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University of Washington CoMotion, Amazon Announce Latest Amazon Catalyst Fellows

SEATTLE, Wash., Oct. 26, 2016 – Amazon Catalyst has awarded 12 grants to a variety of University of Washington(UW) students, faculty, and staff to fund big ideas. The Amazon Catalyst program is a collaboration between UW CoMotion and Amazon to encourage innovation within the UW community and awards grants of up to \$100,000 per project. The goal of the program is to inspire people to think big, invent solutions to real-world problems, and make a positive impact on the world. Open to all three UW campuses and all disciplines, the program provides the winners with mentorship, community through the Amazon Catalyst Fellows, and funding. Amazon Catalyst is not a traditional research fund; it is a different kind of funding model to stimulate big ideas with immediate impact.

“We are excited by the Amazon Catalyst Fellows and their projects,” said Adam Siegel, managing director of Amazon Catalyst. “Our Fellows are students, faculty, and staff working in fields as diverse as healthcare, transportation, and education. This approach -- that someone can observe a need, propose a solution, and then get funding for it – is what makes Amazon Catalyst distinctive.”

“As UW’s collaborative innovation hub, CoMotion at the University of Washington, is thrilled to be collaborating with Amazon on this innovative program,” said Vikram Jandhyala UW’s vice president for innovation strategy and executive director of UW CoMotion. “It is a testament to Amazon and UW’s shared commitment to solving big problems in the world and building an ecosystem of innovation in greater Seattle.”

The 12 recipients and their projects are listed below:

- **Charcoal – The intersection of sustainable forestry and farming**
 - By utilizing the woody waste from forest restoration projects, this team is able to use charcoal to increase the amount of carbon in topsoil by 30 percent, which can increase the nutrient content of food grown in that soil.
 - *Thomas DeLuca, Si Gao, Kai Hoffman-Krull*
- **Using thermal modification to develop the next generation of outdoor wood products**
 - By using an innovative treating process called thermal modification, this team hopes to create a market for hemlock and provide vital economic opportunities on Washington’s Olympic Peninsula, where weak demand for timber has devastated local communities.
 - *Ivan Eastin, Anthony Dichiara, Indroneil Ganguly, Bernard Bormann*
- **Taking vehicle automation to bicycles**
 - A self-driving bike that has a top speed of 30 miles per hour, a 15-mile range, and needs only a 25 lb. battery to function; manufactured at a fraction of the cost of a self-driving car.
 - *Tyler Folsom, Adam Zhu, Nodira Povey, Jordan Walker*

- **Personal osteoporosis screening via smartphone (OsteoApp)**
 - A smartphone app that is able to test bone density and inform a user if they are at risk for bone disease.
 - *Josh Fromm, Alex Mariakakis, Shwetak Patel*
- **Harnessing natural bacteria to prevent water pollution from textile dye industries**
 - By using a newly discovered species of bacteria, scientists are able to detoxify dyes, which allows textile factories to reuse their own water.
 - *Heidi Gough, Noshaba Malik*
- **Improved processing for the widespread use of low-cost phosphorus treatment material**
 - This team is exploring ways to use a waste product from regional drinking water to take phosphorous from stormwater. The waste, which is practically free and would typically be put into a landfill, can remove nearly all of the phosphorous from stormwater preventing phosphorous pollution in lakes.
 - *Andrew James, Alex Gipe, Dana De Leon, Celine Mina*
- **Intelligent lossy video compression for education (FaceCrop)**
 - A compression program to allow users in remote areas of the world to stream high-quality video even in places with limited bandwidth.
 - *Jumana Karwa, Saurav Tomar*
- **Regional climate prediction – enabling society to prepare for climate change**
 - A regional climate model that uses global climate simulations and downscales them, resulting in state-of-the-science probabilistic prediction of the changes people can expect in the next decades and century.
 - *Clifford Mass, Eric Salathe, Adrian Raftery, Richard Steed, Yolande Serra, Guillaume Mauger*
- **A low-cost device for desalination**
 - A desalination device that relies on electricity to turn seawater into clean, drinkable water at only a few percentage of energy cost.
 - *Guozheng Shao*
- **Smartwatch-based cognitive behavioral therapy for impulse control disorders (Slightly Robot)**
 - A smartwatch app and standalone bracelet that vibrates whenever a user is pulling or picking, helping provide positive, real-time feedback to those who suffer from body focused repetitive behaviors.
 - *Matthew Toles, Joseph Toles*
- **Mega-Quake earthquake detector**
 - A tool the USGS and NOAA can use to identify a magnitude 8 or 9 earthquake and send out an alert, giving people vital seconds to minutes to prepare, potentially saving lives and preventing massive property damage.
 - *John Vidale, David Shmidt, Paul Bodin, Bill Steele, Ben Baker, Brendan Crowell*
- **High-Altitude aerial vehicle for communications and exploration**
 - This team has designed a drone that can fly at an altitude of 80,000 feet, has solar panels in the wings, and batteries for storage meaning these drones can stay almost indefinitely. This enables scientists to carry out research in some of the planet's most isolated places.
 - *Robert Winglee*

Amazon Catalyst was launched in November 2015. Since then, Catalyst has instituted a quarterly application deadline. The deadline to apply for Fall 2016 is November 23, 11:59 PM PT. More information can be found at <http://catalyst.amazon.com/uw>

About CoMotion

CoMotion at the University of Washington (UW) is the collaborative innovation hub dedicated to expanding the societal impact of the UW community. By developing and connecting local and global innovation ecosystems, CoMotion helps innovators achieve the greatest impact from their discoveries. We deliver the tools and connections UW researchers and students need to accelerate the impact of their innovations.

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