OSU to build supercomputing center

By COURTNEY VAUGHN
Oregon Capital Bureau

CORVALLIS — Oregon State University says a new 150,000-square-foot supercomputing research center in the works could pave the way for breakthrough research in artificial intelligence, robotics and materials science, while bolstering Oregon's semiconductor industry.

OSU officials announced Friday, Oct. 14, that a $50 million donation from NVIDIA founder and CEO Jen-Hsun Huang and his wife Lori Huang was among $100 million in gifts received by the university to create a new, three-story, $200 million Collaborative Innovation Complex at the university's campus in Corvallis. The Huangs are both OSU alumni. Once completed sometime in 2025, the new center will be named after them.

OSU President Jayathi Murthy said the addition of a supercomputer opens the door for advanced research in climate science and global environmental issues, among other things.

During a virtual meeting Friday with members of the media, Murthy said the university is "very excited about all the possibilities of this new development" and the philanthropy that led to it.

"It's a very ambitious and modern platform on which to build future research," Murthy said, noting the focus will be on "all things climate and sustainability."

NVIDIA, the computer chip manufacturing company Jen-Hsun Huang co-founded, is already a pioneer in artificial intelligence technology and innovation.

"We discovered our love for computer science and engineering at OSU," Jen-Hsun and Lori Huang said in a news release about the project. "We hope this gift will help inspire future generations of students also to fall in love with technology and its capacity to change the world."

Submitted image/Lara Janzen

Aerial rendering of the future Collaborative Innovation Complex, center, at Oregon State University in Corvallis.

The Huangs called AI "the most transformative technology of our time."

"To harness this force, engineering students need access to a supercomputer, a time machine, to accelerate their research," the couple said.

OSU officials said the new facility would create new areas for graduate study at the university and could lead to an expansion of the current degree offerings in the technology and semiconductor fields.

"The Jen-Hsun and Lori Huang Collaborative Innovation Complex at Oregon State University will be much more than a building. It will serve as a university-wide promise and as a hub for advancing groundbreaking solutions for the betterment of humanity, the environment and the economy," Murthy said in a news release announcing the new project. "The center will be a dynamic place where creative, driven faculty, students and partners from business and other universities come together to solve critical challenges facing the state, nation and world."

Artificial intelligence and robotics are already showing promise in helping fight wild fires, said Steve Clark, vice president of university relations and marketing at OSU.

"There's work being done within the College of Engineering to understand how the robots can actually, in some respects, be first responders," Clark said, noting a bi-pedal robot being used in research.

Along with the Collaborative Innovation Complex, OSU also announced that a 49,000-square-foot arts and education center will be named the Patricia Valian Reser Center for the Creative Arts.

Known for her philanthropy, Reser previously donated $25 million anonymously for the arts center, which is slated to open in spring 2024.

Construction on a different project — Reser Stadium — remains under way, thanks to $96.1 million donated to the university. OSU has a fundraising goal of $160.5 million.

The OSU Foundation has an active $1.75 billion campaign that aims to provide student support, scholarships, fellowships and learning funds while paying for faculty positions, academic programs, research and community engagement.

Harvesting sunlight on the farm

By GEORGE PLAVEN
Capital Press

AURORA — Growing crops and harnessing solar energy need not be mutually exclusive.

That's the idea behind a $1.5 million project at Oregon State University's North Willamette Research and Extension Center, putting the concept of agrivoltaics to the test.

Agrivoltaics, or dual-use solar, is exactly what its name implies — using areas of land simultaneously for farming and solar power generation, which has the potential to not only add another revenue stream for producers selling electricity, but also better manage sunlight for plants.

Chad Higgins, an associate professor of biology and ecological engineering for OSU, has studied agrivoltaics since 2015. During that time, he conceived of a research farm where he could experiment with how to maximize the benefits of solar panels on farmland.

Seven years later, construction is underway on the OSU Solar Harvest facility, with a 320-kilowatt solar array being installed on 5 acres at NWREC. A groundbreaking ceremony was held Oct. 11 at the research station, about 20 miles south of Portland.

"To have it all come together, finally, after all the intermediate struggles along the way, is amazing," Higgins said. "I can't wait to get started."

Finding funding for the project was one such struggle, Higgins said. Because the project will produce and sell electricity, that ruled out any state or federal grants.

Instead, Higgins partnered with the Oregon Clean Power Cooperative, a nonprofit dedicated to helping build community solar projects, to make his dream a reality. Co-op members are helping to finance construction, and in turn will receive power from the array.

The Roundhouse Foundation, based in Sisters, also provided an $800,000 grant for agrivoltaics research through the OSU Foundation.

"There are obvious pushes toward electrification of our entire economy," Higgins said. "When you think through the consequences of that, the push of solar into agricultural areas is inevitable. That can be thought of as a detriment, or an opportunity."

According to Higgins' research, widespread installation of solar arrays on farms could provide 20% of all electricity generated nationwide. To reach that benchmark would take a land base roughly the size of Maryland, or about 1% of current U.S. farmland.

A different study led by Higgins in 2015 analyzed the effect of solar panels on sheep pasture near the main OSU campus in Corvallis. Findings showed that grass grown underneath solar panels used water 300% more efficiently and grew 90% more forage.

Once completed, Higgins said he will first use the Solar Harvest array to further study alfalfa and grass as "reference crops."

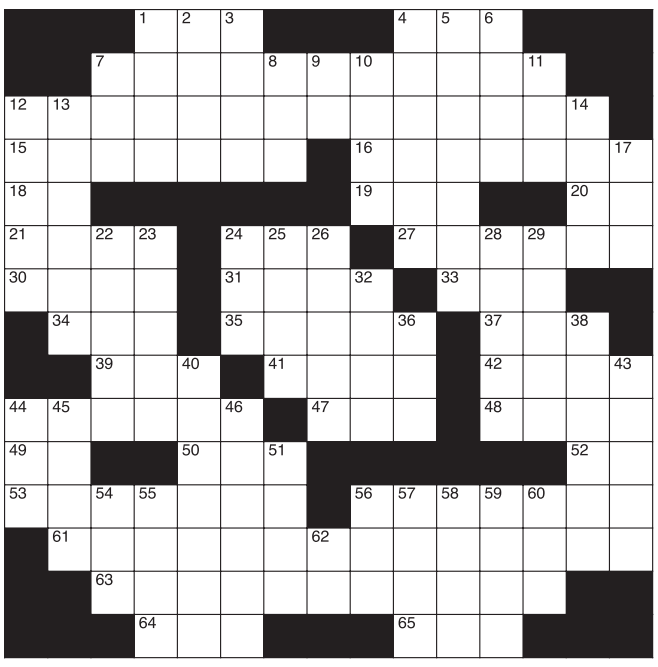
"How much water can you save and how much stress can you relieve because of the agrivoltaics? If I can understand that on a reference crop, then I can translate that to other crops," he explained.

Unlike other agrivoltaic demonstrations, Higgins said the Solar Harvest array is different in its design. Rather than lifting the panels high off the ground, they are fitted on hinges that run north to south and can tilt nearly vertical.

In other words, Higgins said that instead of trying to pass equipment underneath panels, this array will allow the panels to move as needed to make room for farming.

"This is highly important, because the cost of steel plays so big in the economics of the design," he said. "Absent any additional subsidies from the government, it's hard to make highly raised panels work economically."

Coffee Break!



CLUES ACROSS

1. Unhappy
4. Clairvoyance
7. One who works under you
12. What happens there stays there
15. Not ingested
16. Got the picture
18. One thousandth of a gram
19. Breakfast item
20. About
21. Tall deciduous trees
24. Safe keeping receipt
27. Cowardly
30. Pueblo people of New Mexico
31. Herring-like fish
33. A very large body of water
34. Angle (abbr.)
35. Spiritual leader of a Jewish congregation
37. White clergical vestment
39. Cool!
41. Matchstick games
42. Thick piece of something
44. A state that precedes vomiting
47. Burned item residue
48. Jaguarundi
49. Anno Domini (in the year of Our Lord)
50. The home of "60 Minutes"
52. Dorm official
53. Give cards incorrectly
56. One who is learning the job
61. Popular R.L. Stevenson novel
63. Attentively
64. CNN's founder
65. Criticize

CLUES DOWN

1. Fijian capital
2. Assist
3. Elected lord in Venice
4. The capacity of a physical system to do work
5. People of the wild
6. Parent-teacher groups
7. Midway between south and southeast
8. Moved quickly on foot
9. Handheld Nintendo console
10. "Top of the Stairs" playwright
11. Electronic data processing
12. "Dog Day Afternoon" director
13. Leaned
14. About aviation
17. Mountain is a popular type
22. Lake along Zambia and Congo border
23. Heroic tales
24. Soviet Socialist Republic
25. "Star Trek" villain
26. Hand gesture popular on social media
28. Renters have one
29. Tubular steel column
32. Database management system
36. Similar
38. Providing no shelter or sustenance
40. Death
43. What a sheep did
44. Midcentury Asian battleground
45. Horizontal passage into a mine
46. Mortified
51. Improper word
54. No seats available
55. Financial obligation
56. It can be hot or iced
57. Tough outer skin of a fruit
58. __ Spumante (Italian wine)
59. Misfortunes
60. Negative
62. Camper

WORD SCRAMBLE

Rearrange the letters to spell something pertaining to vegetarianism.

EGMEUL

Guess Who?

I am an actor born in California on October 24, 1989. My first on-screen credit came in 2009. I had a recurring role on "Switched at Birth," but made an impression as a superhero of sorts on a Netflix series about kids with powers.

CRYPTO FUN

Determine the code to reveal the answer!

Solve the code to discover words related to being vegetarian.
Each number corresponds to a letter.
(Hint: 3 = A)

A. 20 16 6 16 13 3 15 23 16
Clue: Plant-based food

B. 9 16 3 23 13 9
Clue: Well-being

C. 3 21 2 4 3 23
Clue: Living organism

D. 3 20 8 2 19
Clue: Steer clear of

Puzzle solutions can be found in today's classifieds

SUDOKU

				1			5	
		3					1	4
		9	3		2	8		
			6		3	5		
		7		5	4			
			8					
1	2							7
9		8				2		
4								

Level: Intermediate

Fun By The Numbers
Like puzzles? Then you'll love sudoku. This mind-bending puzzle will have you hooked from the moment you square off, so sharpen your pencil and put your sudoku savvy to the test!

PRODUCE AISLE WORD SEARCH

S	W	N	P	P	D	K	P	S	Q	K	U	K	A	L	R	U	B	P	A
T	K	H	S	E	W	S	I	S	A	E	P	S	Y	C	E	L	E	R	Y
O	A	S	Y	O	P	K	H	D	S	R	P	T	U	Z	F	P	K	T	H
R	O	A	O	B	E	E	T	S	T	T	T	U	H	U	T	O	H	T	U
R	C	U	L	N	T	Q	O	N	G	O	U	O	Q	C	S	T	B	U	E
A	C	Q	S	R	E	P	P	E	P	S	H	R	R	C	R	A	S	I	Y
C	L	S	A	R	T	I	C	H	O	K	E	P	N	H	L	T	M	E	C
H	Y	K	T	D	O	U	E	C	I	B	A	S	G	I	Q	O	U	C	I
R	M	Y	I	P	T	A	C	H	P	M	M	S	P	N	P	E	K	U	L
Z	Q	H	N	I	K	P	M	U	P	P	H	L	P	I	D	S	K	T	R
Z	S	E	O	T	A	M	O	T	Q	S	M	E	E	A	A	N	F	T	A
S	T	O	L	L	A	H	S	L	E	B	F	S	G	M	R	R	O	E	G
F	T	N	T	A	L	D	P	T	W	G	H	S	R	A	F	A	Q	L	P
M	T	I	N	G	C	B	A	G	R	T	A	U	D	R	B	K	G	Y	D
O	Q	O	A	G	M	N	R	E	O	C	N	R	O	C	F	B	M	U	Y
F	Z	N	L	U	Y	O	S	K	E	E	L	B	B	D	M	I	A	D	S
U	F	S	P	W	Z	A	N	D	Q	Z	F	M	L	K	L	Y	F	C	U
E	B	S	G	K	Y	P	I	C	A	U	L	I	F	L	O	W	E	R	U
M	Y	H	G	K	R	E	P	O	F	F	U	Z	C	Z	O	D	P	Q	T
T	S	Z	E	W	A	A	S	E	I	L	W	Q	N	C	H	A	R	D	Y

Find the words hidden vertically, horizontally, diagonally, and backwards.

WORDS

ARTICHOKE
ASPARAGUS
BEETS
BRUSSELS SPROUTS
CABBAGE
CARROTS
CAULIFLOWER
CELERY
CHARD
CORN
EGGPLANT
GARLIC
LEEKS
LETTUCE
ONIONS
PARSNIPS
PEAS
PEPPERS
POTATOES
PUMPKIN
SHALLOTS
SQUASH
TOMATOES
TURNIPS
ZUCCHINI