



Chef cultivates next-gen culinary standouts

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On a mission to leave Earth's orbit



Astronaut Jessica Meir is also a licensed private pilot.
Photo by Robert Markowitz

It took 36 years, but Jessica U. Meir has realized her childhood dream of becoming an astronaut.

Meir, selected by NASA in 2013, earned a bachelor of arts in biology from Brown University, a master of science in space studies from the International Space University, and a doctorate in marine biology from Scripps Institution of Oceanography. In her doctoral research, Meir studied the physiology of animals in extreme environments. During those years, space exploration didn't dominate her thoughts.

"I didn't think my 5-year-old dream job could actually happen," Meir said during a 2018 interview at the USA Science and Engineering Festival.

That all began to change in 2000 when Meir started working at Lockheed Martin's Research Facility, where she not only conducted research on human physiology but also participated in research flights on NASA's reduced gravity aircraft and served as an aquanaut in an underwater habitat for NASA Extreme Environment Mission Operations.

For her doctoral research, Meir studied oxygen depletion in diving emperor penguins and elephant seals. During her post-doctoral research at the University of British Columbia, she trained bar-headed geese to fly in a wind tunnel while recording various physiological measurements in reduced oxygen conditions.

"Now (as an astronaut), I will be the animal in the extreme environment," Meir joked during her interview at the science-and-engineering festival.

Meir's astronaut candidate training, which began in 2013, included scientific and technical briefings; instruction in International Space Station systems; spacewalks; robotics; physiological training; flight training; and water and wilderness survival training. She and her fellow trainees also learned to speak Russian so they can communicate with the Russian astronauts at the space station.

Meir completed astronaut candidate training in July 2015. Two years later, she was featured in the PBS documentary "Beyond a Year in Space," which introduced viewers to the next generation of astronauts training to leave Earth's orbit. In early 2019, she was still awaiting her first mission assignment.

A native of Caribou, Maine, Meir is the recipient of numerous honors, including:

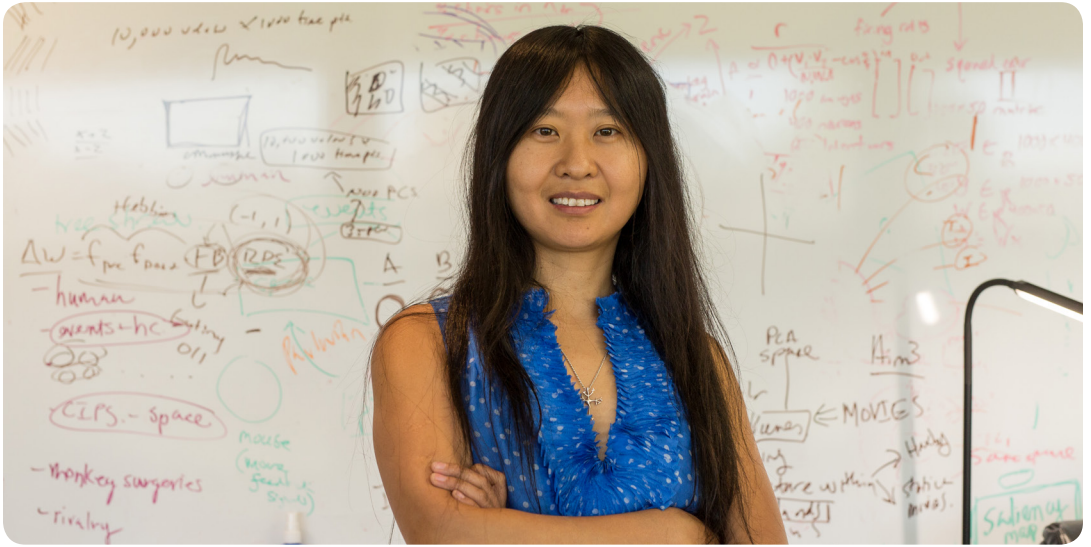
- American Physiological Society Early Career Advocacy Science Policy Fellowship (2013)
- National Science Foundation International Research Post-Doctoral Fellowship (2009) Philanthropic Educational Organization (PEO) Scholar Award (2008)
- Defense Department National Defense Science and Engineering Graduate Fellowship (2003)
- Lockheed Martin Technology Services "Lightning Award" (2002)

Meir is a member of the American Physiological Society, Society for Experimental Biology, Canadian Society of Zoologists, Society for Integrative and Comparative Biology, and Adventurers and Scientists for Conservation.



Jessica Meir, third from left, and fellow members of the 2013 class of astronauts take a break from training at NASA's Johnson Space Center in Houston, Texas. Photo courtesy of NASA

Scientist's work may change how we see the brain



Doris Tsao is a 2018 recipient of the prestigious "Genius Grant." Photo courtesy of the John D. and Catherine T. MacArthur Foundation

For acclaimed neuroscientist Doris Tsao, examining how we are capable of recognizing faces is a gateway to a deeper understanding of how the brain works.

"I study how we see – how the brain sees – and this is important because it's a way of understanding how the brain works," Tsao told the Los Angeles Times. "And the brain, of course, is who we are."

Tsao and her parents emigrated to the U.S. from Changzhou, China, when she was 4. Although she was raised by a computer programmer (her mother) and a machine-vision researcher (her father), Tsao says she wasn't particularly fond of science when she was young – but she did like to read about scientists.

By 2017, Tsao had unraveled the code the brain uses to discern faces from myriad variations in structures, tones and textures. Her tools included brain-imaging technology, electrical recording techniques and mathematical modeling. Tsao's research impressed not only fellow members of the neuroscience community but the MacArthur Foundation. In 2018, Tsao was among what the foundation called "25 extraordinarily creative people who inspire us all." Each fellow was awarded a stipend of \$625,000 (otherwise known as the "Genius Grant"), to be paid quarterly over five years and used at the recipient's discretion.

A professor of biology and biological engineering at California Institute of Technology in Pasadena, Tsao is also an investigator at Howard Hughes Medical Institute, and director and leadership chair of the Tianqiao and Chrissy Chen Center for Systems Neuroscience.

Early in her career, Tsao used functional magnetic resonance imaging to determine that the visual cortex of the macaque monkey shows face-selective activation in six small "patches" in each hemisphere of the brain. She then used data from fMRI brain scans as a map to guide the placement of single-neuron, electrical recording probes, which demonstrated that certain neurons display highly attuned sensitivity to faces, but not to other objects, and that different patches across the brain's cortex are integrated in a network dedicated to the visual processing of faces.

In her findings published in 2017, Tsao recorded how 205 neurons responded to specific dimensions of facial variances computed from photographs of human faces. From that, she was able to predict how each neuron would respond to new faces. She then succeeded in calculating and reconstructing numerous facial configurations, based on the patterns of neural signals triggered by pictures of new faces shown to the macaque. Ultimately, Tsao's experiments could begin to shed light on other neural computation and sensory-processing functions – and help lessen the mystery of how the brain works.

Reverent tableaux of landscapes and traditions

Each artist featured in this issue of *Unity* unveils her signature style and life influences in every piece of art she's created.

Meera Agarwal

Meera Agarwal was born in Chennai, India, and spent most of her childhood there. Her affinity for drawing and painting as a child ultimately changed her life. "Although painting was an expensive hobby for us, my parents were very supportive," Agarwal says.

Throughout her world travels as an adult, painting was always a constant. Mostly self-taught, she worked in various mediums throughout the decades.

Agarwal says she gravitates toward images of people and scenes she has encountered while traveling.

"Pachamama" is a realistic representation of an Andean tribal woman and her baby, whom Agarwal met in Peru. "Her colorful and intricate costume was an immediate draw for me, (as well as the) certain silent strength the woman exuded," says Agarwal.



"Pachamama" by Meera Agarwal



"Hats Off" by Meera Agarwal

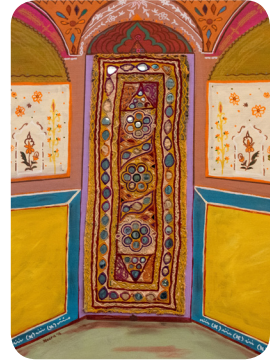
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"Hats Off" is a depiction of the colorful turbans worn by men in the Thar Desert in Jaipur, the capital of Rajasthan state in India. Many people in the region still wear traditional tribal attire.

"Doorway" is a tribute to the ornate "darwazas" (doorways) in the City Palace of Jaipur. A vibrant, colorful doorway speaks to the warm hospitality of royalty that still lives there.



"Doorway" by Meera Agarwal

"The verve and vibrancy of kaleidoscopic India influences my paintings mainly in terms of color scheme," says Agarwal. "Using bright colors, incorporating intricate details, textures and fabric comes naturally to me."

SJ Shaffer

Born in San Diego, California, SJ Shaffer was raised on the streets and ocean boardwalks of Mission Beach in San Diego. "I was watched over by the homeless and street gangs and protected by Vietnam veterans who gifted me art supplies," she says.

Shaffer's refuge was her art classroom, and she attributes her high school art teacher with changing her life. He photographed three years' worth of her artwork and submitted the photos to the California Otis College of Art and Design, considered one of

the finest art institutes in Los Angeles. Shaffer became one of its youngest students and graduated with honors with a BFA in commercial illustration.

Shaffer now resides in northern Arizona, but she has always been inspired by the border towns in the south. Outside Tucson (which borders Nogales, Mexico) is the beautiful Mission San Xavier del



"Bella the White Dove" by SJ Shaffer

Bac. "Bella the White Dove" – illustrated with crisp lines against soft wisps of blue sky – depicts a female friend of Shaffer's riding a mule toward this mission.

"Rayo De Luz" ("Ray of Light") portrays people around a place of worship. The bright colors of acrylic paint on a wood panel give this piece a "ray of light" effect as the people go about selling fruit, vegetables, baskets and blankets.



"Rayo De Luz" by SJ Shaffer

"El Viaje" ("The Journey") represents a Navajo elder, his chihuahua and an eagle spirit beginning his journey into a labyrinth.

In front of him is a desert with the Southwest indigenous ocotillo, a leafy green plant crowned with orange flowers. A dramatic sky of crimson serves as a backdrop to the mountains in shades of ochre, Shaffer's favorite color.

Shaffer says her work has been heavily influenced by a tapestry of cultures found in what she considers to be two of the most majestic and tranquil cities: Sedona, Arizona, and Santa Fe, New Mexico. Her works are represented throughout Arizona; Santa Fe, New Mexico; Texas; and Oklahoma.



"El Viaje" by SJ Shaffer

Deborah Samira

Deborah Samira was born and raised in Arcadia, California. As a child, her mother taught her how to draw more realistically. In the classroom, she was identified as "the artist" when there was a need for one. Samira says her love for the arts resulted in excursions to Europe and art museums and the opportunity to visit family in South America. There, she gained a deeper appreciation for working in terra cotta clay and mud.

Samira's love of "breathing life" into her earthenware is rendered in her series Four Freedoms, wall hangings made of hydrocal plaster and fiberglass that pay tribute to the American icon Norman Rockwell's work of the same name. "The family gathering is a

universal and timeless experience shared in every culture," says Samira.

"Freedom From Want" portrays a gathering in celebration of the family's hard-earned bounty with a Thanksgiving meal of abundance.



"Freedom From Want" by Deborah Samira



"Freedom of Speech" by Deborah Samira

"Those living in the margins of our society should have their voices heard," says Samira. Such a person is highlighted in "Freedom of Speech," featuring a female janitor who works at night, unseen and unheard, but who is the matriarch and protector of her family at home.

"Freedom of Religion" honors cultural diversity in how faith is expressed in this country since Rockwell's lifetime.

"With my artwork, my attempt to reimagine Norman Rockwell's Four Freedoms isn't meant to be a correction or statement of objection. Instead, I humbly and respectfully believe that if living today, Norman Rockwell would also strive to visually give a voice to cultural diversity."



"Freedom of Religion" by Deborah Samira

Influential chef cultivates next-gen culinary standouts



Chef Simone Byron, left, with students Osiris Padilla and Monica Gutierrez, and Thompson Hospitality Joint Ventures Director Genevieve Stona.

Chef Simone Byron has been immersed in all things culinary since childhood. She honed that focus on – and immense appreciation of – food in college and the corporate world. Now she has the privilege of helping to shape the future of 300-plus students at Meadowcreek High School in Norcross, Georgia.

Over the last seven years as leader of the Title 1 school's culinary arts program, Byron has helped the students attain state and national honors. She was also named the 2018 educator of the year by ProStart, a nationwide, high-school culinary program.

Byron's relationship with Thompson Hospitality and Compass Group helped facilitate the creation of a semester-long internship program for her students at Coca-Cola's headquarters in Atlanta that launched in January 2019.



Chef Eric Centeno of Westminster Academy visits with Chef Simone Byron.

Unity spoke with Byron in early 2019 about her career and myriad accomplishments on behalf of her students.

Q. What led you to the culinary field?

A. My family is deeply rooted in culinary arts. My great-grandfather was the head chef for Marcus Garvey's Black Star Line, and owned the first full-service, black-owned catering company in South Bronx. I grew up watching my beautiful mother cook almost every night. My mother is Jamaican, which lends to the diversity of the food I was raised preparing.

Q. During your childhood, did you experience any of the challenges that many of your students do?

A. Actually, no. (But) my parents both came from challenging upbringings. My mom was raised in Queensbridge projects (Queens, New York) and my dad in Castle Hill in the Bronx. They both wanted better for their children and worked hard to provide my brothers and I with an excellent childhood.

I've had the opportunity to travel abroad early in life and be exposed to different cultures. This type of upbringing fuels my leadership in what I do in education. I want my students to experience all the great things I have. I want them to know realize that there's more than what's in front of them. All they need is self-confidence, focus and guidance.

Q. When did you enter the corporate world, where did you work and what were some of the positions you held?

A. I entered the corporate world as soon as I graduated from college (the Art Institute of Atlanta). I worked for Disney at ESPN Zone throughout college and was able to get a catering-manager position with Compass Group upon graduation. I was quickly promoted to chef manager, and then site manager for the SunTrust accounts. I was with Compass for six years before transitioning into education.

Q. How did you end up at Meadowcreek? Did the culinary program already exist or did you create it?

A. When I started at Meadowcreek, there was an existing program, but it was more of a home economics setup. My principal, Dr. Tommy Welch, wanted the program to grow and become a bigger entity of the school. So when he gave me the leeway to express my talents, the program took off.

On the cutting edge



Who says cutting boards have to be so ... square?

These days, the ideal surface for mundane food-preparation tasks such as cutting, slicing and mincing is anything but boring. Still functional? Absolutely. But thanks to talented artisans, and specialty and other retailers, cutting boards qualify as eye candy for all kinds of kitchens, from humble to high-falutin'. In some cases, the boards' heirloom status has reached new heights.

Yes, cooks and collectors alike covet this most utilitarian of kitchen tools now more than ever. This is especially true for culinarians on a mission to outfit their kitchens with the most sustainable equipment and gadgets on the market. No doubt they'd appreciate the reclaimed, Hawaiian-grown hardwood cutting boards crafted by Jen Homcy's company, Foundwood.

"I create functional art, such as cutting boards ... from trees that were trimmed or removed for development or conservation," says Homcy.

"Foundwood was unofficially founded in the early 1970s by my father, Dave Homcy. As a child of the Depression, he learned how to be resourceful and his no waste/trash to treasure practice became a core theme throughout his life."



Some specialty cutting boards provide the perfect opportunity to show pride of place. Brooklyn, New York-based AHeirloom initially only designed and manufactured state-shaped cutting boards. The boards are made of 100 percent "rapidly renewable" bamboo plywood, which can be personalized or engraved. The company also makes tabletop and barware items.

Maybe you have no interest in showing your allegiance to state, region or country. However, if you've always wanted to bring your alma mater or favorite pro team into the kitchen, online retailers such as fanatics.com have boards emblazoned with team insignia ranging from the University of Georgia to the Kansas City Chiefs.

What if you prefer a cutting board that's more refined than rustic, more subtle than splashy? Never fear; custom retailers are here to make the boards that complement your taste and fulfill your culinary needs. San Diego, California-based customcuttingboards.com crafts one-of-a-kind boards that you can pull out from a drawer or mount atop your stove.

No matter your taste or the task at hand, there's bound to be a cutting board that meets – if not exceeds – your desires and needs.

Influential chef cultivates next-gen culinary standouts



Meadowcreek Logo. Photo by Constance Brossa

Gwinnett County is super supportive of technical education, which attributed to building an industrial kitchen at Meadowcreek. I know the value and opportunities a facility like that brought, and I just used my talents to catapult the program.

Q. How much time do you spend in the classroom with your students?

A. Wow, that's a big question. I'm at work all the time. I want to be at work all the time. It's really not even work. I love to be productive, and I love to see my students be productive. I tell people all the time that if I have the blessing to change lives, then I'm doing it. So, I give my time and love to my students everyday – weekends included. So, to answer your question I work seven days a week.

Q. Do you plan to launch / expand the culinary program elsewhere? Is anything in the works at this time?



Thompson Hospitality Executive Chef Rommel Mendoza, left, with Thompson Joint Ventures Director Genevieve Stona and Simone Byron, following his presentation about Filipino cuisine at the school. Photo by Constance Brossa

A. I'm always looking to grow. Compass Group is a great company to partner with because of their global platform, so that's always an exciting aspect to consider. We are working on several projects right now, so more to come on future plans.

Q. What impact has your relationship with Thompson Hospitality and one of its Joint Ventures directors, Genevieve Stona, had on you and the Meadowcreek culinary program?

A. Genevieve is extraordinary. Let me start there! I met Genevieve in 2007 when I worked with Compass. She's the most engaging person that I know. In 2008, I was awarded manager of the year for Thompson because of several projects I did through her leadership. I kept in touch after transitioning into education, and we found a way to help each other. I needed a way to secure internships for my students. I know they needed corporate exposure. Genevieve made that a reality. She's an amazing person to work for, but even more amazing to work with. Genevieve ... continues to lay the pavement for success.

Q. What else would you like people to know about Meadowcreek (the school, the culinary program and / or the students)?

A. Well, I just want to encourage people to do what they can. No matter what field you're in, do the best that your talents will allow you to do. I think there are great people in the world and they're scared to step out on faith and start something. There's a lot of anxiety around leadership; it's not easy. But I can say it's worth it to try. Even the failures I've had are worth it because the wins always dwarf the losses. Do well!

Chef Simone Byron

Hometown - Born in Cleveland, Ohio, and raised in Atlanta, Georgia.

Education - Graduate of the Art Institute of Atlanta. Earned a bachelor's in culinary arts management.

Home life - Lives in Stone Mountain with her son, Cameron Shaw-Byron, 11.

Favorite meal to prepare at home- Salmon Etoufee Over White Cheddar Grits. "My grits are the best!" she says. "Also, I love preparing mussels!"