

## CSUF SCIENTISTS CONTRIBUTE TO NEUTRON STAR-BLACK HOLE DISCOVERY

Cal State Fullerton physicists are on the forefront of a discovery of gravitational waves from two compact cosmic objects never before observed by scientists.

The discovery is the first gravitational-wave detection of a mass-gap object paired with a neutron star, detected during the latest observation run by LIGO, European Virgo Collaboration and Japan's KAGRA.

Jocelyn Read, CSUF professor of physics and co-author of the latest discovery, said the heavier object falls within a possible mass gap, a range of masses where no astronomical objects are found or expected. One of the two compact objects that make up this mysterious merger with a neutron star is a small black hole, she explained.

As members of LIGO's Extreme Matter Group, the CSUF researchers compared gravitational wave data from black holes and neutron stars to models of neutron star matter. Sunny Ng, a physics graduate student and co-author of the research, investigated



how the neutron star-black hole event might affect scientists' understanding of dense nuclear matter.

"This new merger is interesting because it tells us that there are black holes out there that are much smaller than we anticipated," said Ng.

Read and Ng, along with a team of faculty and student researchers, are part of CSUF's Nicholas and Lee Begovich Center for Gravitational-Wave Physics and Astronomy, a research center dedicated to education and outreach in gravitational-wave astronomy, physics and astrophysics.

[news.fullerton.edu/gravitational-wave-2024](https://news.fullerton.edu/gravitational-wave-2024)

## School of Nursing Receives \$5 Million Grant From CalOptima Health

CalOptima Health has approved a \$5 million grant to expand Cal State Fullerton's Bachelor of Science in nursing program and provide nursing students with stipends. The grant is part of CalOptima's Provider Workforce Development Initiative.

CSUF's School of Nursing's pathway from an associate degree in nursing to a Bachelor of Science in nursing is designed to increase the number of nurses entering the workforce and to diversify that workforce.

"The health care system nationwide is facing a severe shortage of workers across multiple specialties," said CSUF President Sylvia Alva. "We are excited to partner with CalOptima and local



community colleges to expand our capacity to educate more nurses in Orange County. It takes partnerships and collaborations like this to fully respond to the needs of our region."

[news.fullerton.edu/caloptima-5m-grant](https://news.fullerton.edu/caloptima-5m-grant)

## Actress Diane Guerrero Inspires Students to Become Warriors in Storytelling

Actress Diane Guerrero spoke to Cal State Fullerton students about opportunities for Latino talent in the entertainment industry, urging them to harness the power of authentic storytelling. She shared her journey from actress to immigration rights activist as part of the university's Beyond the Conversation series, which engages students in dialogue about diversity, equity and inclusion.

Guerrero is known for her roles in Netflix's "Orange Is the New Black," Disney's Oscar-winning film "Encanto," and most recently, DC's superhero television series "Doom Patrol."

[news.fullerton.edu/diane-guerrero](https://news.fullerton.edu/diane-guerrero)



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## Art Student's Feline Design Wins \$10,000 Skechers Scholarship

After Teeny Nadeau's childhood cat, Firefly, was diagnosed with cancer, she channeled her pain into creativity. Working alongside faculty in the College of the Arts, Nadeau developed her artistic skills, using design software to create an animal print design that earned her a \$10,000 Skechers Paws for a Cause Design scholarship.

In addition to the scholarship, Nadeau will receive mentorship from a Skechers industry professional and her design will appear on a Bobs shoe as part of a limited edition collection.

[news.fullerton.edu/teeny-nadeau](https://news.fullerton.edu/teeny-nadeau)