

2012/13

a year
closer to
the future



FIRST ANNUAL REPORT



Getting the conversation started at
CSI's launch, September 24, 2012.



Officially launched on September 24, 2012, Arizona State University's Center for Science and the Imagination (CSI) brings together humanists, artists and scientists to reignite humanity's grand ambitions for innovation and discovery. The center serves as network hub for audacious moonshot ideas and a cultural engine for thoughtful optimism.

Research Areas

Radical Collaboration: Networks of Imagination

We are fostering and studying radical collaborations, such as pairing science fiction writers with scientists and engineers, to create teams that span not just related disciplines but broadly divergent practice areas. Our methods focus on the importance of shared language and key vocabularies in making communication across these disciplinary gulfs possible. Collaborative teams define themselves individually and collectively through narrative, creating compelling visions of the near future inspired by current research. These stories can frame new questions as well as offer crucial insights into how participants define their work in relation to broader intellectual paradigms.



Reinventing STEM Education

The visions of the future we generate through our research projects can serve as compelling starting points for university and K–12 classroom exercises that illustrate STEM (Science, Technology, Engineering and Mathematics) concepts while linking them organically to the arts and humanities. Building course modules that encourage students to remix, reinvent and redefine these narratives will grant them agency to apply their own STEM knowledge, critical thinking and creativity to articulating better dreams for the future.



Prototyping Dreams

The center is exploring multiple pathways for researchers and students to engage in rapid prototyping of their visions for the future using methods including 3D printing, crafting, games and digital narratives, design fiction, science fiction and film. In a pilot effort, center director Ed Finn is developing an introductory-level course in ASU's Digital Culture curriculum titled "Prototyping Dreams" that will introduce students to a variety of approaches to creating better dreams for better futures. Students will learn models for rapid concept prototyping so they can quickly share and advance their ideas collaboratively.



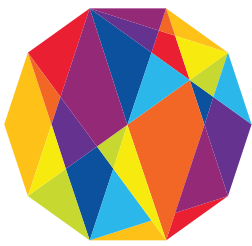
Current Projects

Hieroglyph, a collaboration with Neal Stephenson, teams up authors with scientists and engineers to write science fiction stories that envision a near future radically changed by technological innovation. The project aims to break out of the gloomy, dystopian rut that dominates so many of our visions of the future by inspiring people to think critically and creatively about science, technology and society. The center hosts an online platform that enables quick, easy collaboration between groups of writers and researchers and invites broad public participation. This growing archive of stories and media will serve as the foundation for an anthology of fiction and non-fiction under contract with HarperCollins.

hieroglyph.asu.edu

Neal Stephenson, Keith Hjelmstad, Daniel MacDonald,
Jenny Hu and Kevin Finke present on the Tall Tower
at the Starship Century Symposium, University of
California, San Diego, May 21, 2013.





Hieroglyph

Active discussion

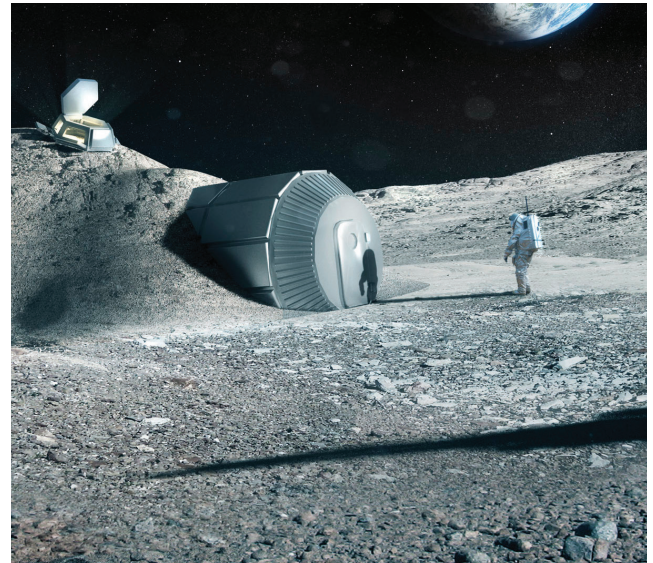
Project Hieroglyph has blossomed into an energetic forum for creative thinking about the future.

Bruce Sterling, for example, is currently balancing the roles of a science fiction author, journalist, editor, globetrotter, Professor of Internet Studies, design fiction maven and our own Visionary in Residence at CSI. Recently, his contributions to Hieroglyph's "But what will we eat?" forum have included some helpful recommendations on how to get your hands on some delicious food substitutes like "Soylent" and "victimless meat".

Zach Berkson, founder of the CSI's student group, the ASU Imagination Project, and freshly graduated member of ASU's chemical engineering program, has also been taking part in this food fueled conversation, sharing his own innovative methods for developing agriculture, including the prospect of flying potato farms someday dominating the skies.

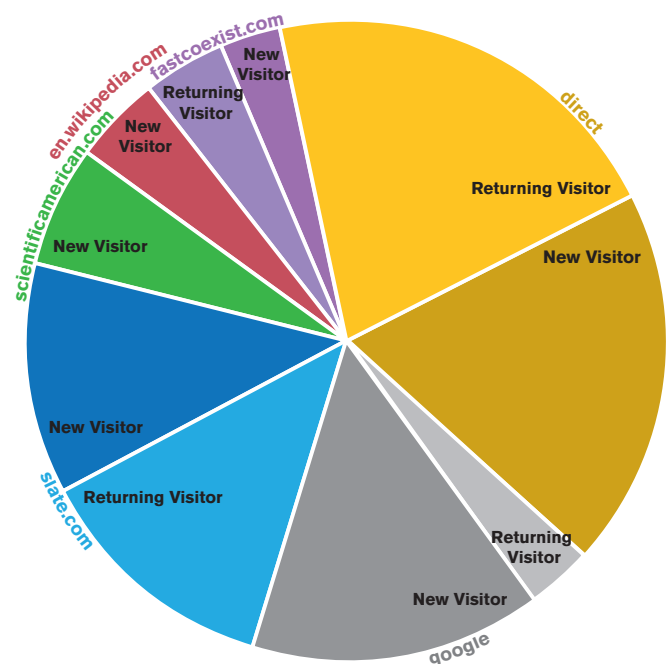
Brenda Cooper, a science fiction author, futurist, and technology professional, took part in a conversation with Rudy Rucker, a fellow science fiction author, mathematician, philosopher, and one of the founders of the cyberpunk literary movement, about telepathy, specifically as a future means of sans-speaking communication.

The time and energy invested by contributors is building a vibrant online community and an active platform for getting big stuff done.



Cory Doctorow is working on a story about 3D printing on the moon. Image by ESA/Foster + Partners

Project Hieroglyph has over **250** active users,
144 different topics in **7** forum areas
 with a total of **373** replies.

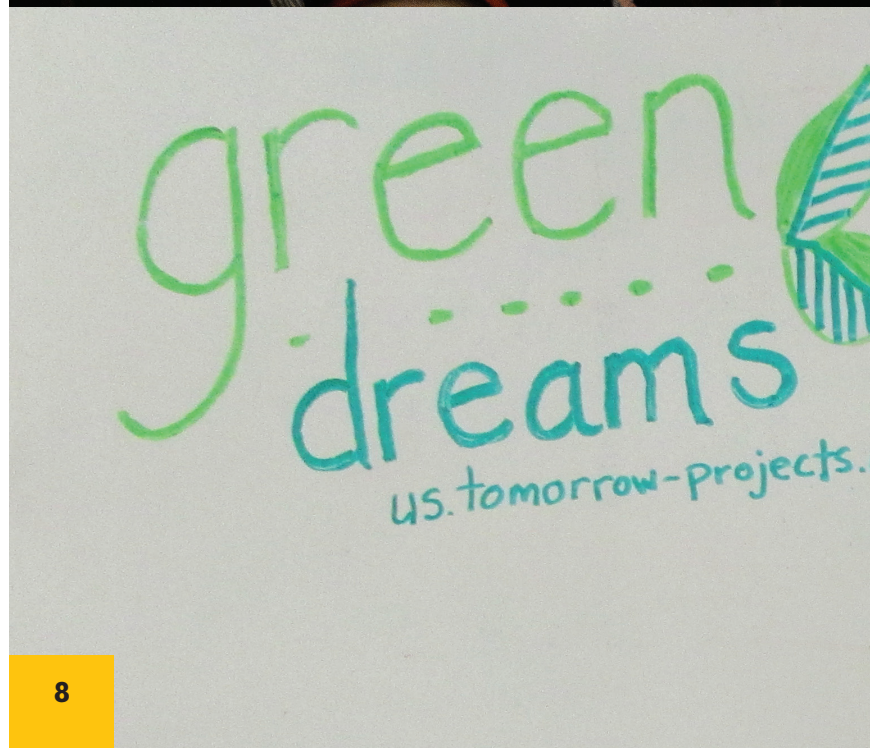


Sources of visitors to Project Hieroglyph web site in May 2013

The Tomorrow Project

Tomorrow Project USA is a collaboration with Intel intended to foster productive, science-based conversations about the future. Tomorrow Project USA will publish a series of anthologies featuring original work from college students, with CSI coordinating an editorial board of leading researchers, journalists, scholars and ASU students. Each anthology will address a different set of grand challenges and possible solutions.

isef.tomorrow-projects.com



THE FUTURE

Powered by Fiction

isef.tomorrow-projects.com

What do we do to avoid?

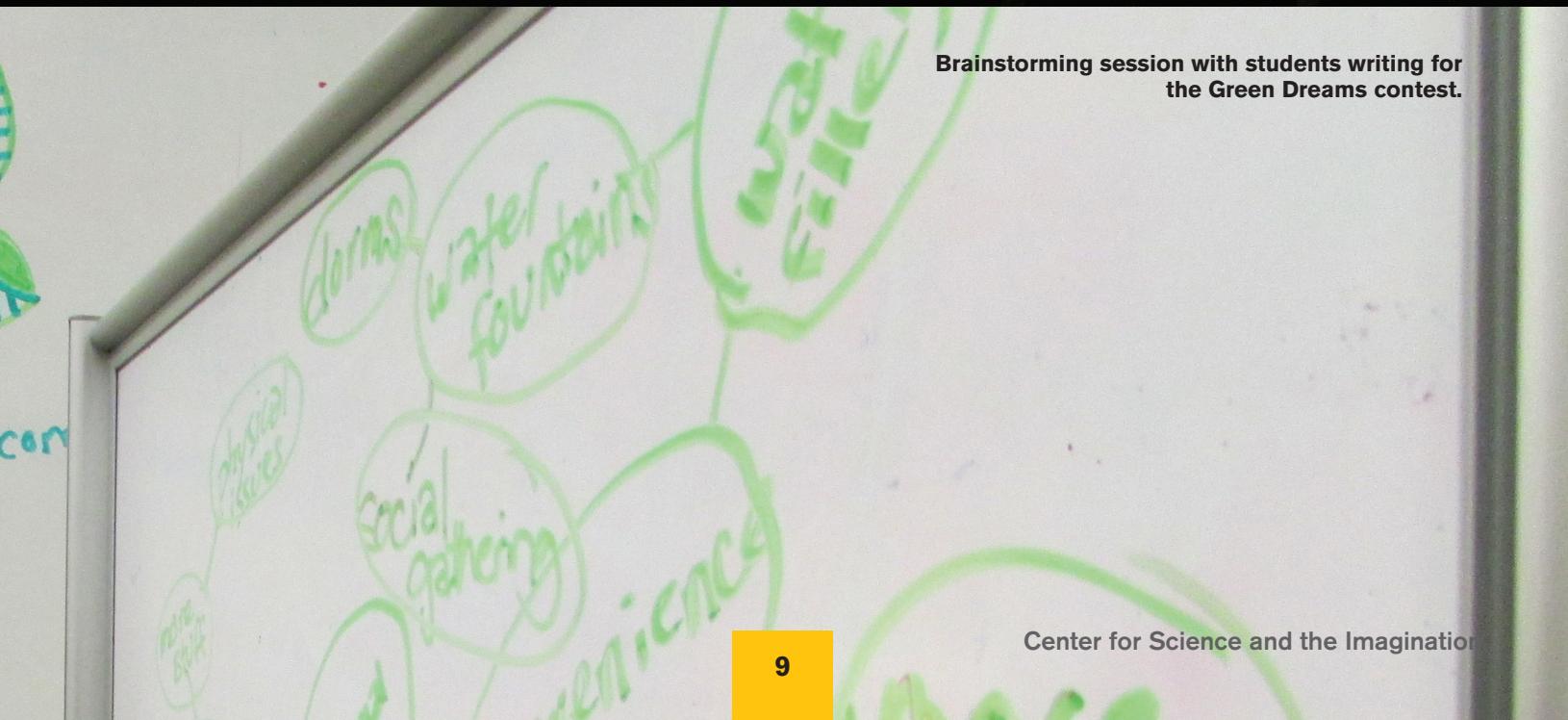
Conversation
projects.com

intel



CSI Director Ed Finn and Intel Futurist Brian David Johnson discuss *The Future - Powered by Fiction* contest with 70 international journalists, May 15, 2013.

Brainstorming session with students writing for the Green Dreams contest.



Center for Science and the Imagination

Emerge: Artists + scientists redesign the future

Emerge brings engineers, scientists, artists, storytellers and designers together to build, draw, write and rethink the future of the human species and the environments that we share. In March 2013 participants explored “The Future of Truth” and the stories we use to make sense of a complex world. Emerge combines workshops in which diverse groups create tangible artifacts and visions of the future with performances, conversations, debates and experiments.

emerge.asu.edu



Emerge



"Space fairies" from the dance company Vessel interact with the community at the Emerge closing festivities, March 2, 2013.



**CSI has taken
the lead in an
emerging field.**

Center for Entrepreneurship and the Future

Director

Sam Arbesman, Senior Scholar, Kauffman Foundation

Status

Drafting white paper; in conversation with CSI about potential collaborations

Mission

Combine scientific discovery, creativity and critical thinking about the future to advance entrepreneurship and innovation.

Center for Public Imagination

Director

Noah Raford, Advisor to the United Arab Emirates Prime Minister's Office

Status

Drafting white paper

Mission

Engage the public in imagining the future of governance, policy and urban development.

Arthur C. Clarke Center for Human Imagination

Director

Sheldon Brown, Professor of Visual Arts,
University of California, San Diego

Status

Launched May 20, 2013

Mission

Explore the nature of imagination from scientific and artistic perspectives; build tools and develop methods to expand the human imagination. Partners with the Arthur C. Clarke Foundation and Clarion Writers' Workshop.

authors

Madeline Ashby
Elizabeth Bear
Gregory Benford
Buzz Bissinger
David Brin
Brenda Cooper
Kathryn Cramer
Cory Doctorow
Alan Dean Foster
Nalo Hopkinson
Lee Konstantinou
Geoffrey Landis
Ian McEwan
Kim Stanley Robinson
Rudy Rucker
Karl Schroeder
Vandana Singh
Michael A. Stackpole
Neal Stephenson
Bruce Sterling

artists & filmmakers

Boyd Branch
Artist
Regan Brashear
Filmmaker
Dan Fine
Artist
Juan Jose Diaz Infante
Mexican Space Collective
Natalie Jaremijenko
Artist
Jonathon Keats
Conceptual Artist and Philosopher
Syd Mead
Visual Futurist and Production Designer
Miguel Palma
Artist
Edgar Ramirez
Photographer
Ilana Rein
Filmmaker
Jasmina Tesanovic
Filmmaker

organizations

AIGA Arizona
Arizona Science Center
The Arizona Republic
AZ SciTech Festival
City of Tempe
Duke University
Futures Institute
Entertainment Technology Center
Gangplank
Geeks' Night Out
German American Business Association
Intel
Intel International Science and Engineering Fair
Intel Tomorrow Project
Knight Foundation
NASA George C. Marshall Space Flight Center
Advanced Concepts Office
National Academy of Sciences
National Endowment for the Arts
National Endowment for the Humanities
Office of Digital Humanities
National Research Initiatives
National Science Foundation
New America Foundation
Phoenix Country Day School
Science News
Slate
Smithsonian Institution
Society for Science & the Public
Solve for X
Spirit of the Senses
Tempe Center for the Arts
Under Tomorrow's Sky
USAID
White House Office of Science and Technology Policy
Zócalo Public Square

ASU community

ASU Film Association

ASU Foundation

ASU Imagination Project

ASU Libraries

ASUtv

Barrett, the Honors College

Biodesign Institute

Changemaker Central

College of Technology and Innovation

College of Public Programs

College of Health Solutions

College of Liberal Arts and Sciences

BEYOND Center for Fundamental
Concepts in Science

Center for Film, Media and Popular Culture

Consortium for Science, Policy and Outcomes
Center for Nanotechnology in Society

Department of English
Film and Media Studies

Institute for Humanities Research

Lincoln Center for Applied Ethics
*Consortium for Emerging Technologies, Military
Operations, and National Security*

Night of the Open Door

Origins Project

School of Earth and Space Exploration
Center for Meteorite Studies

School of Historical, Philosophical & Religious
Studies
Scholarly Publishing Certificate

School of Life Sciences
Center for Biology and Society

School of Politics and Global Studies

School of Social Transformation
Women and Gender Studies

Virginia G. Piper Center for Creative Writing

College of Technology and Innovation

Future Tense

**Hugh Downs School of Human
Communication**

Herberger Institute of Design and the Arts

ASU Art Museum
Desert Initiative

The Design School
InnovationSpace

School of Art

School of Arts, Media and Engineering
Digital Culture Program

School of Theatre and Film

Ira A. Fulton Schools of Engineering

Higher Engineering Education Alliance Program

School of Computing, Informatics,
and Decision Systems Engineering

School of Sustainable Engineering
and the Built Environment
*Center for Earth Systems
Engineering and Management*

Mary Lou Fulton Teachers College

Center for Games and Impact

Office of Knowledge Enterprise Development

Project Humanities

Quanta

Office of the President

Office of University Initiatives

Retirees Association

Sandra Day O'Connor College of Law

School of Sustainability

Student Media

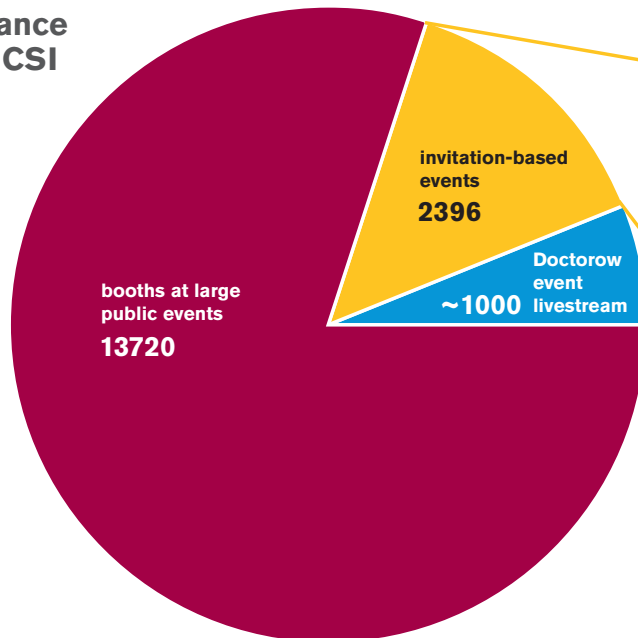
The State Press

Venture Catalyst

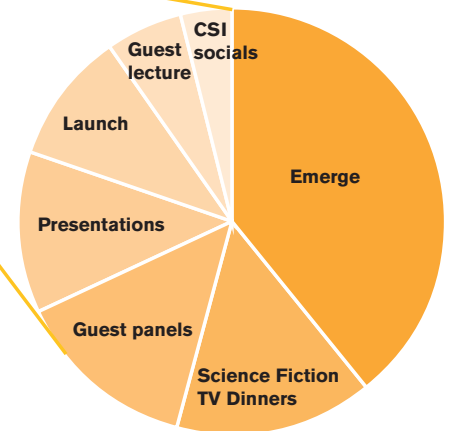
Walter Cronkite School of Journalism and Mass Communication

Community Outreach

Overall attendance of events with CSI participation



Attendance to invitation-based events broken down by category



Media articles about CSI and projects

94

Twitter followers

645

Retweets and mentions

120

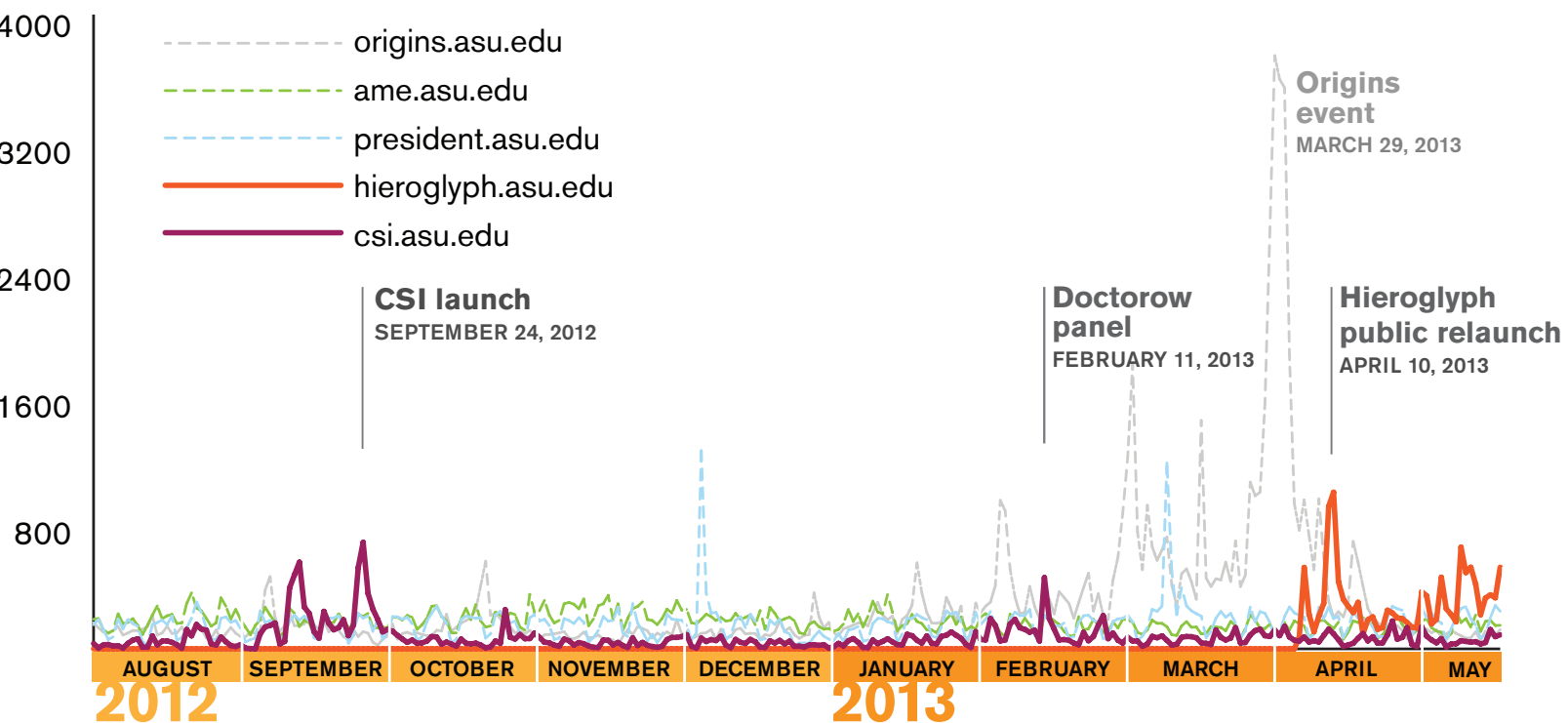
Facebook fans

415

Friends of fans

168,765

Unique web page views August 1, 2012 to May 15, 2013 compared to aspirational units

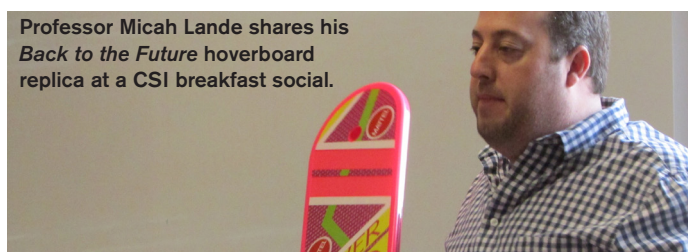




Author and cyber-activist Cory Doctorow speaks at the Hackers + Activism event at ASU's Cronkite School with Ed Finn, ASU's Dawn Gilpin and Gangplank's Jade Meskill.



Thinking big at Phoenix Comicon 2013 with panelists Micheal Stackpole, Kathryn Cramer, Keith Hjelmstad and Ed Finn.



Professor Micah Lande shares his *Back to the Future* hoverboard replica at a CSI breakfast social.



Community members chatting with author Kim Stanley Robinson after a panel discussion in the ASU Art Museum.



Full house for Science Fiction TV Dinner: *The Jetsons*.



Parents, kids and community members learn more about CSI at Geeks' Night Out at Tempe City Hall.

Student Engagement

From workshops to art installations, students were attendees, volunteers, active participants or speakers for many of CSI's events this year. We have engaged students at every opportunity.

CSI's website features several student contributors regularly sharing their ideas and perspectives. Capitalizing on the enthusiasm, a group of students, lead by chemical engineering senior Zach Berkson, started an organization called The Imagination Project:

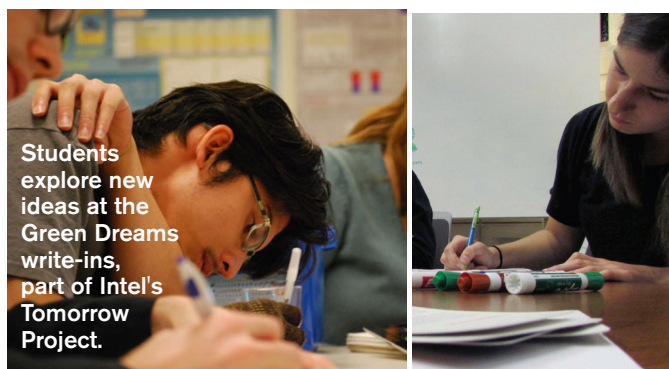
“The Imagination Project expands on CSI's events, projects and research to provide new, hands-on opportunities for student involvement and creativity. Building from CSI's exciting fusion of sciences, arts, humanities and engineering, we focus on reaching out to students (yes, even you!) to promote interdisciplinary collaboration and discovery.

This year, we kicked off what I like to call our “science over pizza” talks, where we engage with incredible innovators in a remarkably intimate setting. We sat down with astrobiologist Sara Walker to discuss the future of space colonization and the origin of life. We were delighted with presentations by resident intellectual powerhouses like Merlyna Lim, an expert on social media and social change, and Ed Finn, who discussed his doctoral research in the field of digital humanities. We talked carbon nanomaterials over brownies and coffee.”

— Raji Ganesan, sophomore and member of The Imagination Project



Docent and Imagination Project member Raji Ganesan discusses the art installation *Rotary Tumble* with an attendee of Intel ISEF 2013.



Students explore new ideas at the Green Dreams write-ins, part of Intel's Tomorrow Project.



Zach Berkson and Carl Stevenson of The Imagination Project gather at a breakfast event.



CSI supported graduate student Boyd Branch's installation at Emerge 2013, *neuro*, an immersive exploration of neurochemistry and ethics.



Staff

Center for Science and the Imagination Arizona State University

Fall 2012 - Spring 2013

Ed Finn

Director

Assistant Professor, School of Arts, Media + Engineering
Assistant Professor, Department of English
edfinn@asu.edu | (480) 382-2116

Ed Finn is the founding director of the Center for Science and the Imagination at Arizona State University, where he is an assistant professor with a joint appointment in the School of Arts, Media and Engineering and the Department of English. Ed's research and teaching explore digital narratives, contemporary culture and the intersection of the humanities, arts and sciences. He completed his doctoral degree in English and American literature at Stanford University in 2011.

Joey Eschrich

Research and Operations Coordinator
jpe@asu.edu | (480) 727-8621

Joey Eschrich earned his master's degree in Gender Studies in 2011 and his bachelor's degree in Film and Media Studies in 2008, both from Arizona State University. He has previously held administrative and research positions at a wide range of units at ASU, including the Office of University Initiatives, the Center for Film, Media, and Popular Culture and the Center for Solid State Electronics Research.

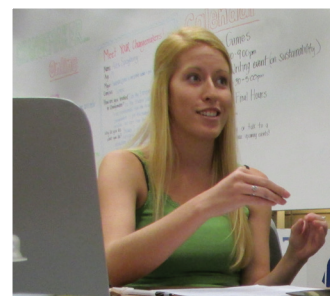
Nina Miller

Design Strategist
ninky@asu.edu | (480) 965-6896

Nina Miller is a designer, artist and performer in Phoenix, Arizona. Her research in Interaction Design focuses on theatrical improvisation and how it might inspire the collaborative design process. She serves as a board member, instructor and improviser at The Torch Theatre, a non-profit improv collective in central Phoenix.



students



Chelsea Courtney
Office Specialist



Wesley de la Rosa
Research Analyst

CSI Annual Report photography contributors: Tom Story, Andy DeLisle, John Dowd, Jose Gonzalez, Taylor Williams, Wesley de la Rosa, Joey Eschrich, Nina Miller, and Ed Finn



Center for Science and the Imagination

PO Box 878305
Tempe, AZ 85287-8305
imagination@asu.edu

csi.asu.edu

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