

Comparative Media Studies/Writing Section

Academic year 2018–2019 was eventful at [Comparative Media Studies/Writing \(CMS/W\)](#). We describe highlights below, but in particular, we would like to spotlight the following faculty awards, outreach activities, and academic developments.

Faculty and research groups were recipients of many grants, fellowships, and prizes. Faculty members received a variety of accolades, including Professor Lisa Park’s MacArthur “Genius” Fellowship, Assistant Professor Justin Reich’s Jan Hawkins Award for Humanistic Research in Learning Technologies (from the American Educational Research Association), Professor Ian Condry’s Faye Chandler Creative Arts Grant to hold spatial sound events, and many more.

Faculty members have also had an excellent year with respect to publishing and presenting. Their topics—everything from digital avatars to surveillance technology and augmented reality—speak to the breadth of the work being produced by faculty (and advisees) in the section.

CMS/W continued its commitment to outreach by inviting colleagues from outside MIT to speak to its students. This year, that included more than five dozen public events, along with many more hosted by individual research groups. The highlights of the year were a conversation with award-winning comics writer Brian Michael Bendis, part of the Julius Schwartz Lecture, and the 10th Media in Transition Conference, this year reprising the theme from the first conference in 1999: democracy and digital media.

As outlined in the remainder of this report, CMS/W’s past academic year featured many additional excellent developments. Its undergraduate courses continue to be in high demand, particularly in relation to other courses that meet the HASS (Humanities, Arts, and Social Sciences) requirement. The CMS graduate program has maintained its high selectivity, and recent graduates have gone on to high-profile jobs and PhD programs in media studies–related fields. The Graduate Program in Science Writing continues to be highly selective, admitting top young science writers. In its role supporting MIT writers, CMS/W has seen remarkable utilization of the Writing and Communication Center (WCC): 88% of WCC’s schedule openings are used, as compared with other schools’ average of around 50%.

Lastly, CMS/W has had great success in advancing its mission through conferences and hackathons, the development and distribution/adoption of humanities-informed technology, frequent employment of Undergraduate Research Opportunities Program (UROP) students, multi-institution international collaborations, and the securing of external grants, gifts, and sponsored research funding.

Mission

MIT Comparative Media Studies/Writing offers innovative programs that apply critical analysis, collaborative research, and design across a variety of media arts, forms, and practices. We develop thinkers who understand the dynamics of media change and can apply their insights to contemporary problems. We cultivate practitioners,

scholars, and artists who can work in multiple forms of contemporary media. Our students and researchers help shape the future as critical and visionary partners at a time of rapid transformation.

At CMS/W, we are devoted to understanding the ways in which media technologies and their uses can enrich the lives of individuals locally, across the United States, and globally. Our faculty, researchers, and students share a deep commitment to the development of new tools and strategies that serve the needs of diverse communities in the 21st century.

In its unique approach to humanities, arts, and science writing education, CMS/W:

- Offers graduate and undergraduate degree programs centered on teamwork and research laboratories
- Engages with media practices across historical periods, cultural settings, and methods in order to assess change, design new tools, and anticipate media developments
- Supports a distinguished studio and workshop curriculum featuring the techniques and traditions of contemporary science writing, fiction, poetry, creative nonfiction, journalism, digital media, video, and games
- Works with programs throughout MIT to draw on and enrich the Institute's unique mix of intellectual and entrepreneurial talent
- Cultivates a community of students, faculty, and staff devoted to the highest standards of scholarship and ethical practice
- Extends its educational work into industry, the arts, and the public sphere by offering socially aware, critically informed expertise and events

Academic Programs

Undergraduate Comparative Media Studies Major

The undergraduate program in Comparative Media Studies offers students an opportunity for interdisciplinary study of film, television, game design, virtual worlds, digital artworks, civic media, interactive writing, and other communications media. Now in its 11th year, the CMS undergraduate major enrolled 24 students, including eight students in the 21E/S (Humanities and Engineering/Science) joint major and four double majors. Nine majors graduated in AY2019, which brings to 132 the number of students who have graduated from the CMS undergraduate program since its inception as an experimental major. In 2019, CMS had five minors and 131 concentrators. During AY2019, CMS sponsored 95 UROP positions for pay or credit. CMS graduates have gone on to careers in global digital commerce, video game production, brand management and marketing, program management, research, nonprofit management, and social networking software design at companies such as Twitch, Electronic Arts, YouTube, the World Wildlife Fund, Google, Facebook, Oracle, Samsung, and Accenture; others have pursued studies in theater arts, fine arts, or law. Many have gone on to leading graduate programs in the United States and abroad.

Comparative Media Studies Graduate Program

In 2019, the CMS graduate program received 56 applications and admitted eight students, including one international student, and won an Ida Green competitive fellowship from the Office of Graduate Education. The program also graduated six students with master's degrees in June and expects to graduate two in September. In AY2020, Professor Vivek Bald will step down as director of graduate studies and will be succeeded by Eric Klopfer (director) and Scot Osterweil (associate director).

Undergraduate Writing Major

In 2019, four writing majors received degrees. Twelve students majored in writing, including four students in the 21E/S joint major and four double majors. In addition, during AY2019 Writing had 12 minors and 77 concentrators. Writing majors have gone on to careers in journalism, fiction writing, education management, consulting, business analysis, technical writing, and public information.

Graduate Program in Science Writing

In 2019, the Graduate Program in Science Writing received 37 applications and admitted eight students, including two international students. The program also graduated seven students who now hold jobs at places such as Northeastern University, the Earthwatch Institute, the *Frederick News Post*, and *UnDark* magazine. They have had their work published in dozens of venues, including the *New York Times*, *Science*, *National Geographic*, and *Hakai*.

The program continued its collaboration with the Knight Science Journalism Fellowship program, providing four students as research assistants to write for *Undark* magazine. This year, six of our eight students had placements in half-time research assistant positions with the School of Engineering, School of Architecture and Planning, and School of Science in addition to *Undark*. This initiative was a success, providing the students with substantial financial support and valuable work experience as science writers.

Public Events

The past year was another strong one for outreach through public events. The Julius Schwartz Lecture, featuring comics creator Brian Michael Bendis, drew hundreds of attendees, and May's Media in Transition Conference on democracy and digital media featured dozens of panels on topics ranging from "fake news" and polarization to virtual reality and youth activism. The conference served both as a celebration of the graduate program's 20th anniversary and as an impromptu reunion of many Comparative Media Studies alumni and former faculty, including CMS co-founder Henry Jenkins. Other highlights included an eight-event civic arts series co-organized with the MIT Program in Art, Culture and Technology; dozens of offerings during January's Independent Activities Period (IAP); and three more readings in the long-running poetry series run by Senior Lecturer Edward Barrett.

CMS/W Research Groups

Center for Civic Media

Research scientist Rahul Bhargava continued his data literacy advocacy and was invited to run a workshop at the second United Nations World Data Forum. Also, he was invited as a speaker for the National Academies roundtable on data science in postsecondary education and as a keynote speaker for the Stanford Data on Purpose conference. He published “Cultivating a Data Mindset in the Arts and Humanities” in *Public* and “Creative Data Literacy: A Constructionist Approach to Teaching Information Visualization” in the *Digital Humanities Quarterly*.

Mitsui Career Development Associate Professor Sasha Costanza-Chock continued work on design justice, a term used by Costanza-Chock to address the need for design that is intersectional and that, instead of reinforcing power dynamics, enables social justice for underserved populations. Costanza-Chock’s co-written report, “#MoreThanCode: Practitioners Reimagine the Landscape of Technology for Justice and Equity,” provided an overview of technologists and other professionals in the field. Among other panels, Costanza-Chock was invited to present at EYEO; the Harvard Kennedy School 2018 Public Interest Technology Summit; the University of the Azores International Colloquium: Youth and Global Movements; the MIT Collective Wisdom Symposium; and A Convergence at the Confluence of Power, Identity, and Design at the Harvard Graduate School of Design.

The Media Cloud team worked to expand the tool’s collections this year, reaching the 1 billion mark for news stories in the database after finalizing a complete review of its sources. The user base of the project continues to grow at a rate of approximately 2,000 users per year. This year the tools were mentioned in and used in such publications as the *Washington Post*, the *Columbia Journalism Review*, *The Atlantic*, and *BuzzFeed*.

Finally, the center’s director, Ethan Zuckerman, is currently finalizing a new \$1.85 million award from the Knight Foundation. This award will allow us to expand the Media Cloud platform to establish the International Hate Observatory, which will index and analyze a broad range of user-generated content to improve understanding of how hate speech emerges and spreads.

Design Lab

The aim of the Design Lab (formerly the Mobile Experience Lab) is to reinvent and creatively design connections among people, information, and places. Using cutting-edge information and mobile technology, the lab seeks to improve people’s lives through the careful design of new social spaces and communities.

Design Lab co-founder Federico Casalegno extended his leave from MIT to a total of two years, continuing his leadership at the Samsung Design Innovation Center in San Francisco. After a successful year of leading a global team of designers and engineers to bring forth the value of design research to the global consumer electronics company, he has decided to dedicate an additional year to solidify his work at the company. Design Lab research associate Yi Hyun Lim is leading the research group in his absence.

The lab has continued to collaborate with long-time partner ENI, within the MIT Energy Initiative (MITEI), to conduct research in the field of IoT (Internet of Things) that can be applied to wearable technology and portable robotics for safety in the workplace. Following the previous work done in the development of advanced safety devices, including a full working prototype of a smart helmet with augmented communication through augmented reality and integrated sensors for safety detection, the team expanded the research focus to the areas of portable robotics and compact drones for remote inspection of confined spaces. In June 2019, the Design Lab team presented ongoing research and demonstrated select features from the working prototype of Pegasus, a hybrid drone-rover robotic inspection system, at the MITEI-ENI Workshop in Milan. Related research from the previous year's work on smart helmets was presented at the PETRA (Pervasive Technologies Related to Assistive Environments) conference in Greece.

In its third year of sponsored research with Puma, the Design Lab team of researchers and students continued to work on adaptive sportswear experiences. Previous years' research with Puma in applying auxetic meta-material structures for customized comfort and improved performance (through generative design and digital simulation) resulted in commercialization as Puma's next line of innovative running shoes. The lab has continued to work closely with the Puma innovation and production team to optimize the design for manufacturing.

The lab completed work on Connected Lighting for Caring Cities, a collaborative research project funded by Philips Signify (Philips Lighting). In this project, the Design Lab team researched societal and user values of "caring" through ethnography and worked to provide a vision of future connected dynamic lighting experiences (across home, work, and public urban areas) supported by an artificial intelligence (AI) agent.

In addition to sponsored research projects, the lab has continued its efforts in running two internal research observatories: User-Value Experience Research and Emerging Technologies Research. Using primary and secondary research methods, the research team has engaged in consolidation, analysis, and evaluation of collected qualitative data and produced two internal reports.

Two other notable workshops were hosted by the Design Lab team. The first, the Augmented Tailor Workshop (with Italian brand Brunello Cucinelli), looked into the impact of connected technology in augmenting tailors' handcraft work. Outcomes of the exercise were presented at Cucinelli headquarters in Solomeo, Italy. A second workshop was held in collaboration with the New England Aquarium of Boston and the Media Laboratory's Open Ocean Initiative. Participating researchers, scientists, and professionals envisioned experiences and products to raise awareness of ocean conservation through design thinking exercises.

This summer Professor Casalegno taught Innovation: Beyond the Buzzword, an MIT professional education course. Co-instructed by Yihyun Lim, the course introduced participants (40 mid-level professionals from various industries) to concepts in design thinking and innovation through lectures and hands-on workshop sessions.

Game Lab

As part of its mission to bring together scholars, creators, and technologists, the Game Lab devoted efforts this past year to exploring the use of play in varying contexts, including education and technology.

The seven courses offered by the Game Lab, in conjunction with the lab's research and development opportunities, have maintained MIT's standing within the *Princeton Review's* top schools for undergraduate or graduate study of game development for a ninth year running.

In fall 2018, the Game Lab co-hosted the Boston Festival of Indie Games for its sixth year. More than 3,000 people attended the event to see games developed by 300 invited developers and studios, giving students direct access to practitioners in game development. The event was covered in the national media, placing MIT and the MIT Game Lab as a center for independent game development.

The Game Lab has been pursuing projects in collaboration with the entertainment video game industry through the Ludus Center for Games, Learning, and Playful Media, a membership-based research consortium. Recently, the MIT Game Lab concluded a relationship with Stockholm-based King Entertainment, creators of *Candy Crush Saga*, to conduct design research around tools to assist game developers with assessing diversity in the character designs in their games. A new relationship has begun with Bose, of Framingham, MA, to conduct design research around creating audio-only augmented reality experiences.

As part of a broader research project focused on surveying representations of European colonialism in board games, a proposal funded by the MIT Center for Art, Science and Technology (CAST), is supporting design and development work to create a "counter-colonialist" board game about topics of importance to the people of Puerto Rico, such as local government and international responses to the devastation caused by Hurricane Maria.

In collaboration with the MIT Education Arcade, the Game Lab is in the middle of an 18-month project, Collaborative Learning Environments in Virtual Reality (CLEVR), that is investigating the use of virtual reality games to help students understand issues of scale in biological systems, particularly at the cell and DNA levels. Prototype development and initial research are supported by a \$450,000 unrestricted gift from Oculus. Additional funds have been provided through the MIT Integrated Learning Initiative to support further study and investigation using virtual reality (VR) in education.

Global Media Technologies and Cultures Lab

The Global Media Technologies and Cultures Lab (GMTaC) had a very busy year. Members of the lab conducted fieldwork in connection with Network Sovereignty: Sociotechnical Relations in Rural Low-Income Communities, an international research project supported by the National Science Foundation (NSF). They made research trips to Browning, MT, to work with Blackfeet Community College. They led community forums in Browning about Internet services and social media use on the Blackfoot Indian Reservation and conducted qualitative interviews with 50 community members. They

also traveled to Tanzania to conduct fieldwork related to the project and interviewed 50 community members in Bunda and several areas around Dar es Salaam. In addition, the lab launched a network sovereignty blog on its website. The goals of the blog are to spotlight and interlink a community of researchers studying network infrastructures (e.g., Internet, mobile phones, video streaming, satellites, data centers), raise awareness about their research projects, and facilitate connections between them.

In December 2018 GMTaC director Lisa Parks and her collaborator, Professor Jennifer Holt, spent a week in Washington, DC, to work on the Surveillance Pressure Points project, which investigates how advocacy groups formulate digital rights agendas within a highly commercialized digital culture. They conducted qualitative interviews with representatives of digital privacy advocacy organizations including Public Knowledge, the Center for Democracy & Technology, Access Now, the Electronic Frontier Foundation, and several others. Lab research assistants have transcribed the interviews, and they are continuing research and will write up findings and submit an article to a peer-reviewed journal in the coming months. This work was supported by a small grant from the International Policy Lab at MIT.

In January 2019, four members of our lab traveled to Dar es Salaam to lead a two-week workshop, [Social IT Solutions](#), supported by a grant from the Abdul Latif Jameel World Education Lab (J-WEL). The team consisted of Professor Parks and three CMS graduate students.

An important goal of GMTaC has been to provide research and publishing opportunities for MIT students. This past year, the lab made significant progress on several co-authored research publications. Professor Parks and research assistant Matt Graydon published “Connecting the Unconnected: A Critical Assessment of US Satellite Internet Services in *Media, Culture and Society*”; Parks and research assistant Rachel Thompson have completed an article titled “The Slow Shutdown: Internet Regulation and Constraints among Online Content Creators in Tanzania, 2010-18” (in review with the *International Journal of Communication*); and Parks, research assistant Iago Bojcuk, and predoctoral lab fellow Gabriel Pereira are nearing completion of an article on WhatsApp and the Brazilian elections and plan to submit it to *Global Media and Communication*. Beyond this, research assistant Han Su is working with lab affiliate Jing Wang on an article about the role of Chinese companies in global streaming platforms.

GMTaC hosted several visitors this year, including Native American drone activist and creator of Digital Smoke Signals Myron Dewey. During his visit, Dewey gave a public lecture as part of the CMS and Civic Arts Lecture Series; screened his documentary film *Awake: A Dream from Standing Rock*; and met with AISES (American Indian Science and Engineering Society) students at MIT as well as with students from the School of Humanities, Arts, and Social Sciences and the Media Lab. The Office of the Vice Chancellor for Diversity and Equity helped support the AISES meeting. The lab also hosted Professors Caren Kaplan (University of California, Davis) and Haidee Wasson (Concordia University), who came to the campus to give lectures in the CMS colloquium and civic arts series and meet with students and faculty members.

Imagination, Computation, and Expression Laboratory

The Imagination, Computation, and Expression Laboratory (ICE Lab), established at MIT in 2010, applies AI and cognitive science approaches to the research and development of interactive narratives, video games, virtual reality, social media, and related forms of digital media. The lab recently completed a three-year Computer Science and Artificial Intelligence Laboratory (CSAIL)/Qatar Computing Research Institute collaboration researching culturally specific everyday uses of virtual identities in social media and video games (with the Middle East and North Africa as a case study). The researchers analyzed a data set of more than 42,000 publicly available social media profiles using computational approaches (archetypal analysis) augmented with social science-based semistructured interviews. This resulted in a set of five needs/values (Arab cultural features, self-expression, social connections, social monitoring, and physical and virtual identity contrasts) supporting Qatari participants' creativity in effectively using virtual identities; it also resulted in guidelines to support developers of virtual identity systems in better serving users while preserving their cultural values and creative agency. Another ICE Lab outcome is [MazeStar](#), an NSF-supported computer science learning curriculum and educational computer game platform that engages students in learning computer science concepts while seeing themselves as powerful science, technology, engineering, and mathematics (STEM) learners and doers.

Open Documentary Lab

The Open Documentary Lab (ODL) brings storytellers, technologists, and scholars together to advance the new arts of documentary. Founded by Professor William Uricchio and directed by Sarah Wolozin, the lab is a center of documentary scholarship and experimentation at MIT. Through courses, workshops, a fellows program, public lectures, experimental projects, and research, the lab educates and actively engages the MIT community and the larger public in a critical discourse about new documentary practices and encourages people to push the boundaries of nonfiction storytelling. The lab currently has two graduate students, one faculty affiliate (Vivek Bald), and collaborations with leading institutions including the Sundance Institute, the Mozilla Foundation, and PBS. It has attracted the interest of major foundations including the MacArthur and Ford foundations.

This year ODL completed a field study titled *Collective Wisdom: Co-Creating Media within Communities, across Disciplines and with Algorithms*. Led by Professor Uricchio and researcher Katerina Cizek together with several colleagues, this first-of-its-kind field study of the media industry highlights trends, opportunities, and challenges to help advance understanding and recognition of co-created works and practices—efforts that live outside the limits of singular authorship.

ODL hosted and curated a collective wisdom symposium in May with more than 200 invited guests, five panels, break-out sessions, performances, and an exhibit. The lab officially launched a co-creation studio, starting with a four-day workshop attended by a Bolivian filmmaking team that is designing a robot. The workshop was funded by the Ford Foundation. The studio is developing partnerships with the Mozilla Foundation, the Sundance Institute, Witness, and others.

ODL was awarded a new three-year \$900,000 grant from the John D. and Catherine T. MacArthur Foundation in September. In addition, the lab received a new \$100,000 grant from the Ford Foundation for the co-creation studio.

The lab continued its fellows program, lecture series, and resource development. In the spring, Sandra Rodriguez again offered MIT's first course on virtual reality, CMS S60 Hacking VR. Through a grant from the MIT Alumni Class Funds, the course was accompanied by an XR lecture series open to the MIT community and the public. Oculus supplied the equipment.

ODL continued to develop Docubase, a curated, interactive database focusing on the people, projects, and tools transforming documentary in the digital age. The lab's publication, *Immerse*, with lab director Sarah Wolozin as editor-at-large, continues to thrive. It has received funding from the Knight and Ford foundations and includes contributions by MIT faculty, researchers, and students.

This spring, ODL director Wolozin continued her speaking and writing engagements with a sneak peek presentation of the forthcoming Collective Wisdom study at the Sundance Film Festival as well as [an article in *Immerse*](#) about her observations at Sundance. In addition, Wolozin, William Uricchio, and Sandra Rodriguez participated in and spoke at a summit on arts and AI curated by Columbia University and hosted by the New Museum of Contemporary Art. In May, Wolozin, Uricchio, Kat Cizek, and Rashin Fahandej formed a panel and presented their Collective Wisdom study findings.

ODL principal investigator Uricchio gave several talks and keynotes, including the keynote for The Electric Gaze: An International Seminar on the Intersections between Image, Technology, and Critical Thought at Cineteca Madrid. He also published a number of articles including "Augmenting Reality: The Markers, Memories, and Meanings Behind Today's AR" (in *Urban Interfaces: Media, Art and Performance in Public Spaces*).

Scheller Teacher Education Program and Education Arcade

The Scheller Teacher Education Program (STEP) and the Education Arcade explore the potential of games and simulations as media that support learning both in and out of the classroom. Over the past year, STEP has continued work funded by five NSF grants aimed at integrating science and computer science education among upper elementary and high school students using Starlogo Nova, a web-based 3D modeling tool.

The program created and piloted educational games in the genre we call pSims (participatory simulations), exploring innovative uses of mobile technology to engage youth in STEM learning and skill building. The development team worked toward completion of the Virus Game and began the design of two additional ecology-themed games. Pilot testing included 23 groups of participants (10 years of age or older). Additional partnerships, sponsorships, and research opportunities continue to be explored.

Three hundred biology teachers from around the world are participating and sharing their knowledge and expertise with each other in a massive open online course (MOOC) launched by STEP. In the course, BioGraph: Teaching Biology through Systems, Models,

& Argumentation, participants learn how to integrate computational modeling, a systems perspective, and the practice of scientific argumentation into their biology classes.

STEP has also continued work with collaborators such as the Emerson Collective (on implementing project-based learning in its XQ schools), the MIT Game Lab (on co-developing a virtual reality game called CLEVR, funded by Oculus Facebook), and the Woodrow Wilson National Fellowship Foundation (on developing a master's of education curriculum for the Woodrow Wilson Academy of Teaching and Learning).

The Science and Engineering Program for Teachers (which partners with MIT alumni clubs) was successfully held again this year with significant programming expansion resulting from new funding. The program almost doubled in size thanks to funding from alum Rick Barry. STEP also serves as a co-organizer for the Connected Learning Summit, with over 600 attendees.

Teaching Systems Lab

The MIT Teaching Systems Lab (TSL)—established in 2015 by Assistant Professor Justin Reich—designs, implements, and researches the future of teacher learning. All around the world, education stakeholders are calling for more ambitious teaching and learning in classrooms: less rote recitation and more active, engaged learning. The only way that will be possible is if we can dramatically increase the quantity and quality of teacher learning available to educators throughout their careers. TSL works on this urgent global challenge by designing and researching the future of online and blended learning for educators and developing a series of teacher practice spaces that allow educators to rehearse for and reflect upon important decisions in teaching. The lab has two research scientists, three postdoctoral researchers, five instructional design staff, three graduate students (from Comparative Media Studies and Electrical Engineering and Computer Science), and 13 undergraduates who work with the lab during the year.

Professor Reich won the Jan Hawkins Award for Humanistic Research in Learning Technologies from the American Educational Research Association.

This past spring TSL staff taught a new class, CMS.594/CMS.894 Education Technology Studio, to 13 MIT undergraduates along with students from Wellesley and Harvard Medical School. The course focused on the development, deployment, and evaluation of education technology projects. The culminating final project was a public presentation of students' education technology innovations.

TSL ran four MOOCs on edX: Launching Innovation in Schools; Competency-Based Education: The Why, What, and How; Design Thinking for Leading and Learning; and Envisioning the Graduate of the Future. The courses enrolled approximately 15,000 participants and awarded 1,553 certificates.

At the request of MIT's dean of digital learning, the lab conducted an evaluation of the Supply Chain Management MicroMasters, the first MicroMasters program offered by MIT that admitted students to an accelerated blended master's program on the basis of performance in MOOCs and a proctored exam. In addition, at the request of

the associate dean of digital learning, the lab team conducted a program evaluation of the six new quantum computing MOOCs (taught on edX) and the four new professional education courses (taught on MITxPRO). They analyzed patterns in terms of demographics, participation, and completion of the MITx courses on edX and found patterns similar to those of other demanding courses.

Trope Tank

The Trope Tank, directed by Professor Nick Montfort, is a lab for research, teaching, and creative production. Its mission is to develop new poetic practices and new understandings of digital media by focusing on the material, formal, and historical aspects of computation and language.

During 2018–2019, the Trope Tank was fortunate to have CMS/W's support for a graduate research assistant, Judy Heflin. This support allowed regular research to continue and a new project to be established. Also part of the core team this academic year, and continuing with the Trope Tank, were Angela Chang, PhD, a volunteer research associate, and Sebastian Bartlett, a visiting undergraduate.

The Trope Tank's literary magazine, *Taper*, continued into its second and third issues; a call for work for the fourth issue was posted.

Writing, Rhetoric, and Professional Communication

Writing, Rhetoric, and Professional Communication (WRAP), a teaching and research group of nearly 40 lecturers within CMS/W, collaborates with MIT faculty in every department to teach written, oral, and visual communication to over 4,000 students a year in more than 100 Communication Intensive (CI) subjects. WRAP also teaches the foundational writing subjects (Communication Intensive in the Humanities, Arts, and Social Sciences–Writing Focused [CI-HW] subjects) in CMS/W. Led by Director Suzanne Lane and Associate Director Andreas Karatsolis, WRAP is devoted to teaching students how to analyze and produce effective communications.

WRAP guides MIT students from the essay exam that they take online before entering as freshmen through their four required Communication Intensive subjects and into their graduate education. WRAP administers the graduate writing exam, teaches the graduate subjects 21W.800J Business Writing for Supply Chain Management and 21W.801J Thesis Writing for Supply Chain Management, provides professional communication instruction in 16.995 Doctoral Research and Communication Seminar and 15.977 Special Graduate Subject in Civil and Environmental Engineering, and offers integrated communication workshops for the Leaders for Global Operations program. In the past year, WRAP has collaborated with new Communication Intensive subjects in a number of areas (civil and environmental engineering, mechanical engineering, brain and cognitive sciences, and management) and is working with New Engineering Education Transformation (NEET) to develop NEET-specific CI subjects. Throughout the year, WRAP offers workshops outside of CI subjects as well, such as a workshop on poster presentations for students in the MIT Energy Initiative and a thesis writing bootcamp for graduate students in mechanical engineering. In addition, WRAP offers several workshops during IAP, including Communicating Science to the Public,

Writing Successful Proposals, Reasoning and Argumentation, and Beyond Citation: Understanding How to Reason with Sources.

In terms of special projects, most of our time this year was dedicated to the creation of a new system for assessing writing.

WRAP's affiliated research lab, ArchiMedia, investigates how digital media is shaping professional communication practices and how digital tools can be used (and designed) to teach professional communication.

With funding from the National Science Foundation, WRAP is participating in a multi-institutional project (with Dartmouth College, the University of Pennsylvania, North Carolina State University, and the University of South Florida) to study the effects of teaching undergraduate STEM students how to effectively peer review each other's texts.

In 2016, WRAP received a three-year grant of \$240,000 from the Davis Educational Foundation to collaborate with science and engineering faculty in producing "disciplinary reasoning diagrams" of six different STEM fields, and this grant is now coming to an end. These reasoning diagrams function as discipline-specific maps that visualize relationships between concepts and the reasoning patterns that connect them.

Finally, with the aid of an Alumni Class Funds grant, ArchiMedia has been developing Metalogon, an online tool for rhetorically analyzing speeches and oral presentations. The platform allows teachers and students to upload video recordings of presentations and then embed commentary on rhetorical elements, which plays back in real time.

Writing and Communication Center

The mission of the Writing and Communication Center is to teach communication and rhetorical skills and provide expert professional communication advice about all stages and types of writing and oral presentation to MIT undergraduates, graduate students, postdocs, faculty, staff, alums, and spouses.

Begun in 1982 as a peer tutor writing center, WCC quickly became a combination center, featuring mostly professional consultants with one or two peer tutors. The change was made because the wide range of WCC clients (from undergraduates to faculty members) required experienced communicators and teachers. In 1992 the experiment in peer tutors was finally ended, and WCC became one of the first centers to employ only professionals rather than undergraduate or graduate student tutors. Since then, WCC has employed only MIT lecturers.

During AY2019, 1,396 unique clients (1,040 in AY2018) consulted WCC 3,408 times (2,691 in AY2016). Of those clients, 70% were non-native speakers of English. In AY2019, non-native speakers of English made 2,586 visits. The AY2019 usage rate was 88%. WCC's continuing high usage rate (experts consider 50% good) among clients from every school and department is a testament to the superior service offered by the center's lecturers.

CMS/W Faculty Summaries

Ian Condry

In collaboration with the MIT Office of the Arts and d&b audiotechnik, Ian Condry is establishing the Spatial Sound Lab, which will be used to create immersive audio projects including music, sound art, and teaching modules. It will be housed in W20-429, the START Studio. Condry gave talks at the Tokyo University of the Arts, the Academy of Fine Arts (Nuremberg, Germany), and the Harvard Program on US-Japan Relations, among other venues. In addition, he was awarded the Faye Chandler Creative Arts Grant.

Sasha Costanza-Chock

Sasha Costanza-Chock submitted final edits for the new book *Design Justice: Community-Led Practices to Build the Worlds We Need* (in production with The MIT Press). Costanza-Chock's essay "Design Justice, A.I., and Escape from the Matrix of Domination" won a \$10,000 essay competition and was published in the *Journal of Design and Science*.

Publications

- "Transformative Media Organizing: Key Lessons from Participatory Communications Research with the Immigrant Rights, Occupy, and LGBTQ & Two-Spirit Movements," in *The Routledge Companion to Media and Activism* (Routledge)
- "#MoreThanCode: Practitioners Reimagine the Landscape of Technology for Justice and Equity" (with Maya Wagoner, Berhan Taye, Caroline Rivas, Chris Schweidler, Georgia Bullen, and the T4SJ Project), a landmark report for the NetGain Funder Collaborative

Selected Panels

- From Design for Good to Design Justice (speaker), EYEO, Minneapolis, MN (June 2019)
- Design Activism (invited panelist), A Convergence at the Confluence of Power, Identity, and Design, Harvard Graduate School of Design, Cambridge, MA (October 2018)
- Technology, Advocacy, and Workers' Rights (keynote speaker), 2018 Public Interest Technology Summit, Harvard Kennedy School of Government, Cambridge, MA (October 2018)
- #MoreThanCode: Practitioners Reimagine the Landscape of Tech for Justice and Equity (panelist), 2018 Public Interest Technology Summit, Harvard Kennedy School of Government, Cambridge, MA (October 2018)
- Beyond the Hashtag: Transformative Media Organizing for Immigrant Rights, Occupy, and Queer & Trans Liberation (keynote speaker), International Colloquium: Youth and Global Movements, University of the Azores, Azores, Portugal (October 2018)

- Swarm: The Dangers and Risks of Co-Creation, and Building Ethical Frameworks and Protocols to Mitigate Them (invited panelist), Collective Wisdom Symposium at MIT, Cambridge, MA (September 2018)

Fox Harrell

D. Fox Harrell, professor of digital media and artificial intelligence, was recently appointed as the director of the [MIT Center for Advanced Virtuality \(MIT Virtuality\)](#), a new center for research into virtual reality, augmented reality, and related technologies. MIT Virtuality pioneers innovative experiences using technologies of virtuality—computing systems that construct imaginative experiences atop our physical world. The center’s approach to engineering and creative practices pushes the expressive potential of technologies of virtuality and simulates social and cognitive phenomena while intrinsically considering their social and cultural impacts.

Several endeavors are underway at MIT Virtuality. One such endeavor is A Framework for Self-Reflection in Massive Online Workplace Learning Systems, a project supported by J-WEL. This effort, focused on learning about sexism in the workplace, resulted in a framework that also supports learner reflections during and after educational experiences, leading to measurable learning gains. The framework has been implemented in a MOOC and an interactive narrative prototype called [Grayscale](#). Another project has focused on modeling racial and ethnic socialization (RES) for interactive storytelling. This research examined the effectiveness of the use of an embedded computational model of RES for virtual identity representation in interactive virtual reality narrative games. Particular outcomes are a novel VR system called [Passage Home VR](#) and a user study conducted with the system. The findings of the study suggest a significant interrelationship among players’ RES, their in-game behaviors, and their narrative interpretations. The results have practical implications for the design of video games aiming to support players from diverse racial and ethnic backgrounds. MIT Virtuality also co-organized an international workshop focusing on the impacts of AI on indigenous cultures (for aims such as language preservation); the workshop was supported by the Canadian Institute for Advanced Research.

Publications

- “Identifying Regional Trends in Avatar Customization” (with Peter Mawhorter, Sercan Şengün, and Haewoon Kwak), *IEEE Transactions on Games*, 2018
- “Virtual Identity Systems Should Better Support Gulf Nationals” (with Sercan Şengün), Oxford Gulf and Arabian Peninsula Studies Forum University of Oxford (2018)
- “From 2,772 Segments to Five Personas: Summarizing a Diverse Online Audience by Generating Culturally Adapted Personas” (with Joni Salminen, Sercan Şengün, Haewoon Kwak, Bernard J. Jansen, Jisun An, Soon-gyo Jung, and Sarah Vieweg), *First Monday*, 2018

- “Chimeria:Grayscale: An Interactive Narrative for Provoking Critical Reflection on Gender Discrimination” (with Pablo Ortiz, Peter Downs, Elizabeth Carre, Annie Wang, and Maya Wagoner), *MATLIT Journal: Materialities of Literature*, 2018
- “Enabling Critical Self-Reflection through Roleplay with Chimeria:Grayscale” (with Pablo Ortiz), in *Proceedings of the 2018 ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play*

Selected Grants

- Canadian Institute for Advanced Research, AI & Society Workshop: Indigenous Protocol and AI (2018–2019, \$79,000)
- J-WEL Grants in Workplace Learning Innovation, A Framework for Self-Reflection in Massive Online Workplace Learning Systems (2018–2019, \$35,000)
- National Science Foundation I-Corps Grant, EAGER: A Social Platform That Models User Identity Via Interactive Stories (2018–2019, \$50,000)
- J-WEL Grants in Workplace Learning Innovation, Interactive Narrative for Reflective Engagement (2018–2019, \$35,000)

Heather Hendershot

Publications

- “City of Losers, Losing City: Pacino, New York, and the New Hollywood Cinema,” in *The New Hollywood Cinema* (Cornell University Press)
- “Strikes, Riots, and Muggers: How John Lindsay Weathered New York City’s Image Crisis,” in *Television History, The Peabody Archive, and Cultural Memory* (University of Georgia Press)
- “*The Handmaid’s Tale* as Utopian Allegory: ‘Stars and Stripes Forever, Baby,’” *Film Quarterly* (2018)
- “How ‘Fake News’ Was Born at the 1968 DNC,” *Politico* (2018)

Conferences and Talks

- “Was the Whole World Watching? How Mayor Richard Daley Used Counter Media to Fight the Networks,” *Remaking American Political History*, Purdue University (June 2019)
- “Revisiting the Roots of ‘Liberal Media Bias’: Network News Coverage of the Chicago Democratic National Convention,” *Society for Cinema and Media Studies conference*, Seattle, WA (March 2019)

- “Mobile Phone Eavesdropping: Historicizing and Theorizing the Cell Site Simulator” (invited talk), IKKM, Bauhaus University, Weimar, Germany (June 2018) “Chicago 1968: Reevaluating Mayor Daley’s Media Strategies” (invited talk), Nieman Foundation for Journalism, Harvard University (March 2019)
- Modern American History and Culture Seminar on Victoria Cain’s “Remote Control: Modernizing Schools through Screens, 1954–1967” (invited respondent), Massachusetts Historical Society, Boston (January 2019)
- “Lost in Translation? The Evolution of the Campus Crusade’s Jesus Film Project” (invited talk), Global Faith and Worldly Power conference, Obama Institute, Johannes Gutenberg University, Mainz, Germany (October 2018)

Eric Klopfer

Eric Klopfer won the Best Poster Award at the 2019 Learning Analytics and Knowledge Conference. In addition, he organized the 2018 First Connected Learning Summit.

Publications

- “Authenticity, Interactivity, and Collaboration in VR Learning Games” (with M. Thompson, A. Wang, and D. Roy), *Frontiers in Robotics and AI*, 2018
- “Connected Learning Initiative (Clix)” (with V. Kumar, B. Muramatsu, J. Perry, and L. Rosenheck), Connected Learning Summit (2018)
- “The State of the Field in Computational Thinking Assessment” (with M. Tissenbaum et al.), in *Rethinking Learning in the Digital Age: Making the Learning Sciences Count* (International Society of the Learning Sciences)

Invited Talks

- Skolkovo Open Innovation Forums (2018)
- Keynote lecture, American Medical Illustrators conference (2018)

Grants

- Moore Foundation (2018–2019, \$700,000)
- Clevr (2019, \$250,000)
- Reach Every Reader (2018–2022, \$1 million)

Helen Lee

Helen Lee published a pair of novels: *The Unlocked Room*, about the lives of a group of people incarcerated in two neighboring US prisons, and *The Hard Loss*, about a DNA exoneree’s first week of freedom after 24 years of incarceration for a crime he did not commit.

Seth Mnookin

Fellowships and Awards

- John Simon Guggenheim Memorial Foundation Fellowship
- National Endowment for the Humanities Summer Stipend Award

Publications

- “How Long Will We Live in 2069?” Medium, 2019

Talks/Lectures

- “The Consequences of America’s Miracle Machine,” Communications Forum with Eric Lander and Maria Zuber (moderator), MIT (November 2018)
- Catalyst Collaborative talk-back lecture and discussion of *Frankenstein* (directed by David Gammons), Central Square Theater, Cambridge (October 2018)

Nick Montfort

Book Series

Nick Montfort continues to edit two book series, Using Electricity (Counterpath) and Platform Studies (with Ian Bogost; The MIT Press). During the 2018–2019 academic year, three new books were published in the Using Electricity series: *Encomials: Sonnets from Pentametron*; *Machine, Unlearning*; and *A Noise Such as a Man Might Make*. Professor Montfort is the proprietor of the micropress Bad Quarto, which published two issues of *Taper* and four unusual print publications during the past year. Montfort published two pamphlets in AY2019, *Basho* and *From Hard West Turn*.

Publications

- *Hard West Turn, 2018 Edition* (artist’s book) (Bad Quarto)
- Afterword, *A Noise Such as a Man Might Make* (Counterpath Press)

Conference Presentations

- “Literature after the Technological Singularity” (lightning talk), Electronic Literature Organization Conference and Festival, Montreal (August 2018)

Invited Talks

- “The Cultural Challenge for Computational Creativity” (keynote), Tenth International Conference on Computational Creativity, Charlotte, NC (June 2019)
- “Seeing Complex Systems through Small Programs” (keynote), Systems: An Interdisciplinary Graduate Conference, New York University (May 2019)
- “Learning to Program and Explore” (keynote), Spring Institute on Teaching and Technology, Trinity College, Hartford, CT (May 2019)
- “Translating Computational Poetry,” Boston University Literary Translation Seminar (April 2019)
- “*The Truelist*, *Autopia*, and *Untitled [You]* as Computing and Poetry,” Harvard University (April 2019)
- “*The Truelist* and Computational Poetry,” Long Island University (March 2019)
- “Finite and Infinite Art” (keynote), Arts & Algorithms Symposium, Columbia University (December 2018)
- “On Computer-Generated Literature: #! and Recent Work,” Worcester Polytechnic Institute (December 2018)
- “How Computational Poetry Can Make the Future” (keynote), #DAAROMLEESIK (#WHYIREAD) Festival Symposium, Ghent, Belgium (November 2018)
- “*The Truelist*: A Program and Poem” (talk and reading), Poetics of Information Symposium, New York University (November 2018)
- “How Poetry and Computing Factor into Our Future,” Center for International Affairs and World Cultures, Northeastern University, (November 2018)

Individually Published Poems

- “won’t you” (type-in computational poem), *Increment*, 2019
- Three 17s (17-word poems), in *PageBoy*, 2019

Readings

- Reading from computational poems on “LIVE at the Writers House,” University of Pennsylvania (January 2019)
- Readings from *The Truelist* and *Hard West Turn* (2018), New York City, Cambridge, Providence, and Los Angeles (July and October 2018)

Group Exhibitions

- *Hard West Turn*, Graphische Sammlung ETH Zurich (February–April 2019)
- *Autopia* (installation with flat-panel display and book), ICIDS 2018 Art Exhibition, Trinity College, Dublin (December 2018)
- *The Deletionist*, Pierogi Gallery, New York City (November 2018–January 2019)
- *Field*, #DAAROMLEESIK (#WHYIREAD) Festival Expo, Ghent, Belgium (November 2018)
- *Hard West Turn* (installation), The MIT Press Bookstore, Cambridge (October 2018)
- *Nanowatt* (installation), UQÀM Ecole de design, Montreal (August 2018)

Music Visualization and Rap Performances

- Livecoding of Commodore 64 BASIC visualization and rapping about computation with ColonelPanix, LiveCode.NYC Algorave, Brooklyn (June 2019)
- Livecoding of Commodore 64 BASIC visualization and rapping about computation with ColonelPanix, LiveCode.NYC/New York Live Arts Algorave, New York City (May 2019)
- Livecoding of Commodore 64 BASIC visualization and rapping about computation with ColonelPanix, *FMPV* release party, Babycastles, New York City (February 2019)
- Livecoding of Commodore 64 BASIC visualization with ColonelPanix, LiveCode.NYC Algorave, Brooklyn (December 2018)

Screenings

- “256B on the C64 for 8K” (digital poem for the Commodore 64), Creativity & Cognition / Designing Interactive Systems Art Exhibition, University of California, San Diego (June 2019)

Awards and Honors

- Higher Education Video Game Alliance Fellow (2019)
- *The Future*, 2018 Choice Outstanding Academic Title

Lisa Parks

Grants, Fellowships, and Honors

- MacArthur Fellowship (2018–2023, \$625,000)
- National Science Foundation grant, Network Sovereignty: Sociotechnical Relations in Rural, Low-Income Communities (with Ramesh Srinivasan) (2018–2020, \$400,000)
- Distinguished lecturer, Institute of Global Humanities and Cultures, University of Virginia (2018)
- Shulman Lecturer, Whitney Humanities Center, Yale University (2019)
- J-WEL grant, Social IT Solutions Workshop, Dar es Salaam Institute of Technology, Dar es Salaam, Tanzania (2019, \$35,000)
- Commencement address, College of Letters and Sciences & Professional Schools, University of Montana (2019)

Publications

- “Mediating Animal-Infrastructure Relations,” in *Being Material* (The MIT Press)
- “Invisible Images: Lisa Parks in Conversation with Trevor Paglen, in *Being Material* (The MIT Press)
- “Surveillance in Insurgent Occupied Mali and Nigeria and the Limits of Location Technologies,” in *Location Technologies in International Context* (Routledge)

Seminars, Colloquia, and Conference Presentations

- Community Forums on Internet and Social Media Use in the Blackfeet Indian Community (organizer), Blackfeet Community College, Browning, MT (June 2019)
- Media in Transition 10: Digital Media and Democracy Conference (co-organizer), MIT (May 2019)
- “Moving Broadband From Sea to Land: Internet Infrastructure and Digital Labor in Tanzania” (invited lecture), Center for Digital Media and Democracy Inaugural Conference, Simon Fraser University, Burnaby, British Columbia, Canada (May 2019)
- “Tactical Drone Use and Vertical Mediation at Standing Rock” (keynote lecture), Nordic American Studies Association, Bergen, Norway (April 2019)
- “Infrastructure as a Term of Media” (invited lecture), Shulman Seminar on Elemental Media, Yale University (April 2019)

- “A Genealogy of Eavesdropping: Historicizing and Theorizing the Cell Site Simulator” (invited lecture), Tisch School of the Arts, New York University (April 2019)
- “Dirty Data: *The Cleaners*, Media Infrastructure and Film/Media Studies,” Society for Cinema and Media Studies conference, Seattle (March 2019)
- “Solar Media: Energizing Media in Tanzania” (invited lecture), Mellon-Sawyer Seminar on Energy Humanities, University of California, Santa Barbara (March 2019)
- “Tactical Drone Use and Vertical Mediation at Standing Rock” (invited lecture), Concordia University, Montreal (February 2019)
- “The Network Sovereignty Project,” Blackfeet Community College, Browning, MT (November 2018)
- What Is Next? Communicating in a Polarized Time (invited panelist), Davidson Honors College, University of Montana (November 2018)
- Pro-Paranoia Forum (invited moderator and respondent), School of Architecture, MIT (October 2018)
- “Vertical Mediation and the War on Terror from 9/11 to Trump” (invited lecture), Institute of Global Humanities and Cultures, University of Virginia (October 2018)
- “A Genealogy of Eavesdropping: Historicizing and Theorizing the Cell Site Simulator,” Burchard Lecture, MIT (October 2018)
- “A Contrapuntal Node: The Project Mercury Earth Station in Zanzibar” (invited lecture), Turning Points Conference, University of Michigan (September 2018)

Edward Schiappa

Publications

- “Will & Grace,” in *The State of SIE: Mapping the Landscape of Social Impact Entertainment* (University of California, Los Angeles)
- “Sophisticated Modernism and Truth,” in *Journalism and Truth in an Age of Social Media* (Oxford University Press)

Interviews

- “Here’s What 1 Language Expert Expects from Trump’s SOTU,” CNN, February 5, 2019

T.L. Taylor

- T.L. Taylor published her new book, *Watch Me Play: Twitch and the Rise of Game Live Streaming*.

William Uricchio

Awards

- Mercator Fellow, Siegen University (Siegen, Germany)

Publications

- *Collective Wisdom: Co-Creating Media Within Communities, Across Disciplines, and With Algorithms* (with Katerina Cizek) (The MIT Press)
- “Augmenting Reality: The Markers, Memories, and Meanings Behind Today’s AR,” *Leonardo Electronic Almanac*, 2019
- “Reassessing the Situation of the Text in the Algorithmic Age,” in *Situated in Translation: Cultural Communities and Media Practices* (Transcript-Verlag)
- “William Uricchio on the Colonization of the Data-Imaginary in the Public Service Sector,” *TMG: Journal for Media History*, 2018
- Foreword, in *Amateur Media: Film, Video, Digital Media and Participatory Culture* (Routledge)
- *Playful Thinking* (book series editor, The MIT Press)

Selected Talks

- “Colonizing the Data Imaginary” (keynote), Utrecht University, Utrecht, the Netherlands (2019)
- The Electric Gaze: An International Seminar on the Intersections between Image, Technology, and Critical Thought (keynote), Cineteca Madrid, Madrid, Spain (2019)
- “Virtual Reality and the Myth of Total Cinema,” EYE Film Institute, Amsterdam, the Netherlands (2018)

Jing Wang

Jing Wang continued her Distinguished Overseas Professorship at the People’s Republic of China Ministry of Education. Also, the Ford Foundation in Beijing awarded another year of support to NGO2.0, a nonprofit organization founded by Professor Wang. Wang published “Xiaomi Is the Best Builder of the ‘Collaborative Ecosystem’ without Borders” in the *China Securities Journal*.

Conferences and Presentations

- “Future Village Project and Anti-Poverty Alleviation,” Tencent Foundation, Shenzhen, People’s Republic of China (June 2019)
- “Online Video for Public Good,” Social Media Literacy Training Workshop, Kunshan, Jiangsu Province, People’s Republic of China (June 2019)

- “Future Village and Tech4Good,” University of Communication of China, Beijing, People’s Republic of China (June 2019)
- “Open Source Village and the MIT Fab Lab Model” (keynote), Technology for Public Good conference, Beijing, People’s Republic of China (May 2019)
- “China’s Gray Zone: Nonconfrontational Activism on the Social Web,” Confucius Institute, University of California, Santa Barbara (October 2018)
- “China’s Gray Zone: Nonconfrontational Activism on the Social Web” (inaugurating speech), Decolonizing Humanities Project, College of William and Mary (October 2018)

Service to the Institute

- Chinese minor advisor (2018)
- Chair, Open Rank Latin American Studies Search Committee (2018)
- Graduate advisor, CMS/W (2018)

Service to the Profession

- Advisory panel, M.A. in Global Communication Program, Chinese University of Hong Kong
- Advisory board, Wikimedia Foundation
- Editorial board, *Media Industries*
- Editorial board, *Advertising & Society Review*
- Editorial collective, *positions: asia critique*
- Editorial advisory board, *Chinese Journal of Communication* (in English)
- Advisory board, *Chinese Journal of Communication and Society* (in Chinese)
- Advisory board, *Taiwan: A Radical Quarterly in Social Studies*
- Editorial board, Media, Culture, and Social Change in Asia book series
- Editorial advisory board, *Global Media and Communication*
- Advisory board, *Portal: Journal of Multidisciplinary International Studies*
- Advisory board, *Inter-Asia Cultural Studies Journal: Movements*

Eric Klopfer

Head, Comparative Media Studies/Writing