invention of printing in 1455 in Germany.

[Information design and data visualization](#) | 2010–2021

Hired in the School of Design to develop an information design and data visualization curriculum. The information design class has been a laboratory for testing various principles of psychology of perception and cognition (working memory). These observations have been recorded in journal articles and conference presentations.

UNIVERSITY LECTURES, WORKSHOPS, AND OUTREACH

[Design of New Metamaterials. SF State Research And Scholarly Activity Symposium](#) | 2019

Public lecture: A progress report on research on metamaterials (advanced materials) funded by a SF State DRC grant. Transformable physical models were demonstrated (not shown in slides above but [viewable here](#)). Faculty Commons (Library 286) October 25, 2019.

[Data? Ta-da! Tips for Better Data Visualization Workshop](#) | 2019

Data Science Workshop sponsored by the LCA College Undergraduate Research Experience (CURE) Committee and Extraordinary Ideas Program, promoting undergraduate research, a high impact practice. The two-hour

workshop attracted students from Anthropology, English, International Relations, and History, and others. Half-hour introduction followed by practical exercises, including using R software.

Frank V. de Bellis Collection Keepsake – Leonardo da Vinci Society of San Francisco | **2016**
Composed and printed musical program keepsake “Una Riunione di Amici: Music of the Italian Baroque Masters” in collaboration with Leonardo da Vinci Society of San Francisco. The keepsake was composed by the students of the Modern Letterpress class and was printed by the instructor Pino Trogu on a Challenge 15MP Proofing Press. 150 copies printed November 2016 at [Stanza 153 Press](#), San Francisco State University.

Math and geometry workshop, SF State Math Summer camp | **2015**
Math Circle Math Camp. Conducted a workshop for 30 elementary school students, on the connections between math, geometry and art. Used materials from my Drafting & Sketching class. Hands-on participation of the students, using paper, clay, steel wire, and other clay modeling tools. June 18, 2015.

CSU-sponsored QOLT participant (hybrid class) | **2013**
(Quality Online Learning and Teaching showcase). With my DAI 320 Drafting and Sketching class, one of thirty-five SF State faculty members participating in the program in Spring 2013, showing how “...hybrid classes that use the iLearn technology can enhance classroom learning.”

iLearn test pilot class – Next iLearn | **2012**
My DAI 523 Information Design was one of only eight participating classes in Fall 2012, campus-wide at San Francisco State, to use the pilot test “nextiLearn”, which was released in Spring 2013. The class tested the system, providing feedback and suggesting improvements prior to campus-wide deployment.

Annual School of Design (formerly Design and Industry) student exhibition | **2009–2012**
Coordination of the Annual Student Design Exhibition, designed and produced by the 524 Exhibit Design class. 5,000-square-foot exhibit showcasing the work of more than 300 DAI students. The class ideates, designs, and produces the show.

VISITING SCHOLAR, DELFT UNIVERSITY OF TECHNOLOGY (TU DELFT, NL)

Guest faculty: Me411095: Bio-Inspired Design course. DU Delft | **2017**
(TU Delft) the Netherlands. Contributed lectures, workshops, and advised and mentored graduate bio-mechanical engineering students. Advisor on final project: scientific paper on A Bio-Inspired Bounce-Controlled Traffic Sign for Car Trouble, based on observation of [vertical jumping motion of loquat seed](#). Fall 2017.

Bioclamping: Aristotle’s Lantern Giorgio Scarpa’s Model of the Masticatory Apparatus of the Sea Urchin. | **2017**
Public lecture: Me411095: Bio-Inspired Design, TU Delft, NL, October 20, 2017.

Bio-inspired models of rotational geometry | **2017** Public seminar: Demonstrations of origami-like transformable chains of prismatic, pyramidal, and other convex/concave modules. TU Delft, NL, December 2, 2017.

YOUTUBE INSTRUCTIONAL VIDEOS

YouTube Channel: 150 videos; 2.34K subscribers, as of 10/20/2021.
575K views; 35K watch hours, since 2007. <https://www.youtube.com/user/pinotrogu>

Selected playlists:

[Drawing](#): Drafting and Sketching. 63 videos | **2021**

[Information Design](#): Data Visualization. 33 videos | **2021**

[Rapid Visualization](#): Industrial Design Sketching. 25 videos | **2021**

EXHIBIT DESIGN

[Patient No More: People with Disabilities Securing Civil Rights](#) | 2013–2015

Paul K. Longmore Institute on Disability, San Francisco State University. Art director and coordinator for a major exhibit on disability. The exhibit focused on an overlooked moment in U.S. history when people with disabilities occupied a government building in San Francisco to demand their rights. Known as the “Section 504 Sit-In,” the protest profoundly changed the lives of people with and without disabilities, and paved the way for the Americans with Disabilities Act (ADA) in 1990. I coordinated the planning and design of the exhibit, organized tasks between researcher, curators, exhibit designers, and SF State student interns.

HIGH SCHOOL MENTOR

[FIRST Technical mentor](#), Lowell High School, San Francisco | 2013

Volunteered one day a week in Spring 2013 with the CardinalBotics 4159 team, as a technical mentor to the students participating in the 2013 *FIRST* Robotics Competition. [FIRST](#) (For Inspiration and Recognition of Science and Technology) is an international high school robotics competition.

WORK PRIOR TO SF STATE

San José State University | 2006–07

School of Art and Design. Introduction to graphic design class: I taught basic progression from drawing to color and typography with final production of a poster. In a digital applications methodology class, students researched the topic of [digital-analog](#), the genealogy of design objects, and the typography of poetry. Other classes taught included Graphic Design 2 and Typography 1.

GrafCo, San Francisco. Owner | 1995–2005

GrafCo provided graphic design, exhibition, and web design to private and public enterprises in the Bay Area and out of state, including: traveling exhibit for the Mineral Resources Program of the United States Geological Survey (USGS); *Neighbors & Neighborhoods*, an exhibit for the San Francisco Mayor’s Office of Housing; Logo and collateral materials for the [Core Knowledge foundation](#), a non-profit devoted to education and curriculum reform; Logo and identity for landscape architecture firms and local community groups: Arcadia Garden Architecture, Pioneer Park at Coit Tower, Friends of the Urban Forest; recycling exhibit for the [South San Francisco Recycling Center](#). In community outreach, GrafCo was involved in art workshops for local elementary school children, working with photography, painting, and light projections.

West Office Exhibition Design, San Francisco | 1994–1995

Exhibit design and graphics for the California Museum of Science and Industry, Los Angeles. Developed concept, logo, and graphic systems for [science exhibits on chemistry, electricity, and special effects](#). Exhibit graphics for the Washington State History Museum, Tacoma, Washington. Managed design team in the production of a graphics program that included hundreds of graphic components.

Melanie Doherty Design, San Francisco | 1994

Developed environmental signage and maps for the San Francisco Museum of Modern Art and other public buildings in the bay area.

The Burdick Group, San Francisco | 1992–1993

Exhibit graphics for [Evoluon, Philips Electronics competence center](#) in Eindhoven, The Netherlands. Managed the graphic production for various areas of the exhibit, including the production of diagrams, storylines and technical illustrations.

Academy of Arts, Architecture and Design, Prague, Czech Republic | 1991

Wrote, filmed and produced [ARKI](#), a 3-minute, 35mm color film about computer modeling and simulation. In the story, a child’s quest to design the perfect coat is finally realized with the help of lego-like electronic modules. The film is considered by some to be the earliest example of wearable computing.

Virginia Commonwealth University (VCU), Richmond, Virginia | 1989–1990

Assistant professor of graphic design. [Freshman foundations classes](#), 2- and 3-D design fundamentals, Typography I and II, Graphic Design I. Advanced courses in color and design criticism were conducted with students in the graduate program.

GrafCo3, Milan, Italy | 1988

With Mauro Panzeri; book and [publication design for Alessi](#) and other Italian manufacturers. Book design for Edizioni Ambiente, a publisher specialized in environmental issues. Book design for the publisher Sonda Edizioni; designed first catalog and exhibit booth at international book fair in Turin. Storyboards for exhibit *One Hundred Years of Industry* at the Milan Triennale.

Robert Gersin Associates, New York | 1986–1987

Corporate identity for the Sears corporation, managing the creation of a series of identity manuals on product graphics and printed materials. Production of a new graphics standards manual for the [General Accounting Office \(GAO\)](#). In cooperation with the Government Printing Office, the manual enabled the agency to reduce paper waste and implement a consistent graphic system. Tasks included the evaluation of hundreds of government publications and the design of new formats for books, brochures, and official reports.