Art and technology

have always been fantastic partners in creativity, and our MFA students consistently create great examples around that intersection. We place a strong emphasis on personal exploration by encouraging students to push their preconceived boundaries and embrace early experimentation as a critical part of the iterative process.

   The MFA Computer Arts program emphasizes creativity and a multidisciplinary approach to producing innovative animation, motion graphics and fine art within a collaborative state-of-the-art production environment.

Our goal is to develop artists who will continue to challenge norms, question standards and surprise people long after they leave SVA. Being based in New York City also offers a significantly enhanced cultural experience including music, theater, food, museums and, of course, world-renowned art galleries.

   Our students come from all around the globe, bringing unique cultural perspectives to the creative process. Our combination of small class sizes, working professionals as faculty and guest lecturers, provides in-depth exposure to all areas of animation, motion graphics and fine art.

—Terrence Masson, chair

About the Program

The MFA Computer Arts program at SVA emphasizes creative experimentation and a multidisciplinary approach to making art with computers and emerging technologies. Dedicated to producing digital artists of the highest caliber, the department guides each student in the development of a personal artistic style in a course of study that is individually tailored to meet his or her needs. Students come from around the world to study in this two-year degree program, which has distinguished itself with nine Student Academy Awards.

- Founded in 1986 and with a network of over 1,000 alumni, the SVA MFA Computer Arts Department was the first MFA program in the U.S. to focus on computer art.
- The first-year curriculum strengthens and broadens the student's knowledge and creative approach to digital art in preparation for the thesis year.
- The second year revolves around the thesis process—the completion of a body of creative work, combined with academic research and an artist's statement.
- The first- and second-year academic programs are supplemented by workshops, visiting artists, guest lecturers and internship opportunities.

Graduates of the department are employed by the most prestigious companies and digital studios including: Adobe, Google, Industrial Light & Magic, Pixar, DreamWorks, Disney, Sony Pictures Imageworks, Blue Sky Studios, the Mill, Charlex, MTV and Electronic Arts. Some alumni choose the entrepreneurship of their own businesses. Those who pursue fine art careers exhibit their work in museums and galleries, including: the Solomon R. Guggenheim Museum, P.S.1/MoMA, Whitney Museum of American Art, Los Angeles Museum of Contemporary Art, San Francisco Museum of Modern Art, Smithsonian Museum of American Art, Digital Art Museum, Chelsea Art Museum and Tate Online. By combining creativity with academics, graduates have also published books and scholarly writings, and have chosen teaching careers at prestigious higher education institutions.

Awards have been bestowed upon our students by major international competitions including Student Academy Awards, Adobe Design Achievement Awards, YouTube Awards, Prix Ars Electronica, SIGGRAPH, Electronic Theater and Art Show, Webby Awards, ISEA and the Leonardo Awards for Excellence. Student works have appeared in such acclaimed festivals as Cannes, Tribeca, Sundance, Annecy, Ottawa and New York, among dozens of others.

Kamil Nawratil & Zyia Zhang

Interactive Entrepreneur Connects with a Collaborator in the MFA Program

Kamil Nawratil (left) and Zyia Zhang at Volvox Labs, co-founded by Nawratil in 2012.

Working with clients like Audi, Microsoft and Nike, as well as numerous artists, agencies and brands, Brooklyn-based Volvox Labs designs and fabricates interactive environments. As they explain it, they use cutting-edge technology to create environments that audiences can experience and interact with through sight, sound and touch.

Kamil Nawratil (MFA 2013) cofounded Volvox Labs while still a student in the MFA Computer Arts program. He enrolled in the program with an eye toward studying coding ▶

and also toward finding collaborators for the studio he hoped to start. The focus of his studies changed when he took the 3D for Fine Artists class. "Since then I've been pushing my 3D aesthetic, still involved with programming, but with less emphasis on the code and more on art," says Nawratil.

He found a collaborator in Zyia Zhang (MFA 2013), who now runs the digital fabrication shop at Volvox Labs, making kinetic installations. She studied digital art as an undergraduate and came to the MFA Computer Arts program to focus on video art and fine-art direction. Once she was in the MFA program, she was introduced to digital fabrication and her focus turned to installation.
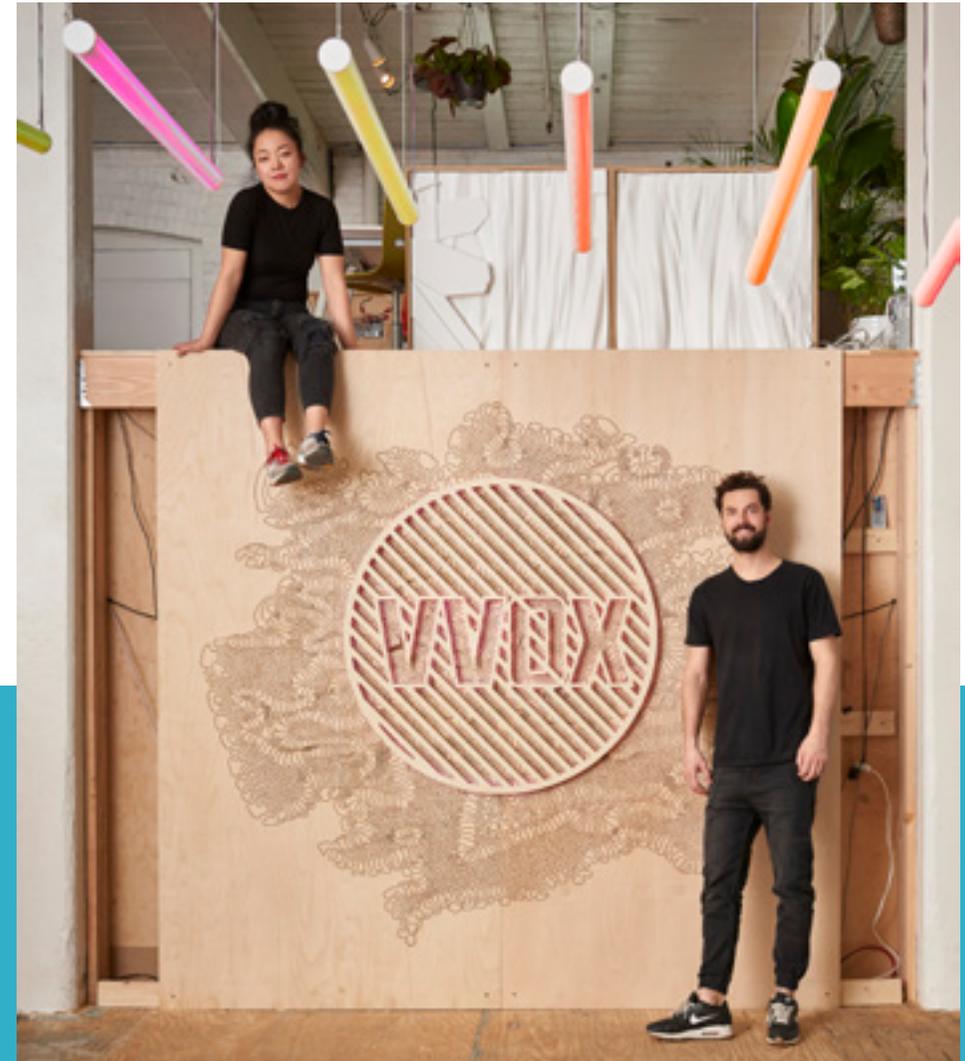
Nawratil and Zhang ended up working together in their installation thesis group. "During school when Volvox started picking up, I always tried to involve physical computing and digital fabrication into anything we proposed," Nawratil explains. "Naturally I'd always reach out to Zyia to work with us as she was a killer solder artist and a very hard worker." Zhang says of their relationship, "I admire Kamil's aesthetic perspective and creative ideas. And we both like to use new technology methods to bring audiences an immersive multisensory experience. It's like a huge combination of what we are each good at."

Like the Computer Arts program itself, Volvox Labs focuses on both commercial and artistic work. The balance between the two has been changing. Nawratil explains that when he started the studio, "Most of the time we were told our style and aesthetic was way too artsy, abstract and not fitting the 'brand' image." He decided to develop work for the music festival audience, which was very open to the 3D medium. "Now our clients in a sense need this artsy image to be seen as cool and progressive … allowing us to create visual and installation art as part of their campaigns." And while their clients often have a vision for the work Volvox Labs will do, the studio is given artistic license about 60 to 70 percent of the time, according to Nawratil.

"This lets us create work we dream of, utilizing technology that is new and exciting, all within our particular style." The level of artistic license Volvox Labs gets can vary widely, with some clients, often artists and performers, looking for the embodiment of their own vision, and still others coming to the studio to essentially hire developers to bring their projects to life. Nawratil likes this variety: "All of this is extremely exciting as each project brings something new to learn and explore."

What can we look forward to seeing from Volvox Labs in the near future? Nawratil responds, "We have a few very interesting things in the pipeline. I don't want to jinx anything, but stay put for human-machine communication, robots and lots of laser!"

Volvox Labs designs, programs and fabricates interactive environments for public spaces.

Curriculum/ Sample Program

The MFA Computer Arts program is multidisciplinary and features three areas of concentration: animation, motion graphics and fine art.

Animation

FIRST YEAR/FALL	CREDITS
3D Modeling and Animation	3
Animation Culture	3
Computer Systems I	3
Digital Art Seminar I	0
Narrative and Visual Storytelling	3
Programming for Animators	3

FIRST YEAR/SPRING	
Advanced 3D Techniques	3
Advanced Modeling and Rigging Concepts	3
Digital Art Seminar II	0
Digital Storyboarding	3
Technical Direction	3
Theory, Criticism and History of Time-Based Media	3

SECOND YEAR/FALL	
Character Animation	3
Dynamics and Particle Systems	3
Production Issues: Animation I	3
Thesis I	3
Thesis Research and Writing I	3

SECOND YEAR/SPRING	
Compositing	3
Production Issues: Animation II	3
Seminar in Musical Choices	3
Thesis II	3
Thesis Research and Writing II	3

Motion Graphics

FIRST YEAR/FALL	CREDITS
Computer Systems I	3
Digital Art Seminar I	0
Ecstasy and Apocalypse	3
Motion Graphics I	3
Video Production: From Concept to Completion	3
Web Programming I	3

FIRST YEAR/SPRING	
Digital Art Seminar II	0
Motion Graphics II	3
Sound Workshop I	3
Theory, Criticism and History of Time-Based Media	3
Video Projects	3
Web Programming II	3

SECOND YEAR/FALL	
Motion Graphics: Theory and Design	3
New Forms in Media	3
Production Issues: Motion Graphics I	3
Thesis I	3
Thesis Research and Writing I	3

SECOND YEAR/SPRING	
3D for Fine Artists	3
Compositing	3
Production Issues: Motion Graphics II	3
Thesis II	3
Thesis Research and Writing II	3

Fine Art

Pasakorn Nontananandh, *Collective of Time Being*, 2018.

Course Offerings

This is a sample of our recent course listings. For our full curriculum, please visit: sva.edu/mfaca/curriculum.

3D DESIGN AND FABRICATION I & II

In these courses, students will examine several methods of virtual-to-digital output. You will cover the software programs needed to successfully translate creative ideas into a file format that will be used for printing and cutting, or to machine-build a project. Applications include SolidWorks, Rhino, Modo, SketchUp, Sculptris, Adobe Photoshop and Illustrator, Geomagic, Mastercam, VCarve Pro and Cut3D. Weekly assignments will familiarize students with 3D scanning and printing, laser and CNC milling and cutting machines, and other techniques. The works of well-known artists who use these technologies as well as the history of these types of artistic production will be discussed. After mastering the basics of digital and mechanical methods of making art, students will begin to work on advanced projects. Class time will include discussions on the evolving aesthetics of this type of work. Students will produce several projects during the course of the semester, or may use this class as an adjunct for fabricating their thesis projects.

ADVANCED MODELING AND RIGGING CONCEPTS

Creating animated characters is one of the most challenging aspects of modern cinema. Students will learn how to create 3D characters from design to modeling and setup through the development of a character pipeline. Considerations in character design, how to incorporate anatomy to improve character workability and how to develop a flexible nonlinear workflow will be covered. Modeling issues such as geometry types, topology and efficiency will also be explored. Rigging topics include kinematics, expression and binary nodes, joint placement and orientations, and binding and deforming skin geometry. By the end of the course, students will have created a character they can easily animate.

CHARACTER ANIMATION

This course provides students with a workshop setting in which to deepen their understanding of professional practice and solve complex animation problems. It will focus on techniques such as forward and inverse kinematics, lip-sync and facial expressions, model deformation (morphing), animating lights and camera movement and rotoscoping. Acting techniques will be practiced so that students can better understand how to convey fluidity of movement and expression of emotion in animated characters. The course will be divided into lectures, demonstrations, tutorials, in-class exercises and critiques.

MOTION GRAPHICS I & II

Encompassing drawing, two- and three-dimensional animation, video, stop motion, photography and typographic elements, motion graphics extend beyond the commonly used methods of frame-by-frame animation and live action and create a conglomeration of multiple visual styles. Motion graphics can be used to creatively go beyond the rules of representation, thus augmenting the various ways that media artists can delve into their imaginations and express unique visual and aural works. While the primary software for these courses are Adobe After Effects and Cinema 4D, students are strongly encouraged to explore the creative software available to them, as well as experiment with traditional media. Project critiques will be given to develop an informed sense of refined creative expression. Advanced techniques relating to combining 2D and 3D animation, live action and stop motion will be explored in depth. Course work will be complemented by guest lecturers and workshops given by industry professionals. Students will complete the course with a reel that showcases both their creativity and knowledge of the software.

CREATIVE PROGRAMMING FOR ARTISTS I & II

These courses are intended for students who have no prior exposure to programming and who want to build their own tools to create digital art. We will take a close look at the techniques used to program simple manipulations of video and sound works, and control these with a broad range of external controllers that are commercially available, as well as with simple camera and motion-tracking techniques. The course will consist of lectures and presentations, with a short assignment after each session. Software and hardware include: Max/MSP/Jitter and the Processing language tool set; Arduino, iCube and other I/O devices; Korg Nano, QuNeo and MIDI-based controllers; Kinect, Leap and other 3D interfaces; and iPhone, iPad and smartphone apps that are able to control the computer.

THEORY, CRITICISM AND HISTORY OF TIME-BASED MEDIA

As the first time-based medium, film quickly became a primary means of cultural expression and an icon of popular culture. Early works by Thomas Edison included live action, stop motion and animation, laying the groundwork for digital video, motion graphics and computer animation. Although digital projection, 3D and web-based technologies have begun to supersede the film medium, its history, including video and animation, provides a wellspring of ideas and practices that demand theoretical and critical analysis. This course will address the vocabulary, grammar and syntax of experimental and mainstream film language, while examining and analyzing basic film constructs, genres and forms. Focusing on these issues from an international perspective, students will explore time-based media through the works of theorists, critics and practitioners. Reading and writing assignments will be complemented by student presentations, guest lecturers and discussion.

VIDEO PRODUCTION: FROM CONCEPT TO COMPLETION

Applying professional video production workflow methods to each student's creative work is the focus of this course. Through demonstrations, assignments and discussions, we will investigate setting up a video shoot, cinematography, camera functionality, lighting, color correction, audio recording and editing. The course will cover video production both in the studio and on location. Assignments address aesthetic and technical issues, and how to troubleshoot throughout the production process.

NARRATIVE AND VISUAL STORYTELLING

This course will study the structural elements underlying animated entertainment, both traditional and experimental narratives. Story structures will be analyzed to discover what content can be conveyed within 30 seconds, a few minutes or longer in art and entertainment. We will focus on the key elements of storytelling, including the development of concepts, such as the central dramatic question, inciting incident, idiosyncratic characters and spaces, conflicts and needs, mounting tension, reversals and resolution. Visual language will be addressed by gaining a familiarity with camera shots, movements, angles and placement. Through short assignments, students will develop original scripts, concept sketches, storyboards and animatics. The basics of previsualization will be covered. An examination of key works in the field is included.

VIRTUAL REALITY STORYTELLING

In this course students will examine the fundamentals of cinematography and storytelling to bring them into VR/AR environments. We will address such elements as storyboarding, lighting cues, camera framing, sound effects and music. Students will begin with basic real-time production pipeline methods using Unity, and will complete the course with a fully realized VR/AR project.

Notable Alumni

Ye Won Cho
Ratatouille, Inside Out, Finding Dory

Yong Duk Jhun
Kung Fu Panda, Shrek, Forever After, The Croods

Nancy Kato
WALL-E, Finding Nemo, Up

Erwin Redl
Whitney Museum of American Art, Bitforms Gallery, National Art Museum of China

Carlos Saldanha
Ice Age: Dawn of the Dinosaurs, Ice Age: The Meltdown, Rio

John F. Simon Jr.
The Museum of Modern Art, Solomon R. Guggenheim Museum, Whitney Museum of American Art, Los Angeles County Museum of Art

> " I realized that combining multiple skills together to form unified, multidisciplinary projects is how I want and need to approach my work. The curriculum at SVA allowed me to explore and tailor my education toward multiple interests by picking a variety of completely unrelated classes."

—Kamil Nawratil, MFA 2013

Faculty

To learn more about the faculty members and to read their biographies visit: sva.edu/mfaca/faculty.

Terrence Masson
chair

Daniel Abramovich
illustrator, graphic artist, printmaker: stereoscopic supervisor, Blue Sky Studios

Benton C. Bainbridge
visual artist

Juan Beltré
motion graphics designer, animator

John Benton
narrative designer in immersive technology; founder, Love8; producer, prgrm.org

Anney Bonney
visual artist

Kun-I Chang
creative director, visual artist

Meng Chih Chiang
creative director, Mengdom Experimental Design Lab

Terry Dame
composer, sound designer, instrument inventor

Andy Deck
media artist; co-founder, Transnational Temps

Jon Dieringer
technical director, Electronics Arts Intermix

Russ Gautier
art director, Perception

Thyrza Nichols Goodeve
critic, writer

Edgar David Grana
composer, collaborator

Jeffrey W. Hagerman
director of photography, on set colorist, digital imaging technician

In Pyo Hong
computer graphics animator

Robert Kohr
associate animation director, Nickelodeon On Air

Russet Lederman
digital artist, curator

David B. Mattingly
matte artist, illustrator

Justin Maynard
technical director

Adam Meyers
producer

Nikita Mikros
game developer; chief executive officer, Tiny Mantis Entertainment

Hsiang Chin Moe
filmmaker, artist, curator

Luis Rodrigo Navarro
new media artist

Alex Noyes
sound designer; sound editor; re-recording mixer; owner, ReSound Post

Steve Rittler
animator, illustrator

Matt Roach
senior effects technical director

Federico Muelas Romero
new media artist

Trilby Schreiber
designer, illustrator, writer, producer

Rich Shupe
founder, president, FMA, New York

Amresh Sinha
filmmaker

David Sloss
visual artist, animator

Rory Solomon
educator, software engineer

Hans Tammen
deputy director, Harvestworks Digital Media Arts Center

Jose Vargas
visual artist

Angelica Vergel
media researcher, visual artist

Ben Voldman
illustrator, animator

Ada Whitney
co-founder, creative director, Beehive

Lecturers, Mentors & Thesis Advisors

Tamas Banovich
curator, owner, Postmasters Gallery

John Canemaker
filmmaker, writer, animator, animation historian

Sarah Cook
new media curator; co-founder, CRUMB

Lauren Cornell
curator, New Museum of Contemporary Art; executive director, Rhizome

Pete Docter
film director, animator, screenwriter, producer

Toni Dove
virtual reality, installation and performance artist

Ken Goldberg
artist, writer, inventor, researcher

Golan Levin
artist, researcher

Barbara London
curator

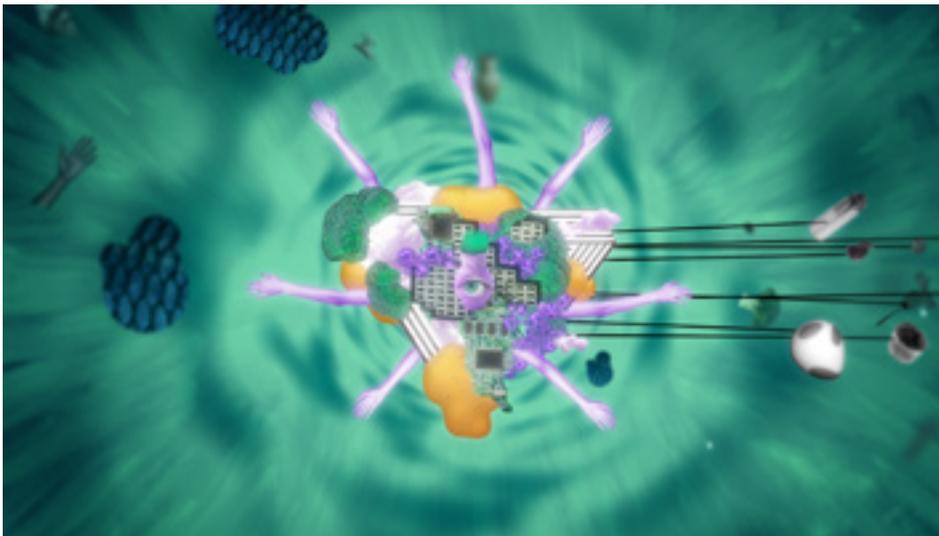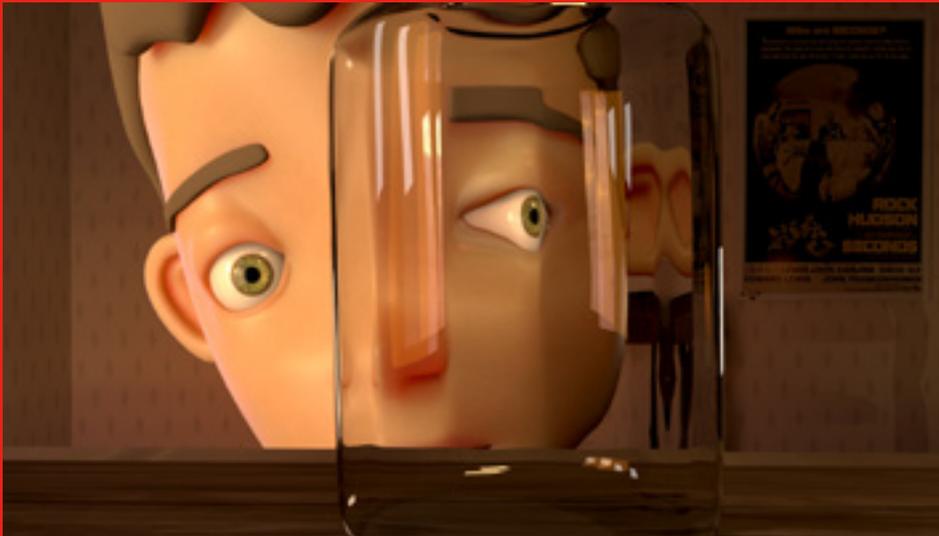**Paul Miller (a.k.a. DJ Spooky)**
DJ, artist, writer

Carol Parkinson
executive director, Harvestworks

Jonah Peretti
viral media artist; founder, Buzzfeed; co-founder, Huffington Post

Bill Plympton
animator, graphic designer, cartoonist

Rich Quade
supervising animator, Pixar

Application Process

APPLICATION REQUIREMENTS

For detailed instructions, visit: sva.edu/grad/howtoapply
- Online Application and $80 Application Fee: sva.edu/apply
- Statement of Intent/Personal Statement
- Résumé
- Letters of Recommendation
- Official College Transcript

Some applicants may be required to submit the following:
- Proof of English Proficiency
- Copy of Permanent Residency Card
- Declaration of Finances
- Verification of Finances
- Foreign Transcript Evaluation

DEPARTMENTAL REQUIREMENTS

For specific guidelines about these requirements, visit: sva.edu/grad/deptreq
- Online Portfolio
- 2–3 Minute Sample Reel
- 1 Minute Personal Introduction Video
- 20 High-Quality Digital Images

DEADLINES

For information on application deadlines, visit: sva.edu/grad/timeline

IMPORTANT LINKS
- FAQ: sva.edu/grad/faq
- International students: sva.edu/grad/intl
- Tuition and fees: sva.edu/tuition
- Visit SVA: sva.edu/grad/visit

CLOCKWISE FROM TOP: Christopher Ramirez, *Necrobia*, 2018; Jingqiu Liu, *#BulbInMouth*, 2018; Tynan Humphrey, *Digital Decay*, 2018; Yen Juen Lee, *I Loaf You*, 2018.

We encourage applicants to visit our department. Contact us directly to schedule a department tour or sign up to attend an Information Session. For more information and to register, go to: sva.edu/grad/visit.

If you have any questions about the application process, contact Graduate Admissions at 212.592.2107 or email: gradadmissions@sva.edu.

Terrence Masson, chair
Bruce Wands, chair emeritus
Hsiang Chin Moe, director of operations
Angelica Vergel, assistant to the chair
India Lombardi-Bello, administrative assistant
Lotte Marie Allen, project coordinator
Jose Vargas, senior systems administrator
Milos Paripovic, systems administrator
Darren Santa Maria, AV systems administrator

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> " SVA turns out the best students because they have the most prepared skill set. That's why I recruit from there today."

—Myung Lee, MFA 2004

ACCREDITATION

The School of Visual Arts has been authorized by the New York State Board of Regents (www.highered.nysed.gov) to confer the degree of Bachelor of Fine Arts on graduates of programs in Advertising; Animation; Cartooning; Computer Art, Computer Animation and Visual Effects; Design; Film; Fine Arts; Illustration; Interior Design; Photography and Video; Visual and Critical Studies; and to confer the degree of Master of Arts on graduates of the programs in Critical Theory and the Arts; Curatorial Practice; Design Research, Writing and Criticism; and to confer the degree of Master of Arts in Teaching on graduates of the program in Art Education; and to confer the degree of Master of Fine Arts on graduates of programs in Art Practice; Art Writing; Computer Arts; Design; Design for Social Innovation; Fine Arts; Illustration as Visual Essay; Interaction Design; Photography, Video and Related Media; Products of Design; Social Documentary Film; Visual Narrative; and to confer the degree of Master of Professional Studies on graduates of the programs in Art Therapy; Branding; Digital Photography; Directing; Fashion Photography. Data required by the U.S. Department of Education on "Gainful Employment" for each of the above programs may be found on each individual program page at sva.edu/ge.

The School of Visual Arts is accredited by the Middle States Commission on Higher Education (msche.org), 3624 Market Street, Philadelphia, PA 19104, 267.284.5000. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council on Higher Education Accreditation.

The School of Visual Arts is an accredited institutional member of the National Association of Schools of Art and Design (nasad.arts-accredit.org).

The Interior Design program leading to the Bachelor of Fine Arts in Interior Design is accredited by the Council for Interior Design Accreditation (accredit-id.org), 206 Grandville Avenue, Suite 305, Grand Rapids, MI, 49503-4014.

The Master of Arts in Teaching in Art Education program is accredited by the Council for the Accreditation of Educator Preparation (CAEP).

The Master of Professional Studies in Art Therapy degree program is approved by the American Art Therapy Association, Inc., and as such meets the Education Standards of the art therapy profession.

CREDITS

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