

Arts, Science + Culture Initiative: 10 Years of Dialogue, Research, and Experimentation



ARTS
SCIENCE +
CULTURE
INITIATIVE

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The Arts, Science + Culture Initiative explores the intersection between artistic production and scientific inquiry, amplifying the University's belief in the transformative power of ideas. By creating distinctive and meaningful trans-disciplinary collaborations and fostering emerging dialogue, the Initiative envisions ways to help shape the cultural landscape and the convergence of new paradigms for seeing and knowing in the 21st century.

We build environments for conversation and experimentation within our institutional setting, where the University community and others can explore a distinctive approach to research, inquiry, and teaching through direct dialogue and interaction. The Initiative's impact emerges from selective programs that inspire the next generation of scholars, arts practitioners, and citizens.



Jen Smoose (Visual Arts)
and Scott Waitukaitis (Physics)
work on their 2012–13 Arts,
Science + Culture collaborative
project *Wishful Permutations*.

UChicago Arts Leaders

David J. Levin

Senior Advisor to the Provost
for Arts. Addie Clark Harding
Professor of Germanic Studies,
Cinema & Media Studies,
Theater & Performance
Studies, and the College
University of Chicago

Bill Michel

Associate Provost and
Executive Director
UChicago Arts and
the Reva and David Logan
Center for the Arts
University of Chicago

With a deep commitment to cross-disciplinary practices, conceptual acuity, and all manner of creativity, the University of Chicago supports a bustling arts community on Chicago's South Side. Here, arts practices and scholarship inform and enrich each other, advancing the University's core commitments to teaching and inquiry and developing deeper cultural networks and richer creative projects. Over the last 10 years, the University has launched a number of new initiatives and programs that support this work, including Arts + Public Life, the Reva and David Logan Center for the Arts, and the Richard and Mary L. Gray Center for Arts and Inquiry. These initiatives and programs have joined academic programs in the College and the Humanities Division, a vibrant and diverse set of student organizations, and renowned professional organizations, including the Court Theatre, the Oriental Institute, and the Smart Museum of Art. In 2010 another dynamic program—the Arts, Science + Culture Initiative—was launched, further testament to the University's belief in the transformative power of ideas.

Over the past 10 years, the Arts Science + Culture Initiative has cultivated important trans-disciplinary conversations, inspired the development of new courses, stimulated novel approaches to exhibitions, spearheaded inventive public programs, and deepened the conversation between artists and scientists on campus and across the city. ASCI has been instrumental

in bringing students and faculty in the physical sciences, biological sciences, and social sciences into a sustained exchange with colleagues across the arts. We are particularly excited by the range of opportunities this exchange has provided to graduate students, enabling them to engage, complicate, and enrich one another's practices, fostering meaningful collaborations and impacting future work.

Given the vitality and dynamism of the last 10 years, we are excited to see where ASCI will head next. But we also want to mark the occasion by acknowledging the many faculty, students, and staff who have contributed to the initiative's success and in particular to thank Julie Marie Lemon, Curator and Director of ASCI, for her vision in bringing the initiative to life and for her remarkable stewardship over the last decade. The work highlighted in this publication is a testament to her capacity to create platforms that allow our students and colleagues to explore and experiment in ways that will resonate at the University and beyond for years to come.

**DIALOGUE /
RESEARCH /
EXPERIMENTATION**

Julie Marie Lemon
Director and Curator

What can we learn and what is to be gained by bringing the disparate fields of the arts, sciences, and culture into dialogue? Will examining the spaces between disciplines yield new ways of thinking? How does the exchange of methodologies, tools, specific questions, and curiosities advance our thinking? In other words, if we assemble “fragments” from disparate disciplines, will “patches of liveliness” bloom, as anthropologist Anna L. Tsing advocates? These are the questions the Arts, Science + Culture Initiative (ASCI) sought to explore when it launched in 2010, realizing a vision to set out into new territory by creating a platform for the interplay of arts, science, and culture at the University of Chicago. For a decade, the Initiative has facilitated original conversations between arts practices and humanistic and scientific fields of inquiry to incubate ideas among

faculty, students, our South Side neighbors, and throughout the city. During this 10th year, we take a moment to simultaneously look back at what has been accomplished and to chart our continued success.

This publication provides a glimpse into the range of trans-disciplinary conversations, projects, course development, exhibitions, symposia, conferences, visiting artists and scholars, as well as several cross-disciplinary partnerships that have emerged. The Arts, Science + Culture Initiative embodies UChicago’s tradition of “integrated and borderless inquiry.” All of ASCI’s programs are designed to ignite conversations, exchange ideas, and critically engage a broad spectrum of disciplines, while remaining committed to rigorous inquiry. We strive to build an “ecology of perspectives.” To stimulate this endeavor, we offer

grants, public programs, and other start-up opportunities for students, faculty, and practitioners in the arts, humanities, social sciences, and sciences to work, think, and experiment in proximity to one another within the University of Chicago and beyond.

We have prospered through the leadership and guidance of our esteemed faculty advisors, who have contributed their expertise, ideas, and mentorship, as well as general oversight in the development of a strategic plan. It is with high regard that we thank them for this support and encouragement. Without their guidance we would have not thrived from our initial experimental stage, growing steadily into a model for other interdisciplinary programs, nationally and internationally. Now, in our 10th year, ASCI’s impact has crystallized from its portfolio of experimental co-curricular programs. Through testing, examining, and refining within the University and our arts community, three primary audiences have emerged: graduate students, faculty, and the larger public, each of whom has a dedicated section in this book.

I never imagined the range and depth of questions explored, the willingness of participants to take risks, or the extent to which meaningful networks would develop. To those who have shared in this extraordinary experience with us and contributed to this endeavor, we thank you wholeheartedly. This Initiative remains committed to providing a dynamic and unique platform

to support research and artistic production through transdisciplinary initiatives. As the ASCI moves into the future, we will build on the valuable ideas, experiments, conversations, and public programs our participants have created. We strive to continue to become a space where ideas and practices can emerge to address the urgent demands of our time.

I am grateful to the leaders of the UChicago Arts and the Office of the Provost, Thomas Rosenbaum, Larry Norman, Bill Brown, Larry Zbikowski, David J. Levin, and Bill Michel, who have had the foresight and patience to provide a progressive and experimental environment where the arts are nourished and flourish, especially for the Arts, Science + Culture Initiative. A special thank you to the Pritzker School of Molecular Engineering for their continued support of this program

I have been so fortunate to have wonderful colleagues who continue to stimulate and challenge what this program is and can be. I am especially grateful to Naomi Blumberg, Assistant Director, ASCI, and Bill Hutchison and Lee Jasperse, PhD Management Fellows, for their thoughtful, imaginative, and encouraging contributions.

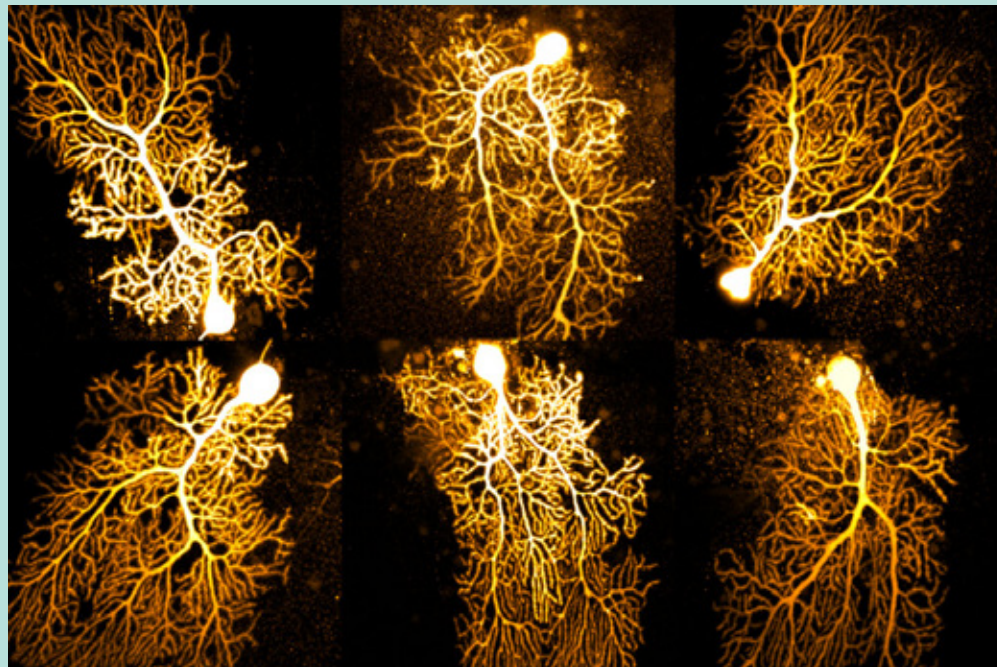


Image: Dana Simmons,
PhD Neurobiology, 2018,
Purkinje cells, Hansel Lab,
University of Chicago

The Art (and Science) of Curating Kinship

Bill Hutchison

PhD 2020, English Language and Literature; ASCI Graduate Management Fellow (2016–19).



There are plenty of amazing moments in academia, but too often they are experienced either alone or in the claustrophobic confines of an individual discourse. It's thrilling to find a forgotten line buried in a letter in some old archive, or to notice a tiny detail that flicks by in just a few frames of a film. And for many of us, those rare moments are treasured. But how are they shared? Mostly at conferences, or in journals and books, with people who already understand the kind of work you do. Sometimes, however, you get to experience an amazing moment with people whose work is light years from your own, and that's what the Arts, Science + Culture Initiative is all about.

I got involved with ASCI in 2013. I had just started my PhD in English,

and a friend of mine was doing an MD/PhD in neuroscience and psychiatry. When the Graduate Collaboration Grants were announced that year, we didn't know a lot about ASCI, but the prospect of working on something together was something we couldn't pass up. We came up with three pretty bonkers ideas, and ended up settling on something that had become a centerpiece of both our lives, despite being in radically different fields—binge-watching TV, burning through episode after episode of a show until we had consumed it all. We wondered what the appeal was, why the notion of “binge-watching” had even come to exist in the first place. With her research on the neuroscience of addition and my interest in the ways in which prestige TV emulated the

technology of the novel rather than the serial, we proposed “Fiction Addiction,” which became a short documentary. We flew all over the country, interviewing philosophers, professors, and producers about why these new kinds of narratives are so compelling. One of our interviewees, a philosopher, suggested that binge-watching was a way to “drown out the buzz of non-being.” I still think of that about once a week, usually when I'm turning on the TV. The funding for such a project would have been impossible to come by in either of our home departments, but ASCI saw the potential in our wild idea and let us run with it.

A few years later, I received a graduate fellowship grant. Not only did I get a project funded, but once a month, scholars from eight very different departments would come together to share a meal and talk about our individual projects and how work in our disciplines happened. We came to understand how different our avenues of inquiry were, and could ask the kinds of burning, naïve questions that are always there but rarely appropriate to ask. For most of us, the fantasy of just getting to ask questions until our curiosity was satisfied had been unrealizable up to that point. And now, all of a sudden, there were molecular engineers and anthropologists and artists who we could finally get to answer burning questions we hadn't even known we had.

In the intervening years before and since, I worked with ASCI as much

as possible: coordinating events, writing articles and interviews, and evangelizing about the program. ASCI is not just a curative, but a necessary corrective to disciplinary isolationism. I've met some of the finest minds in the world over the last seven years of working with ASCI. I've had conversations with fellow graduate students whose wild imaginations are making new paths through their disciplines, and we've gotten to sit down with many of the pathbreaking scholars who inspired us to go to grad school in the first place.

The moments that ASCI offers will unwind and unspool for those of us who have experienced them for years to come. Of all the debts we might owe to ASCI for the opportunities that have and will continue to emerge, these moments are thanks to the curatorial prowess of Julie Marie Lemon. And at its heart, that's what ASCI is about: curation as a mode of cultivation. Now I can't stop imagining new ways to work with strange ideas, or to come up with projects so big there's no way to do them without collaborators. I'm not the only one. We will find ways to let scientific inquiry sneak into our literary research, to let molecular biology inform our art-making, to learn to think like people we don't normally think like. By bringing so many scholars together for so many years, Julie Marie and the whole ASCI team have not only had a hand in shaping how we think today, but also how we will work for years to come—which, for many of us now, is together.

FOUR CORNERSTONES OF THE INITIATIVE

Adrienne Elyse Meyers
(MFA candidate, Visual Arts)
and Agnes Mondragón (PhD
candidate, Anthropology),
working on their project:
*Dissecting Enchantment:
Between Gods and Ghosts*,
2016–17. Photo: Jean Lachat.



COLLABORATION

explore new territory between the arts,
sciences, and social sciences by cultivating
conversation and joint projects that support
new systems of thought and research.

COMMUNICATION

encourage and support new partnerships
from a wide range of disciplines for faculty
and students while championing the
advancement of new knowledge.

EXCHANGE

stimulate new insights and pathways to
address the complexities of our world
by tapping into multiple methodological
insights, tools, questions, and curiosities
offered by different disciplines.

EXPERIMENTATION

foster curiosity and experimentation
to seed visionary outcomes.

University graduate students are front and center of this Initiative. Over the course of 10 years, it has been enormously rewarding to work with such committed, curious, facile, and talented graduate students. We provide unique opportunities and funding for students in research-driven practices in the arts, humanities, social sciences, and sciences to engage and sometimes collaborate with other grads outside their field of study. And we marvel at students' openness and their drive to reconfigure and reinterpret ideas.

Graduate students, in particular, search for new ways to engage in other fields, as a way to examine their own discipline. Several of these programs have proven pioneering not only at our own university, but also beyond our campus, prompting fruitful partnerships with the School of the Art Institute at Chicago, Northwestern University, and the University of Illinois at Chicago. In total, the Arts, Science + Culture graduate programs have awarded 86 grants between the 2010–11 and 2018–19 academic years. The Collaboration Grants program, established in 2010–11, has supported 49 collaborative projects among 118 individuals, while the Fellows Grant program, begun in 2014–15, has awarded 37 individual grants to support 6 cohorts of Fellows.

Awarded yearly since 2010, the Arts, Science + Culture Graduate Collaboration Grants fund teams of two or more graduate students—one or more from the arts or humanities and one or more from the sciences or social sciences—who work together over the course of the academic year to investigate a collaborative project that weaves together the unique perspectives offered by their disciplines. In 2015 the grants expanded to also allow inter-institutional collaboration with MFA candidates at the School of the Art Institute of Chicago (SAIC). In addition to the financial support, the Initiative provides staff support, monthly dinner forums, and exhibition, publication, and presentation and opportunities for the graduates' collaborative projects.

Graduate Collaboration
Grantees Jordie Davies
(PhD candidate, Political
Science) and Ayesha Singh
(MFA candidate, SAIC)
working on their project:
*Power Structures:
Connotations of the Facade
in State Architecture*, 2017.



The Chromochord



Using protein nanotechnology, Josiah Zayner (Biochemistry and Molecular Biology) and Francisco Castillo Trigueros (Music Composition) invented the chromochord, a “biologically powered musical instrument.” The chromochord is a musical biosensor that allows people to both hear and see the chemical reactions of plant proteins that respond to sunlight—light-, oxygen-, and voltage-sensing (LOV) proteins. The chromochord holds 12 vials of protein samples that were bioengineered by Zayner to each respond differently to blue light. Each vial was then paired with a different sound. Zayner and Castillo Trigueros’s instrument had its audiovisual debut in May 2013. Zayner also performed with the Chromochord at MoMA PS1 in February 2015. Their invention was covered by a number of media outlets including *Scientific American* and *The Reader*.

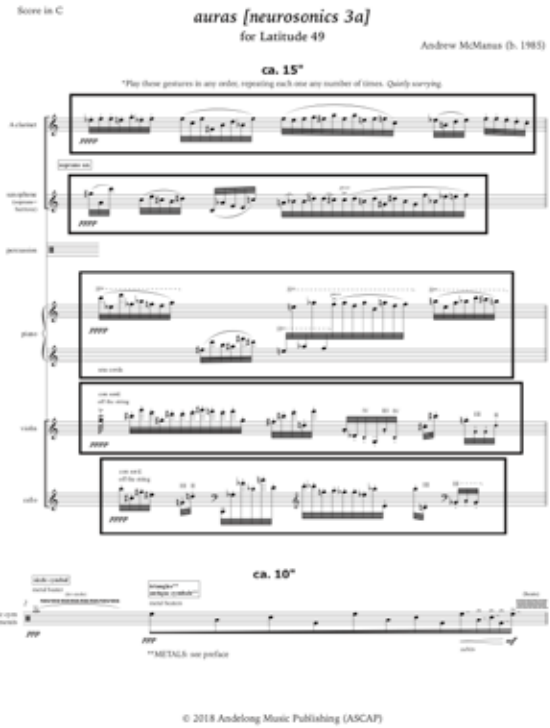
Josiah Zayner
(PhD ‘13, Department of Biochemistry and Molecular Biology)

Francisco Castillo Trigueros
(PhD ‘13, Department of Music)

Faculty Advisors:
Howard Sandroff (Senior Lecturer, Department of Music); Tobin Sosnick (Professor, Biochemistry and Molecular Biophysics, Director, Biological Sciences Division and Institute for Biophysical Dynamics).

Photo: Robert Kozloff

NeuroSonics: Rhythmic Stimulation of Epileptic Cell Cultures



For *Neurosonics*, Andrew McManus (Music Composition) and Tahra Eissa (Neurobiology) transformed neural epileptic data into music to explore the relationship between rhythmicity and neuropathology. The project asks how rhythms affect epileptic neurological activity and plasticity, how patterns of neuronal activity might be translated back into musical sound, and what this translation of neural data into sound reveals about the original epileptic brain processes. The results of the experiment were meant to provide a potential solution for the ongoing challenge of “humanizing” computer-generated sounds as well as provide insight into how a developing, epileptic neural network interacts with rhythmic stimulation. Tahra provided Andrew with raw data from a single stimulation of neurons, and since their initial collaboration Andrew has used the data as the musical basis of six new works, written for the Spektral Quartet, Latitude 49, and others.

Andrew McManus
(PhD ‘15, Department of Music)

Tahra Eissa
(PhD ‘17, Department of Neurobiology)

Faculty Advisors:
Wim van Drongelen (Professor, Pediatrics and Computational Neuroscience); Howard Sandroff (Director, Computer Music Studio, and Senior Lecturer, Department of Music).

Image: Andrew McManus

Breaking Ice



Iddo Aharony
(PhD ‘16, Department of Music)

Ivo Peters
(PhD ‘12, Postdoc ‘15,
Department of Physics)

Qin Xu
(PhD ‘15, Department
of Physics)

Faculty Advisors:
Heinrich Jaeger (Professor,
Physics, and the James Franck
Institute); Howard Sandroff
(Director, Computer Music
Studio, and Senior Lecturer,
Department of Music).

Breaking Ice was an environment-inspired project that culminated in a multimedia composition of live cello and electronics and video projection. The project addressed the increasing rate of melting and disintegrating glaciers by creating a laboratory-controlled model of the much larger-scale phenomenon. Iddo Aharony (Music Composition), Ivo Peters (Physics), and Qin Xu (Physics) examined and documented ice as it was crushed by something like a vise and then melted. The scientific data and footage obtained was then transformed into the core material and inspiration for the musical/visual piece. Following its debut at the end of the grant period, *Breaking Ice* evolved to include dance and was performed by the Fused Muse Ensemble in October 2014 in Chicago.

Photo: Meagan Adams

Syntax & Songbirds



Geoff Brookshire
(PhD ‘18, Psychology)

Kyler Brown
(PhD ‘17, Computational
Neuroscience)

Marcelle Pierson
(PhD ‘15, Music History
and Theory)

Faculty Advisors:
Daniel Casasanto (Assistant
Professor, Psychology);
Anthony Cheung (Assistant
Professor, Music); Sarah
London (Associate Professor,
Psychology); Daniel
Margoliash (Professor,
Organismal Biology &
Anatomy).

At least since the Middle Ages, musicians have taken inspiration from birdsong. In *Syntax & Songbirds*, Geoff Brookshire (Psychology), Kyler Brown (Computational Neuroscience), and Marcelle Pierson (Music History and Theory) made music informed by the biological and cognitive systems supporting birdsong. They analyzed both the syntax and biophysics of the songs of two finch species and interpreted features of wild-type birdsong through synthesized sound and close imitation by an instrument. The scientific foundation of this project enabled the exploration of the boundary between the carefully framed, aestheticized listening experience of the concert hall, and the unframed, natural production of birdsong. Their collaboration resulted in a unique form of musical notation that could be read by both classically trained musicians and the self-taught. The team also generated a musical piece for electronics and oboe, which they composed using Markov chains—the probabilistic process by which birds create form in their song—as well as a “finchesizer,” a software interface programmed to mirror a finch’s physiological capacities and constraints, which allowed them to “play” a finch.

The Phoenix Index: A New Method in Environmental History



Shane DuBay (Evolutionary Biology) and Carl Fuldner (Art History) photographed complete sets of select bird species in the Field Museum’s extensive study collections, which include specimens spread over the last 130 years. They devised a novel means of tracking industrial pollution in the Great Lakes region using these photographs, analyzing luminance data from within the images to gauge the relative amount of soot covering each bird. The result is a dynamic visual archive that leverages photography to explore the value of time-series for contemporary scientific inquiry. Their analysis provides insights that extend back decades before coordinated systems for measuring air quality, while also restoring the severed link between natural history specimens and the environments from which they were gathered.

Since their initial collaboration, DuBay and Fuldner have expanded their study to include specimens at the University of Michigan’s Museum of Zoology in Ann Arbor and the Carnegie Museum of Natural History in Pittsburgh, both of which are close to other major industrial centers. They have also reshot every specimen they worked with at the Field Museum after finding a critical flaw in their original lighting method. Their findings were published in a 2017 paper by the *Proceedings of the National Academy of Sciences*, and the study was covered by media outlets throughout the U.S and abroad, including *The Atlantic*, the BBC, and *The New York Times*.

Shane DuBay
(PhD ‘18, Evolutionary Biology)

Carl Fuldner
(PhD ‘18, Art History)

Faculty Advisors:
John Bates (Committee on Evolutionary Biology, UChicago); Joel M. Snyder (Professor, Department of Art History, UChicago).

Photo: Carl Fuldner and Shane DuBay

Scaling Quelccaya



The near-global glacier retreat of recent decades is among the most convincing evidence for contemporary climate change. But how can we understand the scale of a glacier, both physically and temporally, from very far away? How can we relate to these seemingly abstract but very real climate changes in our world? *Scaling Quelccaya* explored visual strategies for conveying the retreat of the Quelccaya Ice Cap, the world’s largest tropical glaciated area, located in the Peruvian Andes. Drawing on 30 years of satellite imagery of the Quelccaya Ice Cap, Meredith Leich (Film, Video, New Media, and Animation) and Andrew Malone (Glaciology and Climatology) virtually recreated the glacier’s retreat using 3D animation and gaming software. The final result was an animated video installation that juxtaposed the glacier with the city of Chicago, placing the two sites in a common framework to bring these distant spaces into intimate scale. Meredith continued working on the project, creating a full-length film that won the video art competition MACHT KUNST; Andrew presented their work at the American Geophysical Union in New Orleans in 2017.

Meredith Leich
(MFA ‘17, Film, Video, New Media, and Animation, SAIC)

Andrew Malone
(PhD ‘17, Glaciology and Climatology, UChicago)

Faculty Advisors:
Doug MacAyeal (Professor, Department of Geophysical Sciences, UChicago); Marlena Novak (Lecturer, Film, Video, New Media and Animation, SAIC).

Funded by the Graduate Division, School of the Art Institute of Chicago (SAIC).

Film still: Meredith Leich, *Scaling Quelccaya*

Invisible/Invincible: The Bacteria Survival Guide



Joo Young Lee
(MFA '18, Sculpture, SAIC)

Mirae Lee
(PhD student, Microbiology,
UChicago)

Maggie Zhang
(PhD student, Microbiology,
UChicago)

Faculty Advisors:
Sean Crosson (Professor,
Biochemistry and Molecular
Biology, UChicago) and Dan
Price (Assistant Professor,
Sculpture, SAIC).

Bacteria form the living infrastructure of our world: they perform invisible roles in maintaining, defending, and cycling our soils, oceans, and bodies. They are single-cell microorganisms present in various habitats on Earth, including soil, water, acidic hot springs, and arctic environments. The survival of the bacterium in its natural habitat depends on its structural and molecular defenses against adverse conditions. Joo Young Lee (Sculpture), Mirae Lee (Microbiology), and Maggie Zhang (Microbiology) investigated the survival strategies of microbes and produced microscopic portraits and narratives to render what we can learn from the survival strategies of microbes. As women of color, Joo Young, Mirae, and Maggie found themselves empathizing with the impact and resilience of microbes. Focusing on both invisibility and resilience of microbes, the collaboration reconsidered the act of seeing and the way it affects the understanding of our place in the surrounding world.

Photo: Jean Lachat

Coalesce: The Space inside Repetition



Predrag Popovic
(PhD '19, Geophysical
Sciences, UChicago)

Rosemary Hall
(MFA '19, Printmedia, SAIC)

Faculty advisors:
Frances Whitehead (Professor,
Sculpture, SAIC), Michelle
Grabner (Professor, Painting
and Drawing, SAIC),
and Dorian Abbot (Associate
Professor, Geophysical
Sciences, UChicago).

The patterns of bird flocking, microbial growth, and insect colonies have captured the human imagination for centuries. These patterns demonstrate swarm intelligence, a process whereby an emergent order arises from seemingly random biological activity, and through which apparently dissimilar systems can show very similar behavior. Predrag Popovic, (Geophysical Sciences, UChicago) and Rosemary Hall's (Printmedia, SAIC) research focused on the oldest eusocial insect, the termite, and stigmergy (i.e. indirect coordination between swarm members, a key concept in the field of swarm intelligence). The collaboration resulted in a multimedia installation, which included a sound filtering algorithm modeled after stigmergy and a library of books eaten by live termites. The termites ate a book titled *The Universe* from the *Life Nature Library* series. That is, cellulose pages and maps of the cosmos were submitted to termite editing. In time, the termites consumed and created their own architecture out of *The Universe*.

Through wondering in a termite's wandering, this collaboration searched for hybrid, in-between, and experimental translations that invite a broader spectrum of interpretation. Our flesh, our limbs, our movements are inscribed with a multispecies history. The pattern which connects may be best articulated through the poetry of interspecies relations, movements, and behavior.

Film still: Scrappers
Film Group

Grantee Biographies

Iddo Aharony is a composer of contemporary electronic and acoustic music. He is Assistant Professor of Music Technology at Colorado College.

Geoff Brookshire is a post-doctoral research fellow at the University of Birmingham, UK.

Kyler Brown is a data scientist at Cape Analytics, an AI startup in Silicon Valley.

Francisco Castillo Trigueros is currently a composer and digital music researcher and developer living in New York City.

Shane DuBay is an Assistant Professor in the Department of Ecology and Evolutionary Biology at the University of Michigan.

Tahra Eissa is a Research Associate at the University of Colorado-Boulder, studying decision making. She also started a folk-fusion band called the “Folklear Nuclei” with other UChicago computational neuroscience graduate students.

Carl Fuldner was the 2018–19 Daniel F. and Ada L. Rice Postdoctoral Curatorial Fellow in the Photography Department of the Art Institute of Chicago.

Rosemary Hall is a practicing artist in Chicago. Since her collaboration project, she has been awarded a Global Forest Artist Residency (Germany) and the Ex.Change Artists and Scientists on Climate Change Grant (Chicago).

Joo Young Lee is a multimedia artist based in both Seoul and Chicago. She was an artist-in-residence in 2019 at Mana Contemporary, Chicago.

Mirae Lee and Maggie Zhang are working toward their doctoral degrees at UChicago in the research lab of Dr. Eugene B. Chang.

Meredith Leich is a painter, animator, and videomaker, lectures in animation at the School of the Art Institute of Chicago and Loyola University, and continues to work with the intersection of art and science and on the issue of climate change.

Andrew Malone is a Visiting Assistant Professor of Glaciology in the Department of Earth and Environmental Sciences at the University of Illinois at Chicago.

Andrew McManus is a musician and educator. Since his collaboration with Tahra, he has received support for the *Neurosonics* project from New Music USA and from residencies at the Aaron Copland House (Cortlandt Manor, NY) and the Brush Creek Foundation for the Arts (Saratoga, WY).

Ivo Peters is a Lecturer in the Aerodynamics and Flight Mechanics Research Group at the University of Southampton.

Marcelle Pierson is trained as a composer and music theorist and is currently a lecturer in the music department at the University of Pittsburgh.

Predrag Popovic earned his PhD in Geophysical Sciences at UChicago in fall 2019 and has a three-year postdoctoral fellowship at the Institut de Physique du Globe de Paris, France.

Qin Xu was a Postdoctoral Research Scientist at ETH Zurich and is now Assistant Professor of Physics at Hong Kong University of Science and Technology.

Josiah Zayner is a BioHacker and the CEO and founder of The ODIN, a company that sells CRISPR kits to the general public for use in in-home genetic experimentation. He collaborated with new media artist Lynn Hershman Leeson to create an installation about genetic engineering in 2015.

Arts, Science + Culture Graduate Fellows

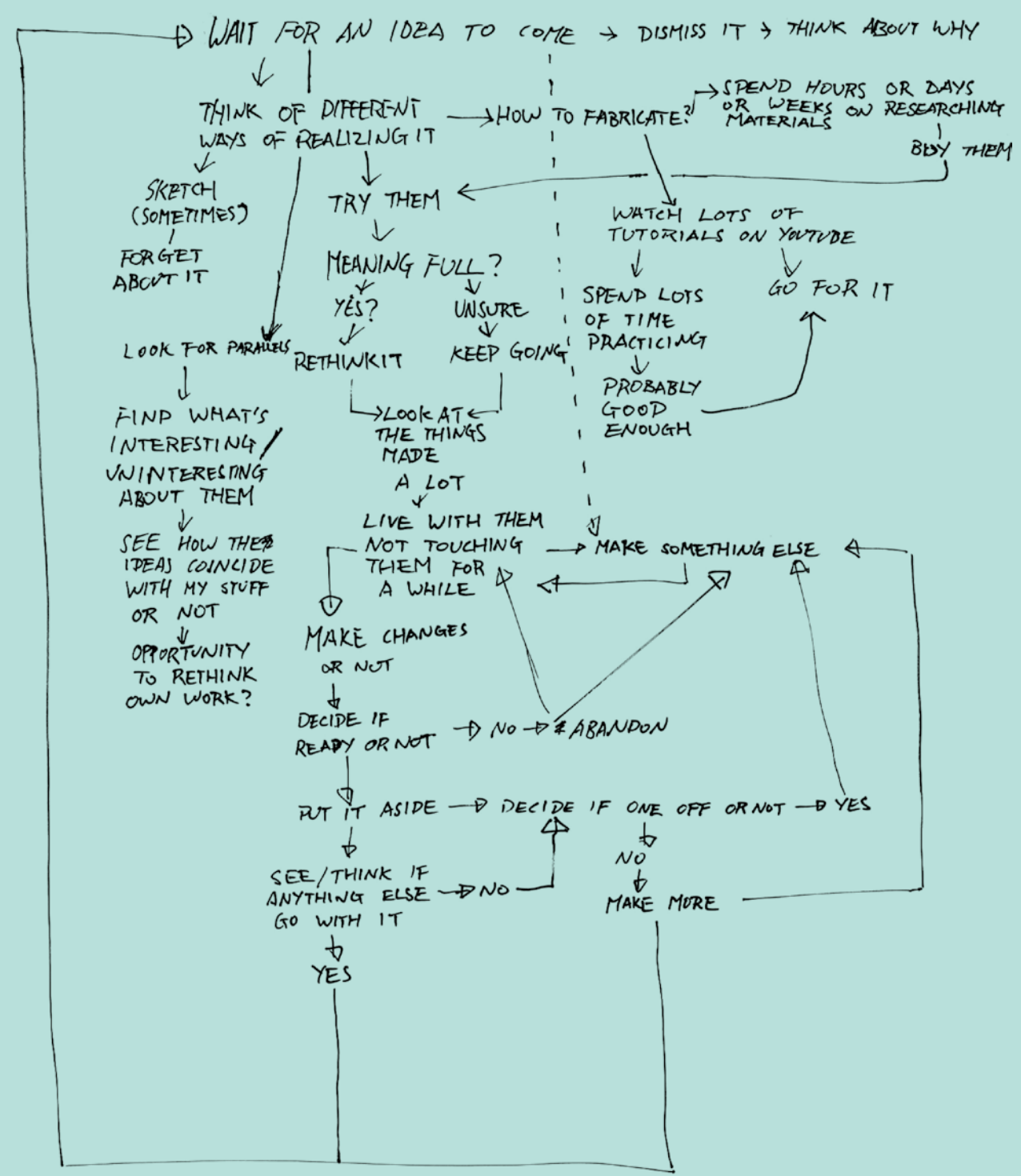
The Arts, Science + Culture Graduate Fellows program is a monthly forum for discussion and exchange among a cohort of graduate students from across the university. The graduate fellows are researchers and artists whose work is firmly anchored in the arts, humanities, social sciences, or sciences, and for whom crossing disciplinary boundaries is integral to the particularities of their work.

Over the course of the fellowship program’s six years, ASCI has granted awards to students from the Departments of Anthropology, Biology, Chemistry, Cinema and Media Studies, Conceptual and Historical Studies of Science, English, Evolutionary Biology, Molecular Engineering, Music Composition, Neuroscience, Organismal Biology and Anatomy, Physics, Theater and Performance Studies, and Visual Arts.

Photo: Jean Lachat

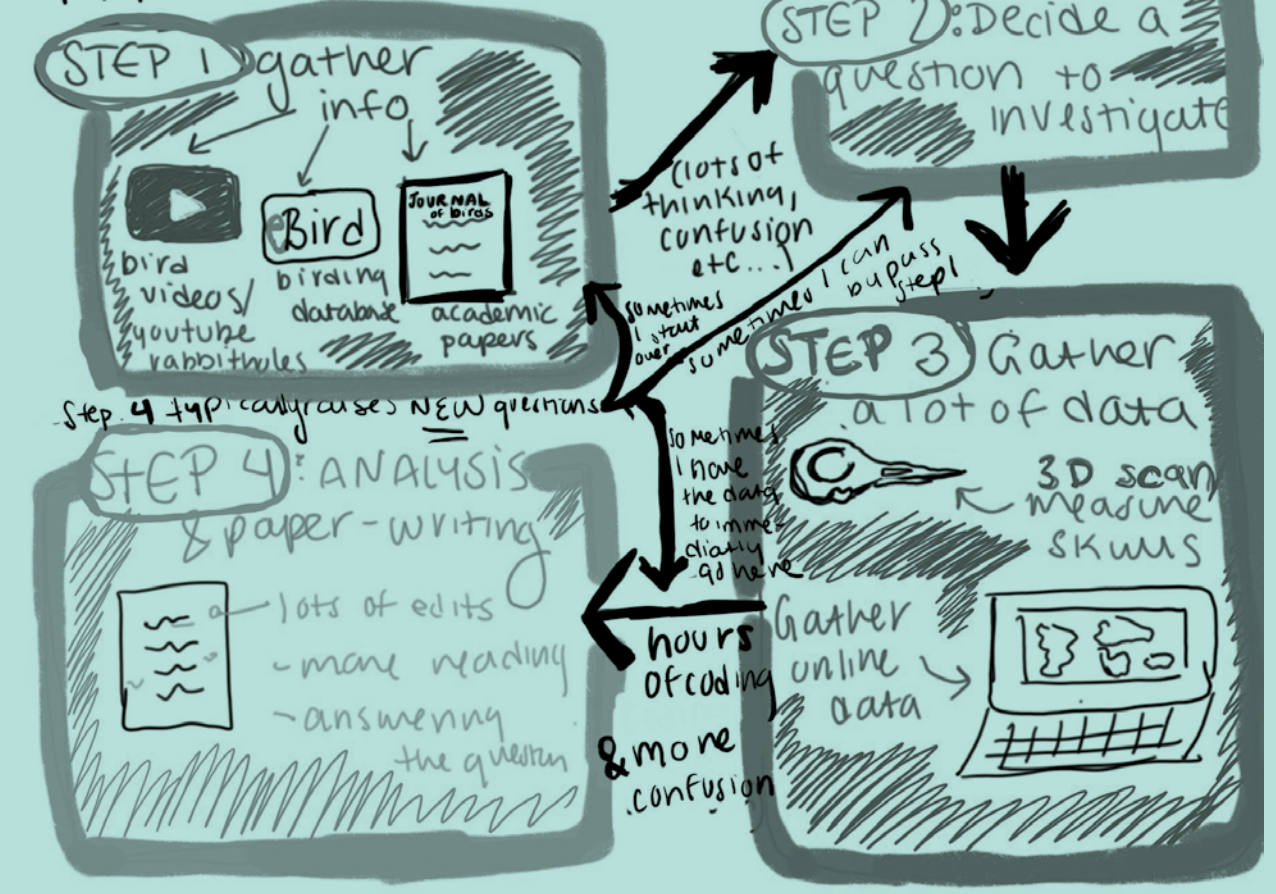


PROCESS FLOW CHART



TERENCE WONG

MY WORKFLOW :



Every year the ASCI Graduate Fellows create personal workflow diagrams to share with their cohort. On the left: Terence Wong, MFA candidate, Visual Arts; on the right: Rossy Natale, PhD candidate, Organismal Biology and Anatomy.

Fellow Testimonials

I emerge from this fellowship with a fresh appreciation for the divergences and commonalities between practices, scholarly lifestyles, and styles of thought. Many of the most fascinating conversations began from simple questions: “What do you mean by term *x*?” or “How long does task *y* take?” It was equally important that we were able to view each other’s workspaces or in some other way develop a multisensory appreciation for one another’s scholarly labor and passion. I believe deeply in the importance of interweaving one’s life and work, or rather that we, as artists, teachers, and scholars, have the luxury of performing work that interweaves easily, productively, and often pleurably without private lives. Of course, this luxury is embedded within the social and professional atmosphere of academia, which can as often be as toxic as it is nurturing. For this reason, I am particularly grateful to have spent a year experiencing anew, and from a variety of disciplinary angles, the forms of *enchantment* each of my colleagues brings to his or her work, and which each was so eager to share.

—Tyler Schroeder, Cinema and Media Studies

The mechanisms of most of my peers’ fields were previously opaque to me. I had no idea how a composer composed music or interacted with musicians. I had no idea how an anthropologist did field research and built projects around that research. I had no idea that the University had a large collection of butterflies, or the underground machines we were shown for the chemistry and physics presentations. There is so much I learned from everyone’s presentations; it would be impossible to list.

—Shanna Zentner, Visual Arts

This experience was one of the most transformative of my time at UChicago. I came into the program thinking I understood different disciplines reasonably well already. Perhaps I did have more insight into what it means to be a *student* in some disparate disciplines, but I certainly discovered that I had no idea what it meant to contribute to scholarship broadly across academia. Discovering what constitutes scholarship among my co-Fellows’ fields was truly a gift; it gave me a deeper appreciation for what research looks like, for what questions are worth asking, and how to push boundaries in meaningful ways. I was also surprised to find so many connections between what I do and what my co-Fellows do. Our meetings always left me with an increased feeling of belonging, as well as a deep admiration for my counterparts throughout the university (and academia more broadly). The weekly meetings made me want to take classes I’d never had any interest in taking before. It also increased my interest in trying to forge new connections between my discipline and others. I now hope to co-teach courses that straddle my discipline and others.

—Nicole James, Physics

Observing the different methods and frameworks with which individuals interact with the pursuit of knowledge has greatly informed my understanding of the greater ideological context within which my own studies exist. It is an unfortunate reality that despite the huge and disciplinarily diverse graduate student body present on our campus, most of us primarily exist within our own disciplinary bubbles, with interactions outside of them existing largely in a social/non-academic context. In this program, I was able to experience perspectives that I otherwise never would have, and have critical discussions about the fundamental nature of research that guided my own self-understanding. I came away with a renewed appreciation of the commonalities that guide our respective efforts to search for truth, to express our ideas in new and interesting ways, and to ultimately contribute to the universal body of knowledge.

—Erzsebet Vincent, Molecular Engineering

I’m grateful for the opportunity to meet folks outside of my department and at different stages of their PhD work. I find it sad that there isn’t more crossover between departments, especially those that share many of the same foundational works, and ASCI provided some space for these conversations. As a humanist, I found the presentations by colleagues in the sciences to be refreshing: it’s amazing to learn more about how the sciences work at a graduate level (having left them at a high school level). I also found it helpful to have a crowd of folks who have more distance from the terminology I frequently use because it forced me to translate myself; this is a particularly important skill in my work because I hope to address audiences beyond the academy.

—Arianna Gass, English and Theater and Performance Studies

Hearing about other students’ projects and discussing my own work in an interdisciplinary venue has shaped my research in so many exciting ways. As an anthropologist who studies science and environmental change, I found that conversations about different kinds of media (music, art, film, and literature) helped me expand the way I was thinking of my field site. On the other hand, discussing my work with scientists has spurred me to think critically about anthropological methods and helped me formulate hypothesis-driven research questions. This has been hugely influential as I have begun working on grant applications for fieldwork. I was a Fellow during the year I wrote the first draft of my dissertation proposal, so these conversations came at a crucial stage of my movement through the PhD program and have been formative for my research.

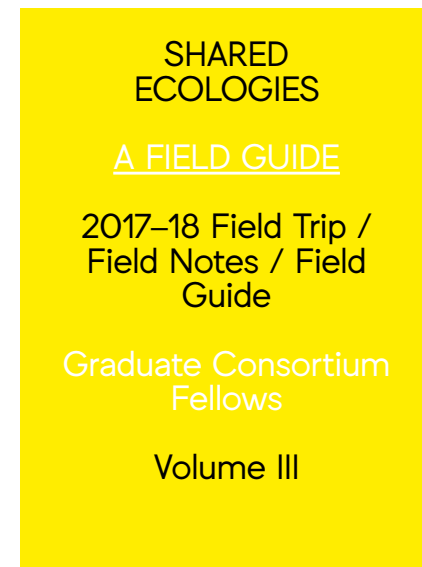
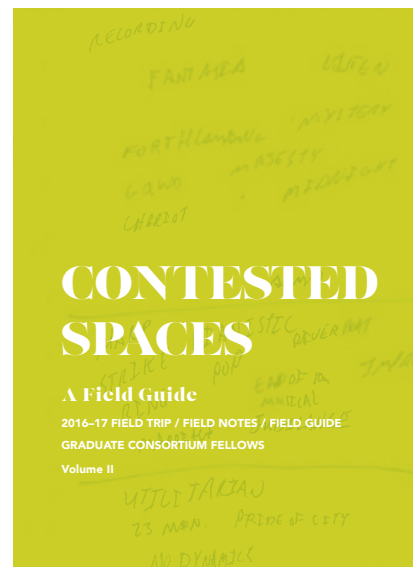
—Hannah Burnett, Anthropology

Field Trip /
Field Notes /
Field Guide

A three-year pilot program launched in 2015 by the Arts, Science + Culture Initiative, *Field Trip / Field Notes / Field Guide* was conceived as a way to build an interdisciplinary community that engaged with Chicago's vibrant urban environment. A trans-disciplinary consortium of Fellows from the University of Chicago, the University of Illinois at Chicago, the School of the Art Institute of Chicago, and Northwestern University, used the city as a unique platform for exchange and connection across disciplinary and institutional boundaries.

The consortium provided an open framework for graduate students and recent alumni to explore and digest their local environment as a collective body while outlining the unique perspectives and methodologies of their disciplinary studies. Counted among the three cohorts were visual artists, musicians, art historians, anthropologists, architects, and one evolutionary biologist. The consortium augmented the institutional support offered to MFA alumni and PhD candidates as they pursued their research "in the field," asking that they consider sharing, communicating, and formulating their work within the context of an interdisciplinary community.

Beginning in the fall and meeting several times over the course of an academic year, the Field Notes Fellows participated in a self-initiated series of expeditions, readings, meals, and discussions. Their activities provoked unexpected exchanges, built collegial relationships, and allowed for unique encounters that would not typically occur within a university setting.



The "field guide" produced by each cohort presents the Fellows' research over the course of the year, highlighting and examining their distinctive approaches to research and practice while on site and working "in the field." Each guide in its entirety may be accessed on the Arts, Science + Culture Initiative's website. In addition to the integral efforts of our own staff, specifically Naomi Blumberg, Assistant Director, and Marissa Benedict, former Program Coordinator, as well as the many people around the city who opened up their places of work and research to our Fellows, we thank the following partners for their vision and commitment to this program:

Lisa Yun Lee, Director (former), School of Art & Art History,
University of Illinois at Chicago

Beate Geissler, Artist and Associate Professor,
Department of Art, University of Illinois at Chicago

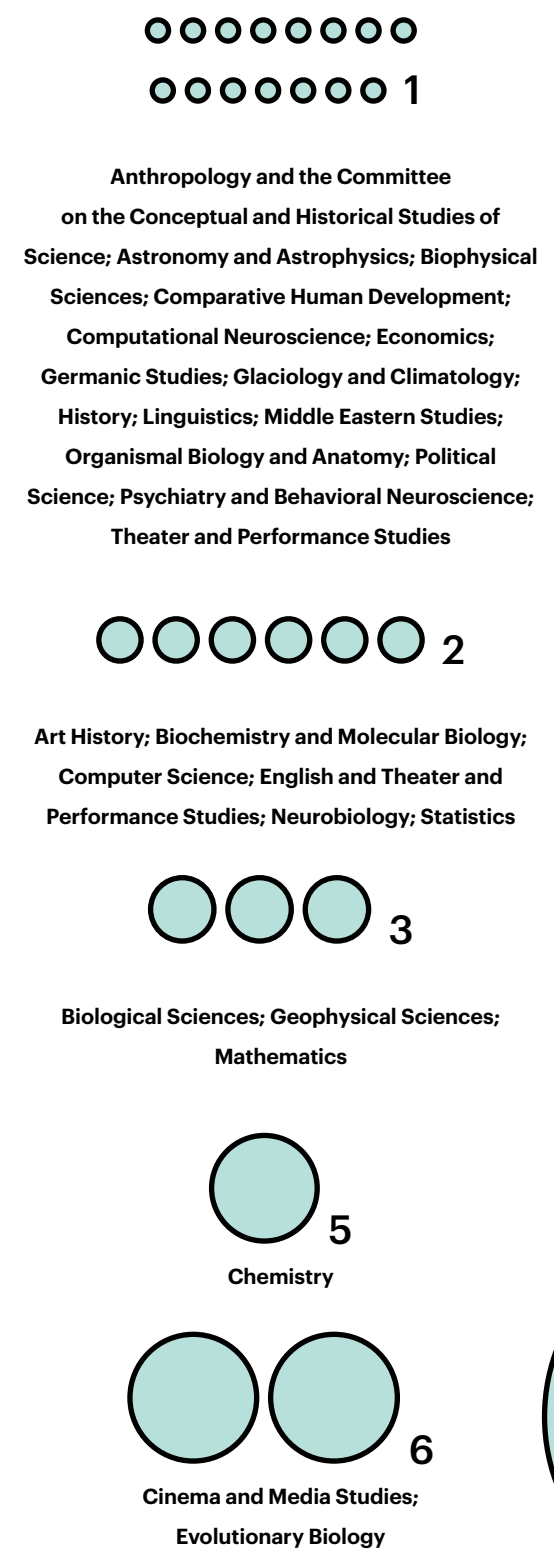
Dan Peterman, Artist and Professor,
Department of Art, University of Illinois at Chicago

Douglas Pancoast, Director, Earl & Brenda Shapiro Center
for Research and Collaboration, and Professor of Architecture,
School of the Art Institute of Chicago

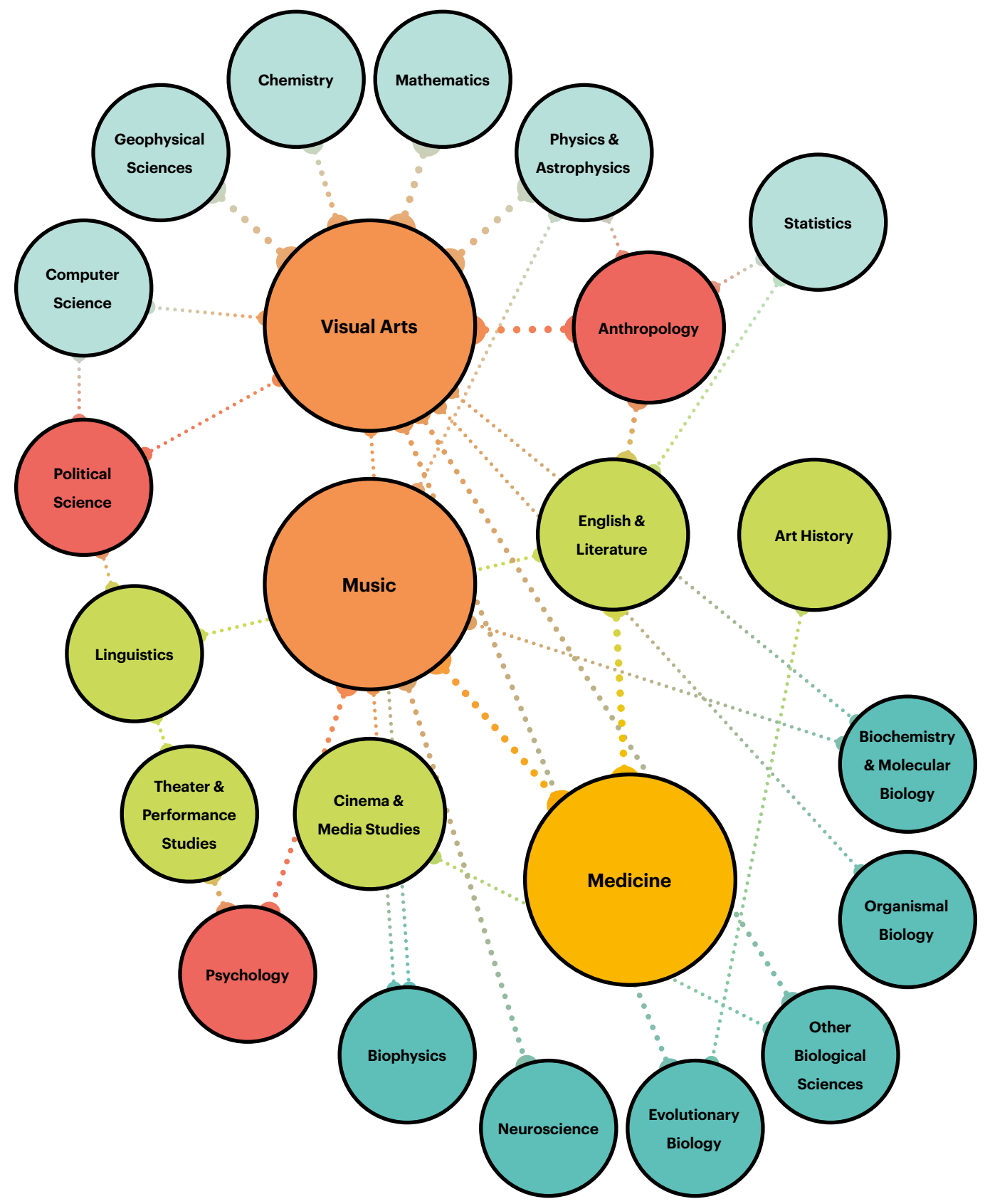
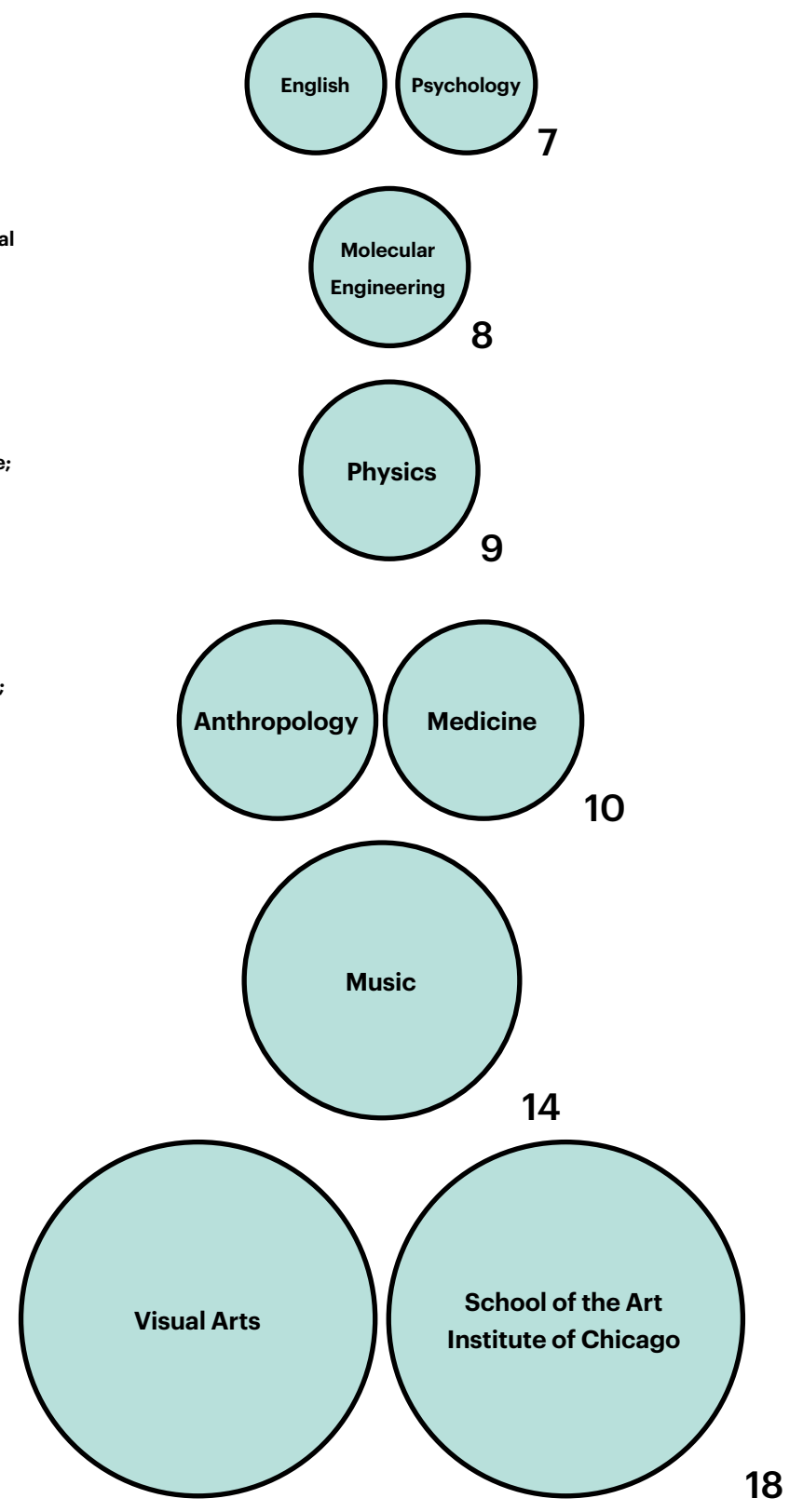
Jaclyn M. Jacunski, Research Associate, Earl & Brenda Shapiro Center
for Research and Collaboration, School of the Art Institute of Chicago

Iñigo Manglano-Ovalle, Artist and Professor, Art, Theory & Practice,
Northwestern University

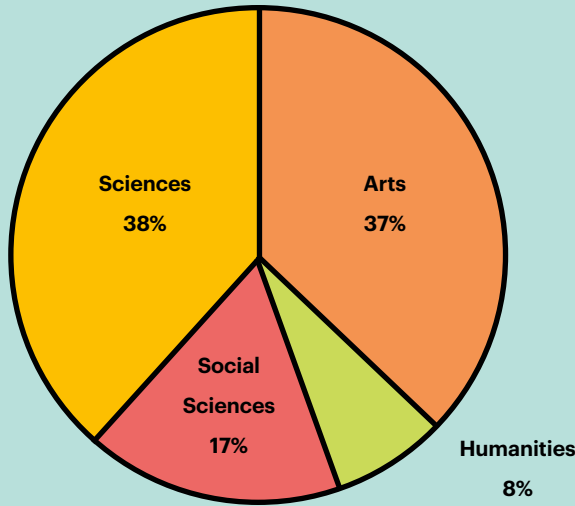
Matthew Martin, Department Assistant, Art, Theory & Practice,
Northwestern University



30 Participants per Discipline



31 Network



In 2019–20, to mark our decennial, we embarked on a formal review of the short- and long-term impacts of the Initiative’s programs on participants. We commissioned the National Opinion Research Center (NORC) to carry out an independent evaluation focusing on the particular impacts cross-discipline engagement has had on students over the course of their graduate studies and beyond.

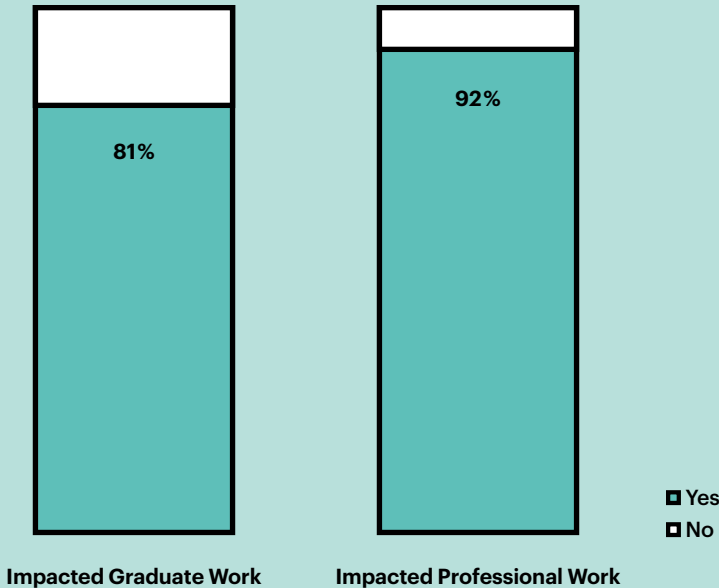
ASCI is structured in part around the assumption that the biggest impacts emerge within the process of cross-disciplinary work, collaboration, and dialogue. Forging dialogue across methodological language encourages collective imaginativeness, intellectual open-endedness, and active communication. By and large, what our students set out to create at the beginning of a grant period often morphs into something quite different over the course of the year. We encourage this creative adaptiveness to critical evaluation and long-form thinking.

Through first-person interviews, analysis of exit interviews completed by graduate student grant recipients over the last 10 years, and web reportage on Collaboration Grant projects, the NORC report summarized findings that emerged from three central questions:

What are students’ initial motivations for participating in the program?

What immediate-term impacts, if any, did cross-disciplinary engagement have on students during the course of their ASCI grant year?

What longer-term impacts, if any, did participation in the program have on students’ later graduate work and professional careers?



What the NORC evaluation revealed was that, for many, participation in ASCI grant programs had real, lasting ramifications for their personal and social lives, academic paths, and professional careers. During the grant year, the immediate outcomes participants experienced included learning, discovering commonalities with other disciplines, generating new ideas and encountering new perspectives, reducing a sense of personal and academic isolation, and helping improve their other academic work.

Longer-term outcomes in graduate school, outcomes included producing stronger dissertation/thesis work, building academic credentials such as publications or additional grants, and pursuing other cross-disciplinary opportunities; Post-graduation, outcomes included help securing academic or other professional positions, finding their professional niche, and performing better in their chosen profession.

The information gleaned from this evaluation has offered the insight essential to understanding our past and the impact our programming has had on our students and will, in turn, help us envision the future of the Arts, Science + Culture Initiative—the ways in which we can broaden our programming and meet the needs and interests of our students.

We thank the team from NORC at the University of Chicago, Gwendolyn Rugg, Kevin Brown, and Erin Eife for their expertise and exceptional efforts in carrying out this evaluation. A full Impact Evaluation can be found on the ASCI website. Support was generously provided by the Office of Research and National Laboratories at the University.



Over the last 10 years, the Arts, Science + Culture Initiative has engaged with the University's extraordinary faculty, supporting and assisting in the development and organization of projects across the disciplines. In 2014 we secured funding, developed the structure, and provided administrative support for *Images and Science*, a new course co-taught by Professor W. J. T. Mitchell and Norman Macleod (Keeper of Paleontology at the British Museum of Natural History, London). Mitchell's book, *Image Science: Iconology, Visual Culture, and Media Aesthetics* (2015), grew out of that groundbreaking seminar. The following year, ASCI initiated and funded *Exploring the Body in Medicine and the Performing Arts*, a course co-taught by Assistant Professor of Medicine, Dr. Brian Callender, and Associate Professor of Visual Arts and Cinema and Media Studies, Catherine Sullivan. *Exploring the Body* was recently offered for a second time through the Stevanovich Institute on the Formation of Knowledge.

ASCI has worked closely with faculty on several conferences and symposia—*Forefronts of Jamming in Physics, Engineering and Architecture* (2014); *Communicating Science* (2014); *Fabricating Color: A Multidisciplinary Conference on Color and Method* (2014); and *Disciplines of Experiment: Exploring the Concepts of Experiment Across the Disciplines* (2018).

In addition to engaging with scholars and artists on our own campus, visiting scholars and practicing artists have joined with our graduate students for workshops and roundtables: Peter Galison (Professor, History of Physics, Harvard University), Jane Taylor (writer and playwright, Andrew W. Mellon Chair of Aesthetic Theory and Material Performance at the Centre for Humanities Research at the University of the Western Cape, South Africa), Samuel Delany (science fiction author and literary critic), Trevor Paglen (artist and geographer), Bruno Latour (philosopher, anthropologist, and sociologist), Catherine Malabou (Professor of Philosophy, Kingston University, London), Katherine Hayles (Professor of Literature, Duke University), and Liam Young (speculative architect and filmmaker, Australia).

Photo: Nancy Wong

Exploring the Body in Medicine and the Performing Arts

Brian Callender, M.D.
Assistant Professor
of Medicine

Catherine Sullivan
Artist and Professor of
Visual Arts and Cinema
and Media Studies

Exploring the Body in Medicine and the Performing Arts was a multidisciplinary course designed to explore the human body through the unique combination of medical science and the performing arts. Drawing broadly from medicine, anthropology, and the performing arts, this course sought to understand the human body by comparing and contrasting the medicalized body with the animated or performing body. With an emphasis on experiential learning, the students participated in activities to learn about the human body through interactions with other bodies as well as their own. The medical sequence of the course examined how medicine uses the body as an educational tool, views the body through radiographic imaging, utilizes the dead body to make diagnoses, and endeavors to prolong life. The performing arts sequence explored the mind and body as a continuous system through somatic pedagogies at the intersection of theater, dance, physical and psychotherapy. Students used their own bodies as instruments of inquiry into somatic pedagogies such as Feldenkrais technique in physical and occupational therapies, methodologies drawn from biomechanics in the theater, from contact improvisation in dance, and bioenergetics in psychotherapy. These two distinct sequences were within the larger cultural context of the human body and more specifically through the deliberate tension created by interactions with the dead/inanimate body and the living/animated body.

Faculty research, preparation, and course organization was funded by an Arts, Science + Culture Initiative grant. The course was recently repeated in 2019.



**Images and Science:
Colloquium and
Symposium, Fall 2011**

W. J. T. Mitchell

Gaylord Donnelley

Distinguished Service

Professor of English

and Art History,

Editor, *Critical Inquiry*

With the administrative and financial support of the Arts, Science + Culture Initiative, I organized a colloquium in the fall of 2011 on the topic of “Images and Science,” a survey of recent work in visual studies, iconology, and art history that engages with scientific theories and practices, primarily (but not exclusively) in the life sciences. The colloquium was constructed around a faculty reading group assembled for the purpose of discussing this topic and producing a cross-fertilization of the disciplines of the natural and physical sciences, art history and visual culture, new media, information technology, and artistic practices. Some 20 PhD students registered for the colloquium. A central presence in the course was biologist Norman Macleod, the Keeper of Paleontology at the British Museum of Natural History, whom ASCI brought to Chicago as a visiting professor for the entire fall term.

Between Picture and Science

The colloquium addressed, among other things, the graphic representation of scientific data, the role of figurative language and pictures in constructing scientific hypotheses, public images of science and scientists, and the status of visible evidence and demonstration in scientific practice. We also wanted to reverse the image/science relationship and examine the concept of the image as such when viewed through the framework of various sciences—cognitive, biological, psychological, computational, and physical. Historical sciences such as archaeology and paleontology are centrally constituted by reconstructed images and scenes. Experimental and theoretical sciences from physics to biology to mathematics have always relied on intuitive leaps employing images, diagrams, and spatial models. Macleod’s writings on theories of images and forms in biology and his work with databases of type specimens were central. I came at the subject via my book on the history of dinosaur images and a paper titled “Image Science” that emerged from the *Bildwissenschaft* group at the Wissenschaftskolleg in Berlin and was commissioned for the Thyssen Lectures at Humboldt University.

Engagement across campus and disciplines

In addition to Macleod and myself, we invited several UChicago scholars to engage with the topic through the lens of their specific discipline. Robert J. Richards, UChicago professor of the History of Science, discussed the role of visual images in the pioneering work of Ernst Haeckel in advancing and publicizing Darwinist models of evolution, the subject of his recent Laing Prize-winning book, *The Tragic Sense of Life* (2011). Richard Neer, our colleague in Art History and Classical Archaeology, presented his work on the hermeneutic circle in the reading of archaeological evidence and introduced us to the revolution in contemporary archaeology’s relation to art history and the earth sciences, a transformation roughly equivalent to the rise of comparative

literature. Professor of Paleontology, Paul Sereno, discussed the importance of visual art and observation in paleontological research and the use of databases to collate large archives of fossils as a guide to precisely targeted field work. Our colleague Jason Salavon, a pioneering figure in new media and digital arts, presented his work with image databases of biological specimens and image-averaging.

Bridge to scholars at other universities

The central event for this colloquium was the visit of Peter Galison and Caroline Jones, the editors of *Picturing Science, Producing Art* (1998). Galison, the Joseph Pellegrino University Professor in the History of Science and Physics at Harvard, is among the leading historians of science in the world today and is Director of the Collection of Historical Scientific Instruments at Harvard. Caroline Jones is Director of the History, Theory and Criticism of Architecture and Art (HTC) program at MIT. She works on modern and contemporary art, with a particular focus on its technological modes of production, distribution, and reception. Galison and Jones came to the UChicago campus for a half-day symposium at the Franke Institute for the Humanities, bringing together the students and faculty involved in the colloquium, as well as interested members of the public. The symposium served as a public forum for the basic issues raised throughout the colloquium: the role of images in science, as educational and publicity tools, as well as research instruments, and as objects of research in their own right.

Personal impact

As for myself, the colloquium inspired my book, *Image Science: Iconology, Visual Culture, and Media Aesthetics* (Chicago, 2015), which would have been scarcely imaginable without it. The title essay, “Image Science,” attempts to reverse the usual discussion of “images in science” as serviceable instruments that help scientists to think about the real things (matter, energy, living things) that concern them. Instead, I proposed to turn the tables and ask what it would mean to think of images themselves as scientific objects rather than instruments. I examined the three scientific fields that would seem to have the most to say about images: mathematics, physics, and biology.

This course was organized and implemented by the Arts, Science + Culture Initiative and co-sponsored by the Computation in Science Seminar Series, Vice Provost for the Arts, Arts Council, Fishbein Center for the History of Science, Nicolson Center for British Studies, Art History Department, and the Franke Institute.



In fall 2017, the Arts, Science + Culture Initiative, together with the Goethe Institut of Chicago, invited Berlin-based Argentinian artist Tomás Saraceno to the UChicago campus. Saraceno met with scientists from astrophysics, cosmology, and soft matter research to discuss the scalability of complex structure—from the microscopic to the truly macroscopic—and the translation of complexity to architectural forms. In a public roundtable, Saraceno and physicists took the audience on a tour of complex forms, from the structure and architecture of dark matter and planetary systems down to spider networks.

Tomás Saraceno's artistic oeuvre is rooted in research informed by the worlds of art, architecture, natural sciences, astrophysics, and engineering; his floating sculptures, community projects, and interactive installations provoke new, sustainable ways of inhabiting and sensing the environment.

During his visit to campus, Saraceno carried out an experiment in the Jaeger physics lab. With the assistance of PhD candidate Melody Lim, he used high-speed video to film particles of cosmic dust as they levitated to the vibrational rhythms of ultrasound frequencies. Acoustic levitation is used as a method for suspending matter in a medium, in this case air, by using intense sound waves and observing how matter aggregates when gently floating. Until now, this dynamic remains largely unexplored, though it could be an important step toward a better understanding of the formation of planets, which grow from aggregating clouds of interstellar dust.

As a result of this residency, Saraceno created *The Politics of Solar Rhythms: Cosmic Levitation*, a video artwork that was later included in the 2018 exhibition, *Carte Blanche to Tomás Saraceno: On Air*, at the Palais De Tokyo, Paris. The video was accompanied by realtime sonification of the temperature differential between the inside and outside of the Palais de Tokyo.

This collaboration and exchange between artists and scientists exemplify the vision of the Arts, Science + Culture Initiative. It is our aim to continue to encourage and facilitate encounters such as this one among scholars and world-class artists.



Single channel video, Full-HD, black and white, sound, 2'48." Courtesy the artist; Ruth Benzacar, Buenos Aires; Esther Schipper, Berlin; Tanya Bonakdar Gallery, New York/ Los Angeles; Andersen's Copenhagen; Pinksummer Contemporary, Genoa. © Studio Tomás Saraceno

**Public Programs:
Artistic, Scientific
and Cultural Inquiry**

The goal of ASCI’s public programming is to engage and disseminate information to the University community, our neighbors, the city of Chicago, and beyond. Our roster of programs presented over the last 10 years exemplifies the interplay of disciplines. We have championed partnerships for more than 40 public programs with University centers, institutes, faculty, and departments including: Music Composition, Visual Arts, Art History, English Literature, Anthropology, Cinema and Media Studies, the Franke Institute of Humanities, Physical and Biological Sciences, the Pritzker School of Molecular Engineering, the Neubauer Collegium, the James Franck Institute for Integrated Science, the Gray Center for Arts and Inquiry, *Critical Inquiry*, the Center for the Study of Gender and Sexuality, the Center for the Study of Race, and Arts and Public Life. On topics as wide-ranging as digital culture, sci-futurism, experimental imaging, and cabinets of curiosity, ASCI’s public programs critically challenge scientists and artists to collide disciplinary methodologies, sparking new bodies of research and lines of inquiry. Our collaborations beyond campus have included the School of the Art Institute of Chicago, the Goethe Institut, HKW: Haus der Kulturen der Welt, and the Chicago Architectural Biennial.



Hysterical Alphabet
November 7, 2012

Hysterical Alphabet was a collaboration between author and performer Terri Kapsalis, video-collagist Danny Thompson, and sound artist John Corbett. Together, they chronicled the saga of the “female malady”—hysteria—throughout human history. The multimedia performance was a project of Theater Oobleck and brought to UChicago by the Arts, Science + Culture Initiative for the way it placed art in conversation with science. The evening’s program consisted of “26 letters of the alphabet, 26 episodes from the history of hysteria, and 26 short films with live soundtracks.” Kapsalis then held a workshop on campus, where she delved into the making of the project.

Hysterical Alphabet was presented by the Arts, Science + Culture Initiative and the Center for the Study of Gender and Sexuality.



**Imaging/Imagining the Human
Body in Anatomical Representation,
a multi-venue exhibition at UChicago**
March 25–June 20, 2014

Curated by Mindy Schwartz, MD, Professor of Medicine, Brian Callender, MD, Assistant Professor at the University of Chicago’s Pritzker School of Medicine, and Anne Leonard, Smart Museum, this exhibition explored the history of anatomical representation and the evolving relationship between the arts and medical science. The exhibition included works in a variety of media—drawings, rare manuscripts, sculptures, engravings, x-rays, and 3-D printed models—dating from the Renaissance to today. It featured both imaginative depictions of the human figure made by artists as well as scientific images of the body, and traced the interplay of artistic and medical imaging throughout history.

This exhibition ran concurrently across three venues, each with a dedicated sub-theme that contributed to the larger theme of Imaging/Imagining: Special Collections Research Center (The Body as Text), the Smart Museum (The Body as Art), and the Crerar Library (The Body as Data).



Cosmos February 13, 2015

In 2013, the Arts, Science + Culture Initiative launched the Cabinet series, a contemporary and animated re-interpretation of the *Wunderkammern*. *Cosmos*, a part of this series exploring cosmology and its reverberations, was a three-part evening of performative presentations by scholars and artists from the University of Chicago and beyond. The multimedia program included “Cosmic Mysteries: The Dark Universe and the Most Energetic Particles,” a conversation with Angela Olinto (Homer J. Livingston Professor, Department of Astronomy and Astrophysics; Enrico Fermi Institute; and the College, the University of Chicago); a magic lantern performance called “The Night Sky,” created by Artemis Willis (filmmaker and media arts curator; PhD Candidate, Cinema and Media Studies, the University of Chicago) and featuring Terri Kapsalis (writer, performer, and cultural critic; Adjunct Professor of Visual and Critical Studies, the School of the Art Institute of Chicago); and “Sun Ra,” a performance on tenor and soprano saxophones by David Boykin (composer, bandleader, and multi-reed instrumentalist).

A Conversation with Thomas Hirschhorn and Yasmil Raymond on Gramsci Monument, A Living Sculpture October 27, 2015

Swiss artist Thomas Hirschhorn and former Dia Foundation and MoMA curator Yasmil Raymond gave a public talk about their work together on the acclaimed *Gramsci Monument*, a tribute to philosopher Antonio Gramsci. Commissioned by Dia Art Foundation in 2013, the Monument was built by housing residents in the courtyard of the Forest Houses housing projects in the South Bronx, New York City. The “living sculpture” took the form of a sprawling outdoor structure, made up of a number of rooms or pavilions collaged together out of everyday materials. Over the course of the installation, the living sculpture offered the community a daily program of lectures by internationally renowned artists, philosophers, curators, and critics; children’s workshops; poetry performances; and an on-site radio station—all documented in a daily newspaper. This talk was in partnership with the first Chicago Architecture Biennial. The discussion was followed by a Q&A session moderated by UChicago’s Bill Brown, Karla Scherer Distinguished Service Professor in American Culture and Deputy Provost for the Arts. Hirschhorn also visited with visual arts student and faculty.

Presented by the Arts, Science + Culture Initiative and the Department of Visual Arts. Sponsored by the University of Chicago Arts Council, *Critical Inquiry*, the Franke Institute for Humanities, the Neubauer Collegium for Culture and Society (Arts and Public Life project), and the Goethe Institut.



Containment: Screening and Roundtable with the Filmmakers February 2 and 3, 2017

Containment (2015) is part graphic novel and part observational essay filmed across weapons plants, Fukushima, and deep underground. It weaves between an uneasy present and an imaginative, troubled far future, exploring the idea that over millennia, nothing stays put.

Following the screening of *Containment*, we held an interdisciplinary round table discussion with filmmakers Peter Galison (Pellegrino University Professor of the History of Science and of Physics at Harvard University) and Robb Moss (Professor and Chair of the Department of Visual and Environmental Studies at Harvard University) led by D. N. Rodowick (Glen A. Lloyd Distinguished Service Professor, Departments of Cinema and Media Studies, and Visual Arts). In a further discussion of the documentary, filmmakers Galison and Moss, joined scholars and scientists Joseph Masco (Professor of Anthropology and of the Social Sciences); Dr. W. Mark Nutt (Principal Nuclear Engineer at Argonne National Laboratory and National Technical Director of the DOE-NE’s Nuclear Fuel Storage and Transportation Planning Project); and Natalia V. Saraeva (Nuclear Engineer at Argonne National Laboratory).

Presented by the Arts, Science + Culture Initiative, the Film Studies Center, and the Neubauer Collegium for Culture and Society at the University of Chicago.



Slipping and Jamming: Variable Installation of Z-Forms October 3 – November 30, 2017

In conjunction with the second Architecture Biennial, the Arts, Science + Culture Initiative commissioned a work by Chicago-based artist and UChicago alumnus Dan Peterman. *Slipping and Jamming* was a sculptural installation that explored the tension between structural stability and instability. The project, which grew out of a 2016 Graham Foundation-funded collaborative endeavor between Peterman and the laboratory of Heinrich Jaeger, a University of Chicago physicist, was based on radically new concepts at the intersection of contemporary sculptural practice and research related to the physics of granular materials. The sculpture was installed in the William Eckhardt Research Center on the University of Chicago campus. In November of that year, we held a public talk at the Gray Center for Arts and Inquiry with Peterman and Jaeger about the collaboration that generated the sculptural installation.

This sculpture installation was sponsored by the UChicago Public Art Fund.

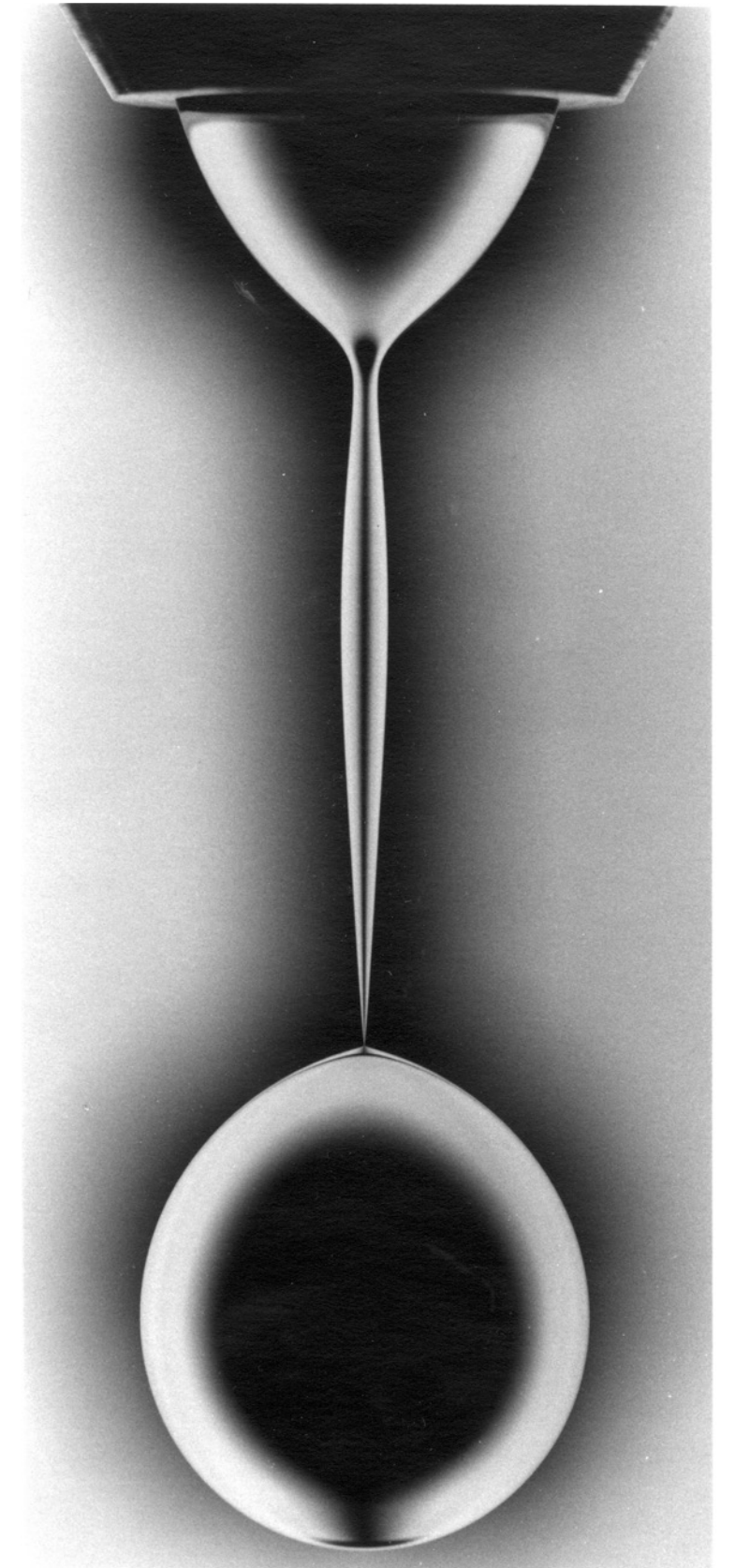
**Water Project:
Research and
Cultural Production**

Water is everything. It connects us all. What is our relationship to the ongoing water crisis and climate change? How can we deepen our imagination of water's centrality to life? Looking ahead, water issues will be among the most critical we face: as sea levels rise, access to potable water is quickly emerging as one of the most pressing and complex concerns we face on our globe. To address this, in 2018 the Arts, Science + Culture Initiative launched the Water Project: Research and Cultural Production, a University-wide program to amplify the discourse around issues related to water—locally and globally—by bringing together scientists, humanists, social scientists, students, community members, and professional arts practitioners. This project offers a dynamic and far-reaching infrastructure for centralizing water-related programs on our campus over the course of several years.

The project grew out of a series of successful faculty roundtables (“Water Tables”) initiated by ASCI that imagined the potential of coalescing water-related coursework, performances, exhibitions, and commissioned artworks. The project connects ongoing research and teaching efforts to amplify their societal relevance and, thereby, contribute to a greater public discourse on water. Most importantly, it brings the powerfully visionary role of arts and culture production to water-related research.

The Water Project is creating waves. Artists across media are concentrating on past and present concerns related to water, artists like Ellie Ga, Joan Jonas, and Oscar Tuazon. Meanwhile, the Humanities and Social Sciences in the College have teamed up with the Biological Sciences to form a trans-disciplinary steering committee to promote water-related coursework and inquiry, bringing together faculty from environmental law, public policy, biological sciences, humanities, environmental studies, and molecular engineering. The Water Project will host a range of programs to stimulate engagement among faculty, students, our broader university community, and the general public with this rich topic. The Water Project is an example of how an “ecology of perspectives” can amplify and ultimately address important concerns of our time. As such, it also serves as a model for future cross-disciplinary research and teaching about one of our most valuable resources. This is our intention moving forward.

Water drop near break off.
Image: Sidney Nagel, Stein-Freiler
Distinguished Service Professor
of Physics.



Partners
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Reva and David Logan Center for the Arts
The Pritzker School of
Molecular Engineering
Divisions of the Biological and Physical Sciences
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Advisory Committee Members
2010–2020
Over the last 10 years, the following faculty have been instrumental in providing guidance to build the impact of the Arts, Science + Culture Initiative. We thank them wholeheartedly for their enduring/continuing support.
Seth Brodsky
Associate Professor, Department of Music and the Humanities, Director, Gray Center for Arts and Inquiry
Orianna Cacchione
PhD, Curator of Global Contemporary Art, Smart Museum of Art
Anthony Cheung
Composer and pianist, Assistant Professor, Department of Music
Juan De Pablo
Vice President for National Laboratories, Liew Family Professor in Molecular Engineering, Senior Scientist at Argonne National Laboratory
Ian Foster
Arthur Holly Compton Distinguished Service Professor, Department of Computer Science Distinguished Fellow, MCS Division, Argonne Senior Scientist, MCS Division, Argonne
Daniel Holtz
Professor, Enrico Femi Institute, Kavli Institute for Cosmological Physics and Department of Physics

Matthew Jesse Jackson
Professor, Department of Art History, Chair, Department of Visual Arts
Patrick Jagoda
Professor, Department of English, Department of Cinema + Media Studies, Center for the Study of Gender and Sexuality, co-editor, <i>Critical Inquiry</i> , Director, Media Arts and Data Center
Young-Kee Kim
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Ka Yee C. Lee
Provost; David Lee Shillinglaw Distinguished Service Professor of Chemistry
Laura Letinsky
Artist, Professor, Department of Visual Arts
Joseph Masco
Professor of Anthropology and of the Social Sciences in the College, Chair
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W.J.T. Mitchell
Gaylord Donnelley Distinguished Service Professor of English and Art History, Editor, <i>Critical Inquiry</i>
Angela Olinto
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Sam Pluta
Composer, Assistant Professor, Department of Music; Director, Computer Music Studio
Pope.L
Artist, Professor, Department of Visual Arts
Michael Rossi
Assistant Professor of the History of Medicine, the Conceptual and Historical Studies of Science, and the College
Zachary Samalin
Assistant Professor, Department of English and the College
Sabina Shaikh
Director, Program on Global Environment; Senior Lecturer, Environmental and Urban Studies in the College; Faculty, Committee on Geographical Sciences; Faculty Director, Chicago Studies

James Skinner
Crown Family Professor of Molecular Engineering, Director of the Water Research Initiative and Deputy Director for Faculty Affairs, Pritzker School of Molecular Engineering/Argonne
Catherine Sullivan
Artist, Professor, Department of Visual Arts, Cinema + Media Studies
Lawrence Zbikowski
Professor of Music and the Humanities, Department of Music
Wendy Zhang
Professor, Department of Physics, James Franck Institute, and the College
Rebecca Zorach
Former Professor, Department of Art History, Department of Romance Languages and Literatures; The College Director of Graduate Studies, Art History; Senior Chair, Society of Fellows in the Liberal Arts

On the Cover

DAN PETERMAN
SLIPPING AND JAMMING: VARIABLE
INSTALLATIONS OF Z-FORMS, 2015–2017

On the occasion of the second Chicago Architecture Biennial, ASCI commissioned a sculpture by internationally renowned Chicago-based artist and UChicago alumnus Dan Peterman. Installed in the lobby of the William Eckhardt Research Center on the UChicago campus, *Slipping and Jamming* explored the tension between structural stability and instability. The work is composed of thousands of “Z-Forms”—post-consumer reprocessed plastic elements each cut in the form of a Z. Z-Form sculptures embody a highly counter-intuitive idea: the possibility to create load-bearing, stable forms not by orderly arrangement of the individual elements, but by random, disordered configurations that structurally resemble a liquid with the potential to flow. Generously funded by the UChicago Public Arts Fund.

