



WICHITA STATE
UNIVERSITY



Wichita State



RESEARCH & INNOVATION NEWS

WICHITA STATE RESEARCH & INNOVATION NEWS • May 2021

After a lengthy 2020, the spring 2021 semester seemed to fly by — thanks in large part to the innovative team behind Wichita State's Molecular Diagnostics Lab. The high-volume testing center provided accurate overnight COVID test results, allowing units on campus and a number of our community partners to create a manageable and productive instructional and work environment at a time when many communities were locked down.

Throughout the pandemic, research and innovation at WSU has remained committed to its role in our community and have adapted in opportunistic ways. During this time of virtual work, we have expanded our efforts to showcase discoveries and startups throughout our ecosystem, on campus and off.

Several highlights include:

Mid-West Air Force Collider Event: In partnership with McConnell AFB and Kansas Small Business Development Center, the Office of Strategic Initiatives hosted this three-day



Dr. Jeremy Patterson

*DEAN OF THE COLLEGE OF
INNOVATION & DESIGN*

virtual event that had participants representing 10 states in our region. The program assists with connecting the Air Force and small businesses to develop innovative technologies and find new market opportunities.

Shocker New Venture Competition: Spring 2020 had a lot of lows, and for many students who did not have the opportunity to compete in the student startup Shocker New Venture Competition and show off the next great idea, this was a particularly heavy blow. This year the Center for Entrepreneurship was able to host a virtual trade show where selected startups had the opportunity to compete for funding. Students pitched through a digital platform, allowing them to connect with judges and local experts to gain feedback and exposure. Congratulations to winner Blake Chance of Bar C Innovation for his Quick-Pin, a tractor hitch pin that offers a faster and easier uncoupling in case of emergencies such as a baler catching fire.

NASA SUITS Program: NASA SUITS (Spacesuit User Interface Technology for Students) is one of NASA's Artemis Student Challenges that tasks university students to design and create spacesuit information within augmented reality environments. The challenge provides students with an authentic innovation design experience as they engage with a problem that is mission-critical to the Artemis program. Wichita State was one of 20 universities selected to the yearlong challenge. Our student team — SELENE (System Engineered for Lunar Environment, Navigation, and Exploration), led by Innovation Design faculty member Maggie Schoonover, developed an interactive navigation and exploration interface for astronauts using augmented reality on a Microsoft HoloLens 2 head-mounted display. NASA held an interactive virtual presentation session, and the Wichita State team was praised by NASA evaluators for their design approach and interdisciplinary team management. Team SELENE has also hosted a number of local outreach events to engage K-12 students who are interested in NASA projects. You can [follow team SELENE for more updates on Instagram](#).

Rural Healthcare Challenge: On May 8, The College of Innovation and Design, in collaboration with Kansas Business Group on Health, hosted a Design Challenge focused on finding solutions for improving health monitoring in rural areas with an emphasis on digital transformation. Multiple interdisciplinary teams competed in this one-day challenge for a portion of \$4,000 prize money.

The online challenge was open to everyone and brought together Wichita State Students and community members seeking solutions through a series of exercises designed to help teams explore and iterate ideas into a viable solution. In the end, it was a team of students — Phillip Zavala, Valerie Gurung and Clara Jackson — who won with a system approach.

The Design Challenge utilizes design thinking methodology for rapid idea generation for well-defined problems. This fall the college will host another design challenge focused on sustainability. Look for details on the College of Innovation and Design web page and social media.

There are many more exciting initiatives and programs coming out of the WSU innovation pipeline that we hope to announce over summer and fall. Until then, stay tuned and join us in congratulating our 2021 graduates!



Airline Quality Rating reveals the effect of the pandemic on airlines

Customer complaints filed against major U.S. airlines soared amid the coronavirus pandemic, even as the carriers generally did better with on-time arrivals and baggage handling during the health crisis, according to the annual Airline Quality Rating released today by Wichita State University.

Complaints against the carriers climbed by nearly 400% from 2019 to 2020, driven by aggravation over refund requests as many travelers canceled their flights, AQR researchers Dr. Dean Headley and Dr. Brent Bowen found. Refund-related grievances amounted to nearly 83% of all complaints last year, pushing down overall quality scores for most airlines included in the report.

[Read more about the AQR](#)



NASA awards \$2 million for Wichita State professor to study the sun

Wichita State University's Dr. Nick Solomey, professor of physics, has been awarded a \$2 million grant from NASA for his work on developing a neutrino detector to work in space and close to the sun.

Solomey's grant was one of five grants NASA announced earlier this month from the NASA Innovative Advanced Concepts (NIAC) program.

[Learn more about Dr. Solomey's research](#)



Wichita State seniors partner with McConnell Innovation Lab

Two Wichita State University seniors have partnered with the McConnell Air Force Base Innovation Lab to help fight COVID-19 – by using robotics. Computer science majors Lucy Hoang and Lydia Melles are creating an autonomous robot that uses ultraviolet C-lights (UVC) to clean grocery stores. The project is part of a senior design class taught by Andy Stallard, WSU College of Engineering Senior Design Experience lecturer and director.

[Read more about this partnership](#)

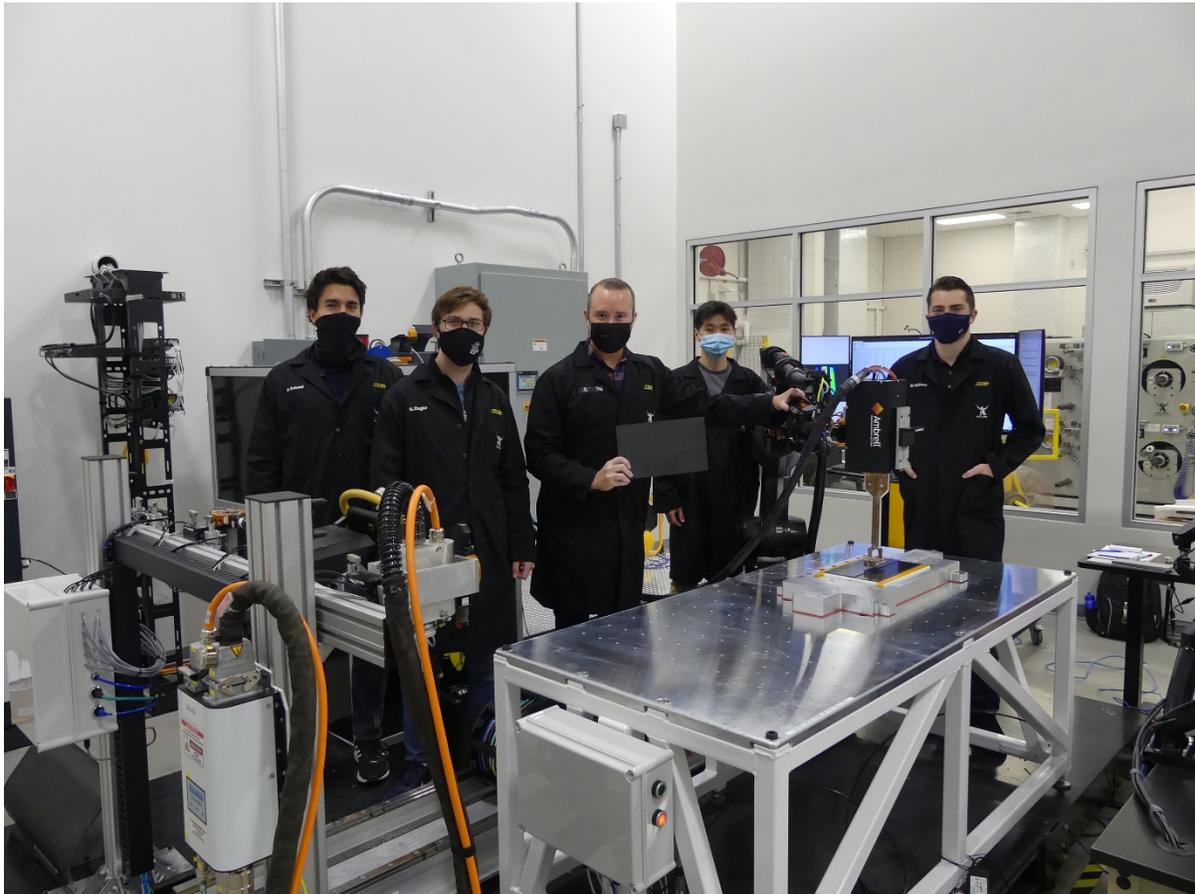


Wichita State's cybersecurity program helps Novacoast locate its office in Wichita

Novacoast, a California-based cybersecurity company, looks for a university and a talent pipeline in a livable city when it plans expansion.

Over our 24 years, we've always been tied to a university," said Paul Anderson, Novacoast's chief executive officer. "A lot of what we hire for is grit. The combination of that Kansas, Wichita culture that you guys have — combined with that subset of people who have a passion for learning — that's just an amazing combination."

[Learn more about Novacoast in Wichita](#)



NIAR's ATLAS announces addition of automated thermoplastic welding, tape-slitting capabilities

Wichita State University's National Institute for Aviation Research (NIAR) announces the addition of two new technologies to its Automated Technologies Laboratory for Aerospace Systems (ATLAS): a fully integrated thermoplastic welding system and a prepreg tape slitting and tow-rewinding machine.

[Read more about ATLAS' new capabilities](#)

Getting to Know Wichita State University

Research Advantage



Research Records

Total Awards for FY20: \$164.6 million



\$60.8M

from the U.S. Department of
Defense



\$11M

from the U.S. Department of
Education



\$10M

from the U.S. Department of
Transportation

\$97.6M | Federal

\$51.1M | Industry

\$14M | State of Kansas

\$1.8M | Private, local, other

Our Research **Innovation Team**

Let us help build your future

Have questions about what Wichita State can do for your business?

Need access to student interns or workforce development assistance?

Reach out to our Research Innovation Team to find out how Wichita State can work with you to advance your business and serve the applied learning mission of the university.



Coleen Pugh
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