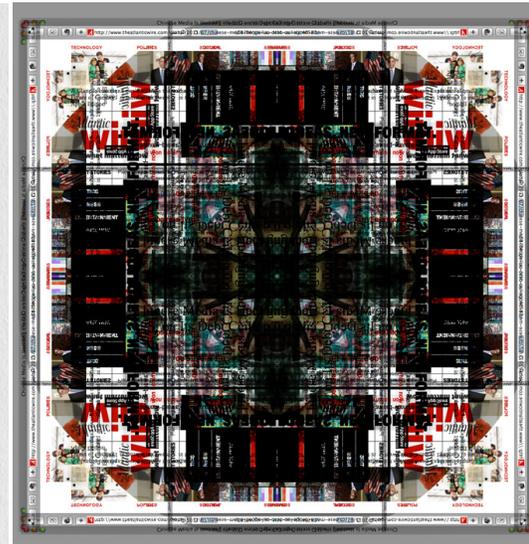
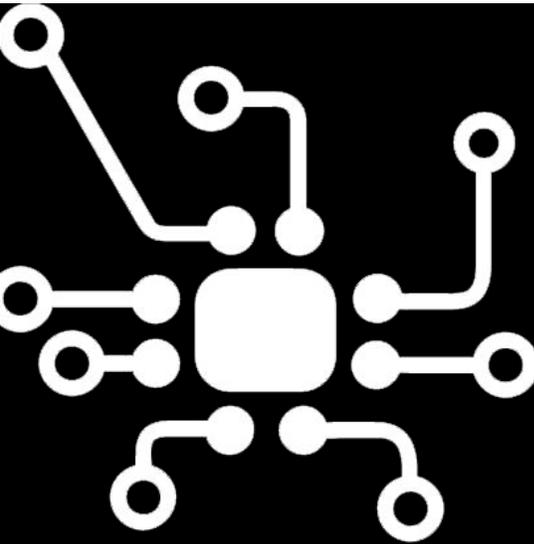




SEPTEMBER 2016

DC Art Science Evening Rendezvous

Exploring the intersection of Research,
Innovation, and Social Engagement



SciArt Research

The D.C. Art Science Evening Rendezvous (DASER) is a discussion forum organized by Cultural Programs of the National Academy of Sciences (CPNAS), held 6-8 times annually. DASER fosters community and conversation around the intersections, and interweaving, of art, science, and culture. On September 22, 2016, CPNAS hosted a program exploring the theme of **SciArt Research**. The presentations and discussion explored trans-disciplinary research projects where artists and scientists are collaborating in mutually beneficial ways. Speakers were Liese Zahabi, Rieko Yajima, Matthew Shlian, and Laurie Baefsky; the discussion was moderated by JD Talasek. We welcomed 175 guests to this event at the NAS Building, 2101 Constitution Ave., N.W., Washington, D.C., which featured inspiring and thought-provoking conversations between the speakers and audience. The program was live-streamed and a recording is available on the NAS account at <https://livestream.com/accounts/7036396/events/5922821>. Videos of the presentations are available on CPNAS' YouTube channel at: <http://www.YouTube.com/CPNAS>.



The National Academies of
SCIENCES • ENGINEERING • MEDICINE



PROGRAM HIGHLIGHTS

This DASER revisited the themes of the November 2015 National Academies Keck *Futures Initiative* (NAKFI) conference held in Irvine, CA. One of the evening's speakers, **Rieko Yajima**, was also a conference participant. NAKFI has been catalyzing interdisciplinary research since 2003; the 2015 conference focused on intersections of art and science.

The evening began with community share, where audience members identify themselves for networking. Several people gave short, fascinating descriptions of their current projects at the intersection of art, science, and culture: **Michele Banks**, a visual artist working with microscopic biological themes, announced that she would be participating in several upcoming arts festivals; **Heather Spence**, a marine biologist and musician, announced that she is looking for interns to conduct research on data analysis and policy analysis; **Patterson Clark** described his ongoing project to harvest D.C.'s exotic invasive vegetation, exploring its potential for use as art, food, fuel, and fiber; **Tom Rudin** and **Ashley Bear** of the National Academies' Board on Higher Education and Workforce announced their two year study that looks at evidence of the value of integrating the arts, humanities, science, engineering, and medicine at the undergraduate and graduate levels; Artist **Bonnie Peterson** described her participation in a project called Fires of Change during which artists underwent fire science training; and photographer **Jill Hatzai** described her passion for helping scientists obtain strong visuals for more effective science communication.

Liese Zahabi gave a talk titled "An Exquisite Morass: Reimagining our Experience of Online News and Google Search." She described her project exploring the patterns found within online searches and how she reconfigures these patterns to alter the experience of information retrieval. Using visual screen grabs and textual headlines from online news stories, Zahabi has experimented with kaleidoscope-like images and typographic studies that reveal the evolution of web design and relationships within a collected body of content.

In her talk, "Reconstructing the Scientific Paradigm," **Rieko Yajima** described how design-based practices can complement scientific investigation. Scientific research is a highly creative process that increasingly depends on what she described as "conceptual collisions" across disciplines, a phrase meaning "bringing knowledge together in new ways." She described the success of the video game *Foldit*, where players solve scientific problems related to protein folding, and non-scientist players have, in some cases, solved problems puzzling scientists for years.

In his talk, "Bringing Physics into the Fold," **Matthew Shlian** explored the connection paper folding has to the science community and its ability to both illustrate scientific principles and assist



in research through design. Not "a math person," he traced his career trajectory in the arts and described how he has come to collaborate with scientists who are applying his paper folding techniques to improve the efficiency of solar cells. His work feeds off the symbiotic relationship that exists between the studio and the lab. He shared samples of his work, much to the audience's delight.

In her talk titled "Thirdspace: Bridging Boundaries to Surface and Support Transdisciplinary Arts Research and Production," **Laurie Baefsky** described the mission of the Alliance for Arts in Research Universities (a2ru): To generate knowledge, advocacy, and resources that enable universities to integrate arts and design practices, fostering highly adaptive creators and thinkers. She described Thirdspace, a2ru's emerging aggregate and peer review platform that serves the community working on transdisciplinary arts research projects, projects like those described by Zahabi, Shlian, and Yajima. Baefsky invited the audience to Denver in November to participate in a2ru's National Conference.

CAN I QUOTE YOU? Audience Responses



THIS CHANGED MY OPINION OF:

The importance of paper [Matthew Shlian's work] and video games [Rieko Yajima's presentation about the Foldit video game's applications in science research].

Nothing. #Sciart rules!

THE SPEAKER NAILED IT WHEN:

She [Rieko Yajima] described integrative science as 'conceptual collisions.'

I enjoyed all of the presenters. They were enthusiastic and informative.

THE BEST PART WAS:

Matthew Shlian's presentation, showing relationship between art + science. Art is useful. Excellent Q & A.

Touching the paper art.

Matthew Shlian described his career trajectory, and the different ways he came to work with scientists, very interesting and relevant to hear about partnerships between these two fields.

#DASER Social Media Highlights



There was lively Twitter and Instagram activity during the DASER program.

@AmyBower11: *Fascinating exploration of web design through artworks made from screenshots @LieseZahabi #DASER*

@elpeanoh: *@RiekoYajima discusses paradigm shifts in scientific (and general) knowledge-when evidence outgrows preconceived theories. #DASER*

@FossilLocator: *"Players that scored best at fold.it were nonscientists" - Rieko Yajima talking of collision of science + design #DASER*

@heatherspence: *.@MatthewShlian 'I work with the paper to find its final form' #DASER @CPNAS*

@artfulmanager: *"When nothing is known, anything is possible." @MatthewShlian #DASER*

@artologica: *Gotta love when the only man on a panel says he's "not a math person" #DASER*

@richardchan81 *#ConceptualCollision Impactful intersection of disciplines #DASER*

@elpeanoh: *Panel discussion on "conceptual collisions" - comes from foundations of different sorts of knowledge, w/ a bit of novelty thrown in. #DASER*

@bluelikechagall: *Fav of the night: @MatthewShlian "It wasn't that long ago that we were dissecting bodies and drawing them at the same time." #DASER*

@artologica: *Learned about @a2ru_News at #DASER - promoting arts/cross-discipline projects*

Read the complete social media Storify archive:
<https://storify.com/CPNAS/daser-sciart-research>.



SPEAKER BIOGRAPHIES

Liese Zahabi is a graphic/interaction designer and Assistant Professor of Graphic/Interaction Design at the University of Maryland in College Park. She holds a master's degree in graphic design from North Carolina State University, and a bachelor's degree in fine arts from Eastern Michigan University. She has been working as a designer for thirteen years, and teaches courses in interaction design, motion design, typography and advanced graphic design. Zahabi's academic research focuses on search as a cognitive and cultural process and artifact, and how the design of metaphoric interfaces can change the experience of search tasks. Her creative design work is also metaphorical, and explores how the nature of search manifests itself in visual patterns and sense-making, and how language and image intersect within the context of the Internet.



Rieko Yajima is a biochemist with interests that lie at the intersection of science and society, which include design and policy. She is currently a visiting research scholar at the Center for Design Research at Stanford University to investigate how Design Thinking Paradigms can catalyze scientific research and innovation. Previously, she worked for the American Association for the Advancement of Science, in Washington, DC, where she advised the scientific community on research collaboration, implementation, and evaluation. In 2015, Yajima was elected to the Global Young Academy, a rallying point for outstanding young scientists from around the world to

come together to address topics of global importance. She holds a doctorate degree in integrative biosciences from The Pennsylvania State University and served as a science policy fellow at the NAS.

Matthew Shlian is an artist and designer working in paper. He uses the traditions of origami, kirigami, and paper engineering to transform flat materials into 3D sculptures and he applies his experience in collaborative research with scientists at the University of Michigan, Ann Arbor. He is a visiting research scholar in the Materials Science Department, University of Michigan, Ann Arbor. He holds a bachelor's degree in fine arts from Alfred University and a master's degree in fine arts from Cranbrook Academy of Fine Art. His exhibit *Chirality* is on view at the NAS through January 16, 2017.

Laurie Baefsky has developed and led arts integrated educational initiatives for over 15 years. As executive director of ArtsEngine and the Alliance for the Arts in Research Universities (a2ru) housed at the University of Michigan, she works locally and nationally to champion and strengthen arts and transdisciplinary arts endeavors in higher education. With a background in classical music, Baefsky has appeared on flute and piccolo with the Minnesota Orchestra, Utah Symphony, New World Symphony, and as a tenured member of the Virginia Symphony for many years. Baefsky currently serves as a member of the committee of the National Academies of Sciences, Engineering, and Medicine on the Integrating Higher Education in the Arts, Humanities, Sciences, Engineering and Medicine, and is PI on a three-year Mellon Foundation-supported research initiative at the University of Michigan, *SPARC — Supporting Practice in the Arts, Research and Curricula*.

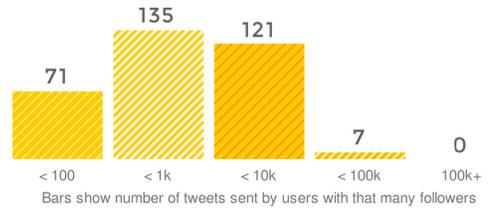
TWEETREACH SNAPSHOT FOR DASER

ESTIMATED REACH

239,518
ACCOUNTS REACHED

EXPOSURE

777,413 IMPRESSIONS

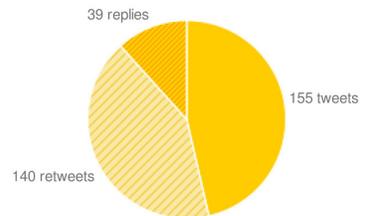


ACTIVITY

334
TWEETS

126
CONTRIBUTORS

10
DAYS



TOP CONTRIBUTORS

- 266.1k** IMPRESSIONS @CPNAS
- 64** RETWEETS @CPNAS
- 114** MENTIONS @CPNAS

MOST RETWEETED TWEETS

- 11** CPNAS @CPNAS
.@matthewshlian's exhibition, Chirality, is on view @theNASciences through January 16, 2017....
[twitter.com/i/web/status/7...](#)
- 6** Heather Spence @heatherspence
.@matthewshlian 'I work with the paper to find its final form' #daser @CPNAS [https://t.co/qlb2Y03T23](#)
- 5** CPNAS @CPNAS
Baefsky: @ICATatVT, an @a2ru_News partner, is a transdisciplinary living lab tightly integrated w/ edu, commercial... [twitter.com/i/web/status/7...](#)

LIVESTREAM WEBCAST REPORT

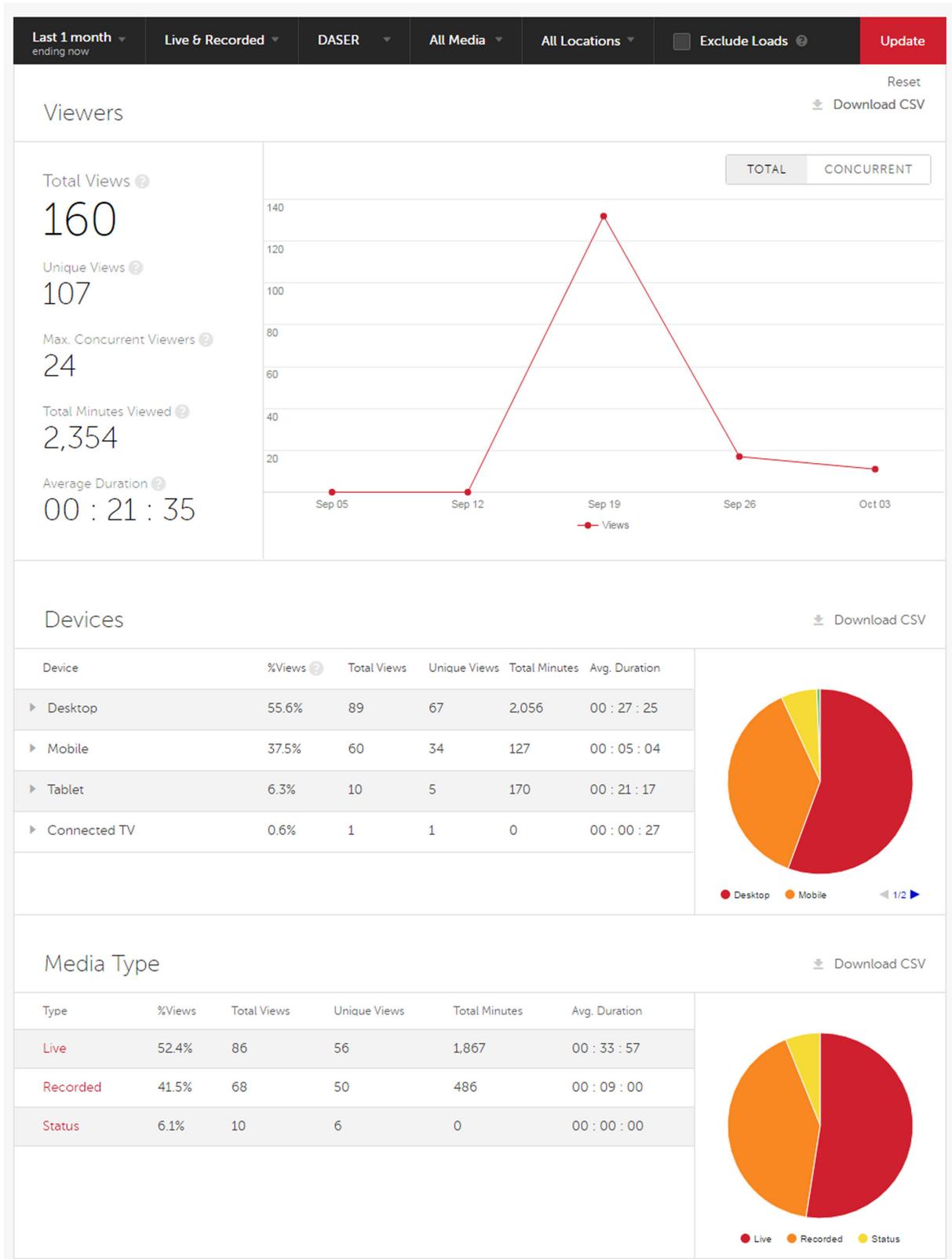


PHOTO CREDITS