ALFRED P. SLOAN FOUNDATION

Sloan Hosted Reception Celebrating Congressional Gold Medal for *Hidden Figures* Women

On December 9 at 5pm, Sloan hosted an official celebration with Senator Chris Coons and Representative Eddie Bernice Johnson to honor the real-life women scientists portrayed in Margot Lee Shetterly's Sloan-supported book and the Oscar-nominated film *Hidden Figures*.

After passing in both the Senate and the House, a bill was signed into law by President Trump in November to award the women the highest civilian honor, the Congressional Gold Medal. The bill honors Katherine Johnson and Christine Darden and posthumously honors Mary Jackson and Dorothy Vaughan, as well as the thousands of other women computers, for their contributions to science during the space race. At the event, Coons and Johnson presented an official proclamation of the bill to Darden (pictured left). Senator Tim Kaine, Representative Bobby Scott, Senator Lisa Murkowski, Representative Frank Lucas, Senator Mark Warner, Sloan VP and Program Director Doron Weber, NASA Deputy Associate Administrator Melanie Saunders, Shettertly, and *Hidden Figures* producer Donna Gigliotti also gave remarks to the packed room that included science and tech leaders, students, and Congressional staffers. Sloan has been instrumental in supporting this effort since 2017.

FILM

The Aeronauts Wins Sloan Science in Cinema Prize at SFFILM

The 2019 SFFILM Sloan Science in Cinema Prize, which recognizes the compelling depiction of science in a narrative feature film, was awarded to *The Aeronauts*. The film follows daredevil pilot Amelia Wren (Felicity Jones) and weather scientist James Glaisher (Eddie Redmayne) as they travel in an air balloon higher than any human before, taking measurements of temperature and pressure to get a better understanding of the atmosphere. In celebration of the award, SFFILM and Sloan hosted a screening and panel discussion in San Francisco. Participating in the discussion were University of San Francisco cosmologist Aparna Venkatesan, director of the film Tom Harper, SFFILM Director of Programming Rachel Rosen, and NASA's Ved Chirayath. *The Aeronauts* will be released for a limited theatrical run on December 6, before debuting on Amazon Prime Video on December 20. The award is part of a 2019 Sloan grant to SFFILM to develop and champion films that explore scientific or technological themes and characters.

Tesla Awarded 2020 Sundance Sloan Feature Film Prize

Tesla has been chosen as the Sloan Feature Film Prize winner at the 2020 Sundance Film Festival, to be awarded in January in Park City. *A* feature-length, Sloan-supported film about inventor Nikola Tesla (pictured below), best-known for his contributions to the design of the modern alternating current electricity supply system, the film was cited by the jury, "for its bold and original approach to cinematic storytelling, and for its beautifully shot portrayal of a technological pioneer and visionary futurist who foresaw our age 100 years ago." [Tesla](#) was directed by three-time Sloan-supported director Michael Almereyda (*Experimenter* and *Marjorie Prime)*, stars four-time-Academy-Award nominee Ethan Hawke (pictured below, *Training Day, Before Sunset*), and features an A-list supporting cast. Almereyda received a 2016 SFFILM Sloan Science in Cinema Filmmaker Fellowship for *Tesla* and the film also received additional production support from a 2019 Sloan grant to SFFILM.

This year's Sloan jury included astrophysicist Ruth Angus, Ph.D., award-winning actress and producer Emily Mortimer, Sloan-supported director of *One Man Dies a Million Times* Jessica Orek, materials scientist, author, and science communicator Ainissa Ramirez, Ph.D., and Sloan-supported director and co-writer of *The Sound of Silence* Michael Tyburski. *Tesla* will

premiere at the 2020 Sundance Film Festival, where it will be recognized at a reception hosted by Sloan following a panel with filmmakers and scientists. At the awards reception, Sloan will also announce the winners of the 2020 Sloan Sundance Screenwriting Lab Fellowship and the Sloan Sundance Commissioning Grant. These awards and activities are supported by a 2019 grant to the Sundance Institute.

NYU Awards $100K Feature Film Prize to Nicholas Ma's Screenplay *Mabel*

New York University (NYU) awarded its $100K Alfred P. Sloan Feature Film Prize to Nicholas Ma's screenplay *Mabel.* Co-written by Ma and Joy Goodwin, *Mabel* is about a quirky young girl

whose best friend is a plant, the girl's relationship with her parents, and her attempts to fit in. In [an interview with NYU](#), Ma (pictured left with Sloan VP and Program Director Doron Weber and Dean of NYU's Tisch School of the Arts Allyson Green) described his choice to focus on a young girl's interest in science, "We think of scientists and science being the province of a priestly cast, where there are some people who are born to be scientists and some people who are not. And if you're not born to be a scientist, you can't touch, or engage, or understand science. I think that that's deeply misguided. Science is a way of looking and understanding the world around us, and is something we all have access to." The Alfred P. Sloan Foundation $100K Feature Film Award is supported by a 2016 Sloan grant to NYU.

Sloan-Supported *To Dust* Nominated for Independent Spirit Award

To Dust, a dark comedy written and directed by Shawn Snyder and produced by Alessandro Nivola, Emily Mortimer, and Josh Crook, was nominated for an Independent Spirit Award for Best Screenplay. The film, which follows a Hasidic man who becomes obsessed with the body's decomposition after the death of his beloved wife, has won multiple Sloan awards,

including the 2015 NYU First Feature Award, the 2016 Tribeca Film Institute Grand Jury Prize, and the 2018 Film Independent Distribution Grant. *To Dust* stars Géza Röhrig (*Son of Saul*) as the widower and Matthew Broderick (*The Producers, Ferris Bueller's Day Off*) as the biology teacher who reluctantly helps him in his scientific pursuits. The film premiered at the Tribeca Film Festival in 2018 and won both the prestigious Audience Award and the juried Best New Narrative Director Award and had a limited theatrical run in 2019.

Athena Film Festival Hosts Reading of Sloan-Winning Script *Lucky 13*

In October, the Athena Film Festival announced its inaugural Alfred P. Sloan Development Grant winner, *Lucky 13* by Denise Meyers, and held a reading of selected scenes from the screenplay at Barnard College in New York City. *Lucky 13* is based on the true story about the Women Airforce Service Pilots, or WASPs, who freed male pilots from domestic flying duties while helping to find a way to pilot the B-26 Marauder, also known as the "Widowmaker." Melisa Annis cast and directed the reading, which featured a repertory of talented actors
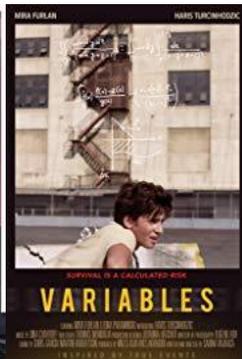

(pictured left with Meyers). After the reading, Meyers participated in a Q&A with Athena Film Festival co-founder Melissa Silverstein and spoke about her long-time commitment to telling the stories of the WASPs. The Alfred P. Sloan Development Award is supported by a 2018 Sloan grant to the Athena Film Festival.

Three Sloan-Supported Short Films Honored this Quarter

Three shorts produced with support from Sloan were honored this quarter with major awards. *Variables,* by Sabina Vajraca, won a Directors Guild Award in the Women's Category for directing and is nominated for the Humanitas Prize. The film, about a Bosnian math-whiz who is invited to the International Math Olympiad in Canada during the Bosnian War, recieved the 2017 Sloan/ USC Production Award. *Under Darkness,* by Caroline Friend, won a Directors Guild Jury Award in the Women's Category for directing. The film, about a young Jewish woman who joins the Soviet Resistance during World War II and uses photography to remember the past and document the future, recieved the 2016 Sloan/ USC Production Award. *The Chef,* by director Hao Zheng, writers Vanessa Leqi Kong and Ithaca Yixian Deng, producer Ithaca Yixian Deng, cinematographer Carlo Mendoza, production designer Mboni Maumba, and editor Guangwei Du, won both a Student Academy Award and Best International Film at Show Me Shorts New Zealand, and is now in the race for the 2020 Oscar's Live Action Short Category. The film, about a chef working in the near future when labor workers are replaced by AI-fueled humanoids, received a 2018 Sloan/ AFI production award.

BOOKS

SAM: One Robot, a Dozen Engineers, and the Race to Revolutionize the Way We Build by Jonathan Waldman to be Published in January
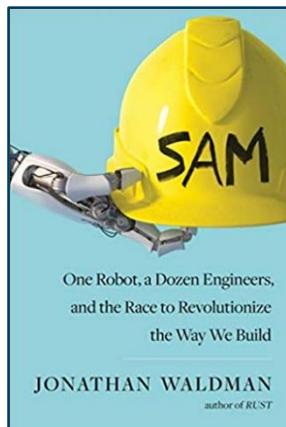
SAM: One Robot, a Dozen Engineers, and the Race to Revolutionize the Way We Build by science writer Jonathan Waldman will be published on January 7, 2020. The book is about a small company's efforts to build the first-ever commercially-viable bricklaying robot, named SAM. Kirkus Reviews describes the book as a "gripping tale . . . As one learns a great deal about geology from John McPhee and computers from Tracy Kidder, Waldman offers a lively, accessible overview of the bricklayer's art, which is much more complex than one might think. Apart from engendering an appreciation for the uses of technology, the author also adds to the literature surrounding the dignity of artful labor. Human meets machine, and both prevail in an engaging story of technology and discovery." Waldman received a Sloan grant in 2017 for the research and writing of this book. He is the author of the acclaimed book *Rust: The Longest War* (2015)*, which was also supported by Sloan.

Friendship: The Evolution, Biology, and Extraordinary Power of Life's Fundamental Bond by Lydia Denworth to be Published in January
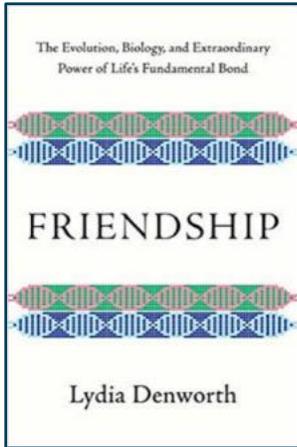
[Friendship: The Evolution, Biology, and Extraordinary Power of Life's Fundamental Bond](#) by science journalist and author Lydia Denworth will be published on January 28, 2020. The book will weave together past and present discoveries about the science of friendship. It will look at a monkey sanctuary in Puerto Rico and a baboon colony in Kenya to examine social bonds and follow neuroscientists and geneticists studying how friendship is reflected in human brain waves, genomes, and cardiovascular and immune systems. *New York Times* science journalist and award-winning, Sloan-supported author Carl Zimmer writes, "There's a deep evolutionary story to friendship now, and Lydia Denworth tells it in clear, lyrical prose." The book has already received [a positive review](#) from the American Library Association's *Booklist.* Denworth received a Sloan grant in 2018 to support the research and writing of this book.

NEW MEDIA

### ICERM Hosts Semester-Long "Illustrating Mathematics" Program

The Institute for Computational and Experimental Research in Mathematics (ICERM) at Brown University has been hosting a semester-long Sloan-supported program called ["Illustrating Mathematics,"](#) focused on visualizing and illustrating mathematical concepts. The program is not only introducing mathematicians to new computational tools but is also teaching researchers how to better explain their mathematical research to the general public via various new multi-media channels. (See below for three of the [many works](#) that have already come out of the program). "Illustrating Mathematics" is supported through a 2019 Sloan grant to Brown University.

Laura Taalman

Caleb Nussear
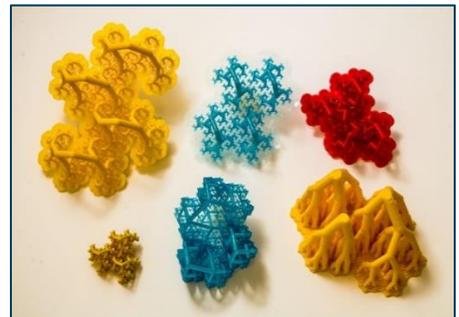
Bernat Espigulé

Sloan-Supported National Gallery Exhibit Marks 500th Anniversary of da Vinci's Death

The National Gallery's first major immersive digital exhbition, the Sloan-supported *Leonardo: Experience a Masterpiece* opened on November 9. *Leonardo* celebrates the 500th anniversary of Leonardo da Vinci's death, along with other major institutions around Europe. It integrates science and art by exploring a single great work by da Vinci, *The Virgin on the Rocks*, using novel analytical imaging techniques—macro X-ray fluorescence scanning, new digital infra-red reflectography, and high specification hyperspectral imaging technology—to arrive at new insights about Leonardo's work. With digital and VR technologies, it will provide a wide range of multi-sensory experiences. The exhibition will run until January 12, 2020, and then will travel internationally. *Leonardo* was supported by a 2019 Sloan grant to the American Friends of the National Gallery, London.

SCI-Arc Hosts Fear and Wonder 3: Stranger than Fiction

The Southern California Institute of Architecture (SCI-Arc) hosted the Sloan-supported symposium Fear and Wonder 3: Stranger than Fiction on November 20 at the SCI-Arc campus in Los Angeles. The symposium focused on the portrayal of AI in media, bringing in both artists and technologists to speak to SCI-Arc students to better inform their work. Guest

speakers included the concept artist for *Blade Runner 2049*, the director of Google's Artist and Machine Intelligence Group, the animation director for *Rick and Morty*, and the architect of the personality for Microsoft's digital assistant, Cortana. Fear and Wonder 3 is supported by a 2019 Sloan grant to SCI-Arc.

THEATER

Sloan-Backed Musical *Einstein's Dreams* Opens in NYC

Einstein's Dreams, a musical based on the international bestseller of the same title written by physicist and author Alan Lightman, began its Sloan-supported run in November at 59E59 Theaters. The play is set in the year 1905, while Albert Einstein was working at the patent office in Bern, Switzerland, attempting to find the balance between his career and family life,


and developing his Theory of Special Relativity. It imagines Einstein's dreams during that period of his life. Other characters include Einstein's friend and physicist Michele Besso and Josette, a mysterious woman who is actually the personification of time and who helps Einstein with his scientific pursuits. The portrayal of dreams and mystery is augmented with original video projection, LED illumination, moving lights, and other high-tech set design features. Lightman and renowned physicist and science communicator Brian Greene will participate in post-performance discussions. The play was supported by a 2019 Sloan grant to the Prospect Theater Company.

TELEVISION

American Experience's "The Poison Squad" to Air in February
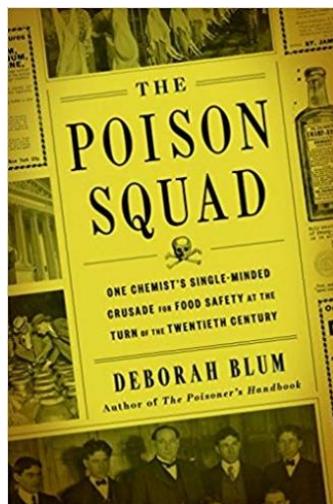
A two-hour Sloan-supported *American Experience* special based on acclaimed author Deborah Blum's new book, *The Poison Squad: One Chemist's Single-Minded Crusade for Food Safety at the Turn of the Twentieth Century* (pictured left) is scheduled to air on February 4, 2020 at 9pm on PBS. Blum, a Pulitzer Prize winner and Sloan supported author for *The Poisoner's Handbook*—which became the basis for one of the most successful *American Experience* shows ever—tells the story of Dr. Harvey Washington Wiley, chief chemist for the U.S. Department of Agriculture, whose dogged efforts to test the health effects of popular chemical food additives led to modern standards of food safety and consumer protection. This show is the first of four produced through a 2019 Sloan grant to American Experience to support projects such as "Chasing the Moon," "Sealab," and "The Eugenics Crusade."

## NOVA Documentary on Autonomous Vehicles Debuted in October

Look Who's Driving, NOVA's Sloan-supported documentary film on autonomous vehicles, premiered on October 23 on PBS. The one-hour special, produced by the award-winning team at Kikim Media, explored topics from the history of driverless cars to today's state of the art autonomous vehicle technology and its possible pitfalls. The documentary aims to separate the hype surrounding driverless cars from the science and what is truly possible today. In an admiring review after a screening at the Computer History Museum in Silicon Valley, *Forbes* called the film "a must-see on the promises and perils of self-driving cars... [which] offers a

carefully reasoned and properly balanced examination of where we are with self-driving cars and posits intelligently about where we might be heading." The film is available to stream via the NOVA website and will be available on DVD starting January 14, 2020. The production of *Look Who's Driving* was supported by a 2018 grant to the Catticus Corporation.

Sloan-Backed *American Experience* Nominated for IDA Documentary Awards

"Chasing the Moon," the three-part Sloan-supported *American Experience* documentary and the PBS centerpiece project of 2019, was nominated for an International Documentary Association (IDA) Documentary Award for Best Multi-Part Documentary. *American Experience* as a whole, Sloan's flagship PBS partner for over two decades, was also nominated for Best Curated Series. "Chasing the Moon" explores the events leading up to the historic journey to
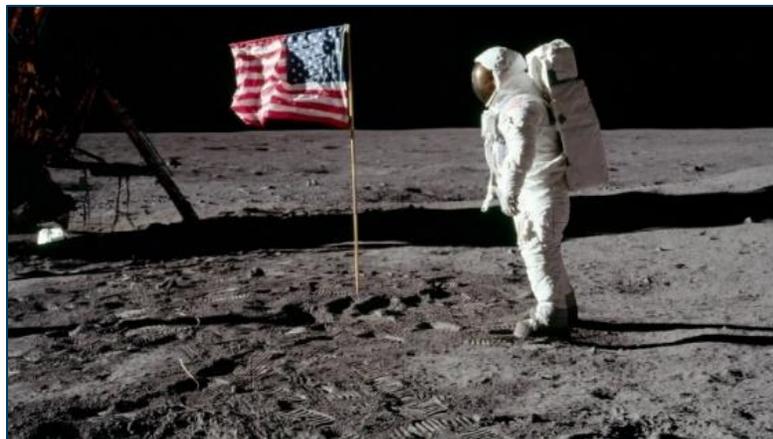
the moon, covering a range of topics from the little-known but important role of women to the influence of former Nazi Wernher von Braun on NASA's rocket program to the civil rights activists who protested the use of U.S. resources for space exploration rather than other pressing issues. The film is now available to view on the PBS website, as well as on other streaming platforms and DVD.

RADIO

### *Gastropod* Episode on CRISPR and Food Hits the Sweet Spot

In a recent episode of Sloan-supported *Gastropod*, "What's CRISPR Doing in Our Food?", hosts Cynthia Graeber and Nicola Twilley examined how CRISPR is used in food. They travelled to Wisconsin to learn the story of how CRISPR was discovered in a yogurt culture factory, discussed the difference between GMO foods and foods modified with CRISPR, and outlined the good and the bad that comes from using technology to transform our food. The episode was one of the most popular *Gastropod* episodes to-date and was widely shared by listeners. The production of *Gastropod* is supported by a 2018 grant to the Food & Environment Reporting Network.

UNIVERSAL ACCESS TO KNOWLEDGE

Consumer Reports Finds Home Security Cameras Have Security Vulnerabilities

Consumer Reports (CR) tested 12 home security cameras and found two of the cameras had multiple security vulnerabilities that could allow hackers access to personal information.
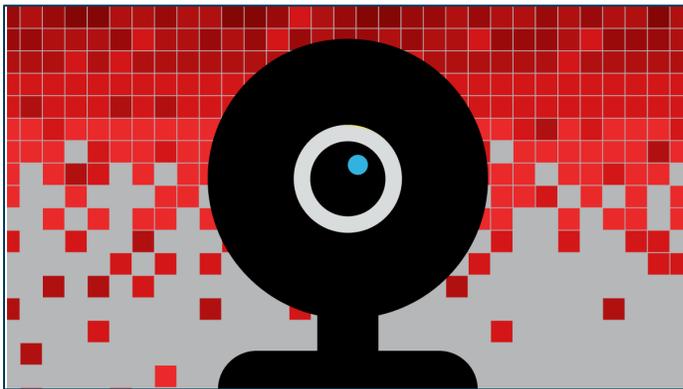
After informing the companies of these vulnerabilities, both organizations involved have fixed or are currently working to fix the issues. CR used the Digital Standard, a set of digital privacy and security criteria, to perform these tests. Work with the Digital Standard is part of a 2018 grant to CR to research consumer attitudes on digital privacy, convene experts and test technology platforms on their privacy practices, and educate consumers about digital privacy and security.