



2018 AlphaLab Gear Hardware Cup: Finalists, Semifinalists, International Companies & Descriptions

If you would like to connect with one or more of these companies directly rather than via the website provided, please email Leah Simoncelli at leah@alphalabgear.org

AlphaLab Gear Hardware Cup: US Finalists

Somatic Labs- South (Austin)- **1st Place at International Finals**

Somatic Labs creates devices that communicate through the sense of touch. Zorb (hardware and software platform) enables any wearable device to deliver detailed sensations that move across a user's skin through unique, vibrotactile patterns. Zorb can convey directions, commands, and alerts in environments where a user cannot see or hear clearly.

Lilu- East Coast (Washington D.C.)- **2nd Place at International Finals**

Lilu builds tech-enabled products for the modern mom to equip mothers with tools to meet the breastfeeding guidelines suggested by the WHO. We have created the first automated pumping bra, that mimics expert-recommended breast massage and compression techniques, to enable mothers to get up to 50% more milk each pumping session, hands-free and in less time. With Lilu's first product, mothers can pump more and better breastmilk for healthier babies, while eliminating pain and complications for nursing mothers.

Velocity Robotics- Mid Atlantic (Pittsburgh)

We make connected power tools for contractors to improve worksite productivity in construction. Our first tool, Autoset, is a miter saw attachment that helps contractors measure and cut building material both faster and more accurately.

Neopenda- Midwest (Chicago)

Neopenda is a for-profit social enterprise startup passionate about improving healthcare in low-resource settings through innovative technology solutions. Neopenda's first product, currently being validated in clinical trials in Uganda, is an affordable wireless vital signs monitor for newborns in overcrowded, understaffed health facilities. Our solution, tailored for users in emerging markets, reduces response time to newborns in distress, and helps healthcare workers to save more lives.

[Sleepbox](#)-Northeast (Boston)

Sleepbox is creating a new type of tech-drive hospitality experience with our modular, stand-alone hotel rooms. We can repurpose in-demand space in the center of cities to create hotels which act the hub for urban explorers. We can create hotels for 1/10th the cost and in 1/5 the time of traditional hotels, and pass that along to the guests by setting room rates to pay for everything they want, and nothing they don't.

[Leo Aerospace](#)- West Coast (LA)

Leo Aerospace provides dedicated launch for microsatellites to space. The emerging small satellite economy is hindered by a single outstanding problem: Access to space. To address this problem and realize the incredible potential in this market, Leo Aerospace is developing a rockoon: a rocket launched from a high-altitude balloon.

AlphaLab Gear Hardware Cup: International Finalists

[Lumir](#)- South Korea- **3rd Place at International Finals**

Lumir aims to resolve the problem of lack of light in the world. In order to improve the living conditions of people who lack access to electricity, Lumir has developed an efficient LED lamp powered by affordable cooking oil which produce 2.5 times brighter light with using 80% less fuel cost.

[Hachitama](#)- Japan

TOLETTA is the world's first IoT Japanese toilet for cats. It aims to help cat owners & vets to detect one of the most common reasons for cat's diseases: chronic kidney failure.

[EZMEMS](#)- Israel

Towards the age of sensors and IoT, where sensors are everywhere and everything is being sensed, the deployment of a large number of sensors requires them to be compact, low cost and disposable. EZMEMS is going to revolutionize the world of sensors by introducing its disruptive technology and easy approach towards smart disposable plastic sensors with integrated electronics.

[UNA Smart](#)- Brazil

UNA Smart revolutionizes the way people experience coffee on-the-go, by providing a solution that offers fresh coffee, the way you want, right at the time of your need. Our solution is a smart and portable coffee maker, with high-quality and eco-friendly coffee pods.

AlphaLab Gear Hardware Cup: Regional Semi-finalists

West Coast Regional Semi-finalists

[Hoolest](#)

We develop drug-free technologies that reduce the effects of performance anxiety. We designed a pair of earbuds that instantly block the effects of stress through a technology called Vagus Nerve

Stimulation. Our earbuds are designed to help elite athletes stay calm, cool, and collected under pressure.

[Lumenus](#)

A first of its kind solution, by taking smart-lights out of the socket and into the world, Lumenus has created a wearable smart-safety solution for the mobile world. We connect IoT data in real-time to provide critical information in life-saving scenarios for both consumers and high-risk vocational workers.

[SimpleSense](#)

SimpleSense is google analytics for the physical world, built by a team of experienced entrepreneurs with over 20 years IoT experience, some of those years competing against each other. With paid alphas already running, and betas lined up, we're on track to be the leader in presence and dwell sensing through our simple sensors that can be setup in less than 20 seconds.

[In-vehicle Vending System, LLC](#)

IVS creates a unique patent-pending mobile vending systems allowing for unlimited product potentials. IVS leverage our automated delivery systems into an enormous, untapped passenger market with over 1,000,000 passengers daily taking taxis, buses, ride-share, and trains in the US alone. Our systems are cloud inter-connected giving us real-time sales and analytical data while allowing us to control remotely pricing, ad displays, plan-o-gram displays, and digital services offering on the fly.

[Urbavore](#) *Voted Audience Favorite

Urbavore is an award-winning ag-tech startup based in California that builds smart residential indoor gardening systems designed specifically to help increase individuals' and households' access to truly fresh, organic produce. Our uBloom system, which is a fully automated, energy-efficient, highly productive, modular, and mess-free gardening system, produces up to 6 square ft of vertical gardening space.

Mid-Atlantic Regional Semi-finalists

[Augean Robotics](#)

Our company is building a robotic work cart called Burro. Burro follows people autonomously (just like a good dog) and also can record/retrace paths back. In any application where people are picking/packing/lifting material, then shuttling it around, Burro can save time and money while reducing worker strain by eliminating shuttling time and providing a hands-free robotic virtual conveyor belt.

[EXG Wearable Devices](#)

We test, design and develop wearable devices that enable human to interact seamlessly with surrounding smart objects and robots. Our first product EXGbuds is a user-friendly simple headset/earbud that is customizable, compact and generate actionable commands from simple eye movements and facial gestures. Users can control any smart home devices, external assistive robots, operating tools or wheelchairs with simple eye movements. By incorporating brain-computer interface and proprietary machine-learning platform we develop simple Apps to go along with the hardware devices and allow users to control things completely "hands-free".

[Circalux](#)

Circalux designs sleep-friendly night lights to help people who need to complete tasks overnight. Our devices, called Circalights, use ultra-wide band radio frequencies to provide wireless, hands-free light when and where you need it. Our target customers include healthcare providers like nurses and technicians as well as consumers like campers, parents, and caregivers for the elderly.

[Bounce Imaging](#) *Voted Audience Favorite

We make throwable, stabilized, 360/VR cameras that allow first-responders to see inside dangerous spaces without exposing themselves or civilians to harm. Thrown through a window or deployed on a pole or rope, the cameras take instant 360-video and send it back to users' smartphone, tablet, or VR headset - or to a command center thousands of miles away via the cloud - granting instant situational awareness.

[Spand-Ice, LLC](#)

Spand-Ice design natural pain relief and support gear for pregnancy, postpartum and motherhood. Our products offer belly support, back pain relief with hot and cold therapy, adjustable compression, AND adjusts to her changing body during pregnancy and postpartum. The Motherhood journey is full of challenges, but we believe that pain shouldn't have to be one of them.

Northeast Regional Semi-finalists

[Aavia](#)

We invented a pocket-sized device that women can store their usual Pill blister pack in that automatically recognizes if a woman hasn't taken her Pill by her daily set time and sends smart reminders to her phone until she actually takes it, allowing her to focus on other priorities.

[Tranquilo](#)

Tranquilo Mat is a portable soothing mat created by a Maternity Nurse to calm crying babies and help them to sleep. Based on the science of mimicking the womb to soothe babies, the mat is lightweight and flexible making it ultra portable and versatile for the busy modern parent. Tranquilo goes anywhere babies cry - in a crib, car seat, baby carrier, and even in a parents arms - the possibilities are truly endless!

[LeakSpotter](#)

LeakSpotter is an Early Warning System for toilet leaks, the #1 cause of water waste indoors. Our WiFi sensor clips into toilets and sends info on leaks to the internet, which then notifies your maintenance person. This saves on average \$100/toilet. A building management company with 1000 apartments will save \$100K a year and we'll charge \$30/toilet/year, i.e. \$30K.

[Riot Solutions Inc/Raybaby](#)

Supported by Johnson and Johnson and HAX, Raybaby is the world's first non-contact sleep and wellness tracker for babies.

[Yank Technologies](#)

We are a contactless wireless charging startup from the Columbia University Startup Lab and hardware co-working space New Lab. Our first product, the MotherBox, is the first wireless charger that can REALLY wirelessly charge your devices like WiFi but for power. The MotherBox can charge faster than a typical wall charger, can charge multiple devices simultaneously, and is compatible with both iOS and Android devices.

[CHÚ](#) *Voted Audience Favorite

CHÚ is a simple and comfortable air filter that fits in your nose.

East Coast Regional Semi-finalists

[OrthoFit Inc](#)

OrthoFit is a workplace health and safety IOT company that makes the workplace safer by preventing musculoskeletal injuries and automating the ergonomic evaluation process. We use our proprietary smart wearables to collect data on workers and our software to perform safety assessments on workers.

[AssistENT](#)

AssistENT is an early medical device venture developing Schnozzle, the first nasal breathing aid suitable for daily wear. Much like a contact lens, this device is inserted and removed daily by the user, it provides an instant improvement in nasal function, and it is undetectable to others during use. The technology was created at Johns Hopkins by engineers in the Center for Bioengineering Innovation and Design (CBID) and Patrick Byrne, MD, FACS, MBA, the Director of Facial Plastic and Reconstructive Surgery.

[MARTA ALI STUDIOS](#)

We specialize in digital design and fabrication to manufacture unique building materials. Currently our core products are 2d/3D/textured Architectural Wall Panels which can be used for interior wall applications, column covers, furniture making, ceilings, counter tops, bed boards or any application that can benefit from surface designs.

[KnoNap](#) *Voted Audience Favorite

1 out of every 13 college aged individuals suspected having a drink laced with a rape drug in 2016. Currently, there is no way for individuals to discreetly test their drinks to ensure it's safety. We have created a discreet, portable, gender inclusive detection device for rape drugs, hidden into a cocktail napkin, that works to empower individuals to know if their drink is safe for consumption, prior to ingestion.

[Vidura Tech](#)

The Vidura Tech team is innovating at the intersection of ancient yogic wisdom and modern intelligent technology to truly disrupt the way that our customers practice yoga with their favorite yoga instructors in a private session, at home, or live in a studio. We develop technical yoga products designed to help yogis create a simple, safe, and smart practice on their own. Our first product, CONNCT, is a device that transforms a regular yoga mat into a smart yoga mat by providing active alignment and balance feedback to the user.

Southern Regional Semi-finalists

[SYNDEO](#)

SYNDEO developed, patented and has completed trials with the City of Austin, TX of its Smart Panel product ("Smart-City-In-A-Box"). The Smart Panel is a waterproof environmentally controlled subsurface enclosure with a load bearing tactile panel that provides critically needed space in cities to meet the rapidly rising demand for deploying smart city technology. This one-of-a-kind product provides a secure, scalable, stealth and competitively priced location for connectivity technology.

[TeamLocShark](#)

LOCSHARK is a hardware company created around our innovative cell phone case. We want to pick up where Apple's "Find My iPhone" left off. The LOCSHARK case allows owners to locate their lost or stolen phone even when the battery has died.

[Kwema](#)

Kwema connects people in danger with immediate help through discreet wearables and security partnerships.

[Abraxas Technology](#)

Abraxas Technology is bringing outdoor advertising into the Digital Age using patent pending technology that provides the ability to track impressions, frequency, and duration, and capture conversions into the store. Our mission is to make outdoor advertising as effective as online advertising.

Midwest Regional Semi-finalists

[MicroEra Power - CHPplus](#)

MicroEra Power is developing high-efficiency commercial scale distributed generation (DG) systems. Our on-site power systems use automotive-derivative engine, fuel cell and hybrid vehicle technologies, allowing a scalable fast-to-market product launch. On-site power is a critical technology for the rational evolution of a renewable-intensive grid. MicroEra Power has cloud-based predictive/adaptive controls which monitor, control and optimize the systems. Our smart Combined Heat and Power CHPplus solution is customer-friendly, utility-friendly and climate friendly.

[Hintech Ag](#)

Our first product is the Decimator which is a machine that will splinter corn stalks, to mitigate tire damage on farm equipment and enhance decomposition of the stalk stubble. The Decimator can also extract the stalk stubble and root balls intact, in addition to splintering the stalk. Extracting the stalk and root ball can alleviate the issues in creating seed-to-soil contact in the following crop, which is essential for germination.

[BeeHex](#) *Voted Audience Favorite

BeeHex manufactures machines to automate food personalization. We utilize 3D printing, CNC and robotics technologies to integrate our product.

[Nobo](#)

Nobo enables clinicians, trainers and health conscious consumers to approach and understand the body in entirely new ways. We help our users measure and interpret important physiologic signals so they can act on the results to improve health and physical performance. Because Nobo focuses on previously unmeasured parameters, new insights into the body are revealed.

AlphaLab Gear Hardware Cup: International Runners Up

[Challenergy](#)- Challenergy is the world's first vertical wind turbine, an eco-friendly solution that can generate electricity from typhoons & storms.

[SmartShopping](#)- Auto-replenishment and inventory-control service using IoT device “Smartmat” for an affordable rental price. Helpful for improving productivity and optimizing inventory in offices, restaurants, factories, retailers, warehouses, and hospitals.