George Legrady Studio

Building on a conceptual approach to still photography, George Legrady acquired computational skills in the studio of the Artificial Intelligence artist Harold Cohen in the early 1980s on a DEC PDP-11 mainframe computer. Legrady is considered a pioneer in the field for integrating computation with photographic imaging, semiotics, and Information Theory in the mid-1980s when the first image processing analog-to-digital raster image capture technology became available (the AT&T Targa Truevision graphics hardware).

George Legrady has pursued an experimental and research-oriented approach integrating image classification with metadata in databases (mid-1970s), semiotics and semantic analysis (1980s), Information Theory (1980s), interactive multi-linear narrative (1990s), natural language processing (1990s), motion-sensing (1990s), artificial neural-networks (2000s), mathematical particle modeling (2000s), data collection, analysis and visualizations (2000s), physics particle behavior (2000s), machine-learning (2014), and other algorithmic processes based on project-specific demands.

Throughout his 45-year artistic career, Legrady has presented his work initially within the alternative gallery network, moving on to museum installations with works featured across a broad interdisciplinary context, intersecting fine arts photography, digital media arts festivals, and contemporary art in North America, Europe, and Asia. His five most significant projects include the “James Bay Cree Photography Documentary” (1973), “An Anecdoted Archive from the Cold War” (1992), “Pockets Full of Memories” (2001), “Making Visible the Invisible” (2006), “We Are Stardust” (2008).

Major Art Projects

1973 *James Bay Indigenous Cree Photographic Documentary*
https://hyperallergic.com/326655/photographs-cree-community-manmade-flood-washed-away/

1975 *Catalog of Found Objects*, a work that explores **semantic classification**. First exhibited in “West Coast Conceptual Photographers”, curated by Lew Thomas for La Mamelle, San Francisco (1976) https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/fo/found_obj.html

1976 *Floating Objects*, A series focused on **virtual space simulation** through analog photography. Exh. At the National Gallery of Canada (1998) https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/Flo/flo_obj.html.

1981 *Still Lives*, large format photographic panels that explore the **syntactic and semantic** nature of the still photograph. Exh. At P.S.1, Long Island City (1981), musée d’art contemporain, Montreal (1984), La Jolla Museum of Contemporary Art (1984) https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/co_cu/corp_culture.html

1980 *Artificial Intelligence*, a commissioned publication project for the art journal Parachute 22, Montreal, https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/parachute/para22sm.pdf

1985 *China-in-Transition*, A photographic documentary of hand-painted China billboards, A study of ideological iconography at a moment of transition. Exhibited at the Stiftung Ahlers Pro Arte Museum, Hanover, Germany (2008) https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/ch/china.html

1987 *Noise-to-Signal*, A series of **born-digital** still images created through software that integrates **Information Theory’s signal-noise, Brownian random noise, Barthian semiotics, and Baudrillard’s simulacra** to explore the visual syntax of the staging television news. First exhibited at the USC Atelier, Santa Monica (1987) also in “Digital Photography”, SF Cameraworks (1988), and “Photography of Invention”, Museum of American Art, Washington DC (1989) https://www.mat.ucsb.edu/g.legrady/glWeb/publications/p/1980sJetgraphixOPT.pdf

1992 *Equivalents II*, an interactive installation and early artwork that introduced **natural language processing**, positioning digital algorithmic design in relation to Alfred Stieglitz's 1922 photographic series Equivalents. The custom software used a **2D fractal mid-point synthesis algorithm** to create organic abstract images shaped by text input by the user. All phrases contributed by users remained with the work to function as reference for the feedback process when words in the user's phrase were compared to those in the data pool. Exhibited in "Iterations" at the ICP, NYC (1994), Ansel Adams Center SF (1996), and in the travelling exhibition "Fotografie nach der Fotografie", by the Siemens Kultur Programm (1995-1997) Phttps://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/equivalents/Equi.html

1992 *An Anecdoted Archive from the Cold War*, A **multi-linear database**, over 60 stories and objects in the artist's possession are classified according to the floorplan of the former Hungarian Communist propaganda museum in Budapest. An installation work and CD-ROM publication that addresses the archive as multi-linear narrative and the intersection of personal and official documents in Stalinist Hungary. Commissioned by the Yerba Buena Center, SF (1992). Widely exhibited internationally including Palais des beaux-arts Brussels, with Chris Marker, https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/anecdote/Anecdote.html

1995 *the [clearing],* A hunting image representing the Bosnian war crisis is subdivided into sections each holding clusters of news topics of the war during the 1993-1994 period based on Western news clippings. Viewers uncover the texts by rolling over the image. Exh. At New Langton Arts, SF (1994). https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/clearing/clearing.html

1996 *Slippery Traces*, Partially produced at the ZKM, a multi-linear narrative where viewers navigate through 25 theme-specific chapters of a database of 250 postcards based on image-details as a way to weave a sequenced narrative of 20th Century global history. Published in Artintact 3 by ZKM. Exh. in "Deep Storage" (Siemens) Haus der Kunst, Munich; P.S.1; Kunstforum, Berlin; "Future Cinema", ZKM Karlsruhe (2002). https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/slippery/Slippery.html

2001 *Pockets Full of Memories*, a data collection installation commissioned by the Centre Pompidou consisting of contributed images of objects by the public that are continuously organized by the unsupervised Kohonen **artificial neural-network algorithm** so that all objects are spatially placed between each other based on their semantic metadata, https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/pfom2/pfom2.html

2003 *Blink* and other algorithmically defined animations based on the **Ising physics mathematical model** of how magnetic particles relate to surrounding particles. Exh. Santa Barbara Museum of Art (2008) Santhttps://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/algo2/algo2.html

2005 *Making Visible the Invisible*, a data visualization at the Seattle Public Library that may be the **longest operational data visualization**. The hourly aggregated checked-outs by library patrons are analyzed and visualized through 4 animations to give a sense of what are the key topics of interests at each hour, https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/k/k.html

2006 *Kinetic Flow*, A permanent commission by the LA Metro Rail visualizing subway riders' demographic information processed by the Ising mathematical model. https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/k/k.html

2007 *Cell Tango*, An interactive installation that features a dynamically growing collection of cellphone images tagged by contributors' metadata to be visually organized by a **bin-packing algorithm**, a **computational complexity theory problem**. Multiple exhibitions including the National Academy of Sciences, Washington DC (2007), and the Poznan Art Biennale, Poland (2010). https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/celltango/cell.html

2008 *We Are Stardust*, Commissioned by the NASA Spitzer Science Center at California Institute of Technology, and the Art Center of Design in Pasadena - two projections retrace with data and a

military grade infrared camera the angle-of-views of the sun orbiting NASA Spitzer telescope through the full sequence of 34,000 observations. Exhibited in Art Center College of Design (2008), Vancouver Winter Olympics (2010), and “Infosphere” at the ZKM, Karlsruhe, Germany. https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/st/stardust.html

2008 *Data Flow*, A data visualization on 3 separate screens in the corporate space of the Corporate Executive Board, dynamically analyses incoming members’ emails to visualize in real-time statistical analyses of the incoming language. Various algorithms such as **bigram analysis** determine the data selection, https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/ceb_/ceb_.html

2009 *Studies in ReTelling*, explores the synthesis of literary form and computer engineering in narrative construction inspired in part by the author Raymond Queneau's multiple retelling of a simple story in *Exercises de Style* to determine how the positioning and scaling of images creates changes in meaning. Two screens continuously re-organize their images and at some point exchange them. Shanghai eArts Beyond (2009) https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/rt/retelling.html

2011 *Refraction*, 24 photographs unwrap through 8 lenticular panels the sequence of events within a cinematic narrative of a formal evening reminiscent of the film *Last Year in Marienbad*. Nature Morte Gallery, Berlin (2012), included in “Stage Presence” San Francisco Museum of Modern Art (2012) https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/re/refraction.html

2011 *Voice of Sisyphus*, A multimedia projection with 4 channel spatialized sound installation in which segments of a black and white image are dynamically sonified in real-time by a computer program which synthesizes image segments and produces sounds resulting in a continuously evolving composition. Exhibited in Chronus Art Center, Shanghai (2015), “Datumsoria”, ZKM, Karlsruhe. https://vimeo.com/239322215

2014 *Swarm Vision*, 3 cameras autonomously scan and analyze the space they are in for visual details of interest. Custom **machine-learning** software provides each camera with a history to compare current views with previous ones. Two large visual projections feature camera performance and images captured featured in 3D virtual space. Exh. Siggraph (2013), Heidelberg Kunstverein (2015) https://www.mat.ucsb.edu/g.legrady/glWeb/Projects/sv/swarmvision.html

2015 *Imagining Macondo*, Interactive installation in which the public contributes photographs of scenes and personalities from Garcia Marquez' One Hundred Years of Solitude. The images are spatially organized by the Kohonen artificial neural-network self-organizing map algorithm. Exh. Bogota International Book Fair (2015) https://www.facebook.com/george.legrady/posts/928893493830249

2015 *Anamorphic Fluid*, A computer-generated animation that simulated a virtual 3D space in which a collection of images float until disrupted by the movement of spectators' captured through motion-sensing. Exh. Dongdaemun Museum, Seoul (2016), Currents New media (2017) https://vimeo.com/225051559

2018 *Digital Giverny*, Photographs taken at Monet’s Giverny garden are processed by a style transfer algorithm which references industrial rust surface panels, https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/dg/digitalGiverny.pdf

2018 *Algorithmic Fontainebleau*, Photographs of the Fontainebleau nature processed by a sinusoidal algorithm used to get detail out of the Shroud of Turin, https://www.mat.ucsb.edu/~g.legrady/glWeb/Projects/fb/shroud.pdf

2020 *Anamorphic-Voronoi*, A series that simulate organization of visual elements within a virtual 3D space, https://www.mat.ucsb.edu/~g.legrady/glWeb/projects.html

Awards & Grants

2021 Canada Council for the Arts Explore & Create grant
2019 Graham Foundation Advanced Studies in Fine Arts
2016 John Simon Guggenheim Foundation Fellowship
2011/15 Robert W. Deutsch Foundation Fellowship
2012 National Science Foundation Arctic Social Science
2011 National Science Foundation Intelligence & Information Systems Grant
2003/05 Computer Integrated Media Awards from the Canada Council
2003 Honorable mention, Prix Ars Electronica
2002 Creative Capital Foundation (Emerging Trends)
2000 Daniel Langlois Foundation for the Arts, Science and Technology
1996 New Voices-New Vision, Interval Research Corporation, The Voyager Co, Wired Magazine
1996 Computer Integrated media Awards from the Canada Council
1996 Honorable mention, Prix Ars Electronica
1995 Creative Capital Foundation (Emerging Trends)
1995 Artslink, National Endowment for the Arts
1994 National Endowment for the Arts Visual Fellowship
1989 Canada Council Paris Studio
1988 Honorable mention, Prix Ars Electronica
1972-82 Various Canada Council Arts and Ontario Arts Council Awards

Public Collections

2020 McIntosh Gallery, Western University, London, Ontario
2019 Santa Barbara Museum of Art
2018 Los Angeles County Museum of Art
2015 Centre for Art and Technology, ZKM, Karlsruhe, Germany
2012 San Francisco Museum of Modern Art
2012 21c museum, Cincinnati
2009 Los Angeles County Museum of Art, Vernon Collection Acquisition
2008 D.E.Shaw & Co Consulting, NYC
2008 Corporate Executive Board, Arlington, Virginia (Commission)
2008 Pro Ahlers Arte Foundation, Hanover, Germany
2006 Seattle Public Library (Commission)
2006 Los Angeles Metro Rail Santa Monica/Vermont Station (Commission)
2005 Philbrook Museum of Art, Tulsa
1996 Centre for Art and Technology, ZKM, Karlsruhe, Germany
1992 Centre Georges Pompidou musée d'art moderne, Paris
1990 Canada Council Art Bank, Ottawa
1987 American Museum of Art, Smithsonian Institution, Washington DC
1986 National Galleries of Canada, Ottawa
1984 Musée d'art contemporain, Montreal
1980 Museum London, London, Ontario

Academic Affiliations

George Legrady received the Masters of Fine Arts degree in Photography from the San Francisco Art Institute (1976). He is distinguished professor of digital media in the Media Arts & Technology graduate program at the University of California, Santa Barbara since 2000 where he directs the Experimental Visualization Lab focused on data visualization and computational photography. He has held faculty positions at the Merz Akademie, University

of Design/Art/Media, Stuttgart, Germany (1996-2000); Conceptual Design/Information Arts, San Francisco State University (1989-1997); University of Southern California (1984-1988) the California Institute of the Arts (1982-1984); and the University of Western Ontario (1978-1981), London, Ontario. He was visiting faculty and held visiting research positions at the iCinema Research Centre, University of New South Wales, Sydney, Australia (2018); Diaspora Lab, Institut des mines-telecom, ParisTech, Paris, France (2017-2018); UCLA Digital Media & Design (1998); National Academy of Fine Arts, Budapest (1994); UCLA Art Department, Photography (1983); Nova Scotia College of Art & Design, Halifax, Canada (1979); North Texas State University (1977).

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