



# NSF GRANTEES

## PARTICIPATING IN EUREKA PARK

### 3DeWitt, LLC

[3dewitt.com](http://3dewitt.com)



Booth Number 75410

NSF Grant Numbers  
9261621, 9420321,  
0539618, 0724428



#### Company

3DeWitt LLC was spun off from its parent, DeWitt Brothers Tool Company, Inc. in 2009 with seed capitalization and conducts research underwritten by the National Science Foundation and NASA. By joining the confluence of powerful computers and inexpensive diffractive optics, 3DeWitt is focused on developments in 3D vision. 3DeWitt has patents that address 3D acquisition instruments such as cameras, localizers, and graphical input devices.

#### Booth Demonstration

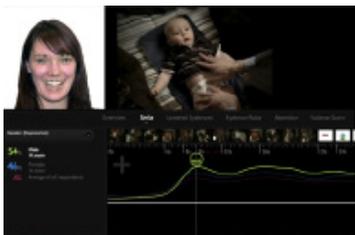
3DeWitt will demonstrate a 3D user input for cell phones, tablets, laptops and desktop workstations using inexpensive, replicated, holographic optics. The demonstrations show how to track a white LED in three dimensions with a single webcam or cell phone camera. Visitors will see what appears to be a transparent plastic film, with the images on the camera-side of the film being the 3D co-ordinates of a tracked light source in the field-of-view of the camera.

#### Media Contact

Tom Ditto  
[maus@3dewitt.com](mailto:maus@3dewitt.com)

### AFFECTIVA, INC.

[affectiva.com](http://affectiva.com)



Booth Number 75130

NSF Grant Number 1152261



#### Company

Affectiva, an MIT Media Lab spin-off, develops cutting-edge emotion measurement technology, such as Affdex™, a facial expression recognition software. Affectiva delivers scalable emotion analytics to companies and leading market research agencies that use the insights to improve products, processes and brand experiences.

#### Booth Demonstration

Affdex analyzes people's facial expressions, detects their emotions and translates them into powerful information that allows content providers to better understand and connect with their audience. The demonstration, "Affdex Face-Off", pits ads of two tech giants against their rival brands to determine which brand provides the most engaging experience for their audience. While viewers watch four brief ads, Affdex will map their facial expressions via webcam, using viewer reactions to determine the winner.

#### Media Contact

Elina Kanan  
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# ASIUS TECHNOLOGIES, LLC

[AsiusTechnologies.com](http://AsiusTechnologies.com)



Booth Number 75306

NSF Grant Number 1152467



## Company

Asius Technologies traces its roots to the 1960's, when founder Stephen D. Ambrose began developing technology that would lead to in-ear monitors for coupling sound into the human ear -- devices adopted and used extensively by a wide range of top studio and touring musicians. Today, Asius is developing new in-ear monitors--informed from research supported by federal SBIR grants to study the damage posed by personal listening devices--that incorporate an inflatable, in-ear solution called the Ambrose Diaphonic Ear Lens.

## Booth Demonstration

Visitors will be able to experience several Asius prototypes that incorporate a synthetic ear lens, or membrane, that acts within an earbud like an auxiliary ear drum, absorbing harmful sound pressures that would normally cause the ear drum to tighten and require a listener to compensate by increasing the volume. Visitors will also be able to experience the Ambrose Diaphonic Ear Lens (ADEL), which converts sound from an earbud speaker into energy that inflates a synthetic membrane bubble in the ear canal, a device for helping listeners reduce in-ear stuffiness caused by the occlusion effect and audio fatigue. Asius will also demonstrate their newest technology, a hybrid in-ear monitor – hearing aid. The press is invited to attend the Asius press event -- "The Future of Listening" -- on Tuesday January 8th from 2:00 - 3:00 p.m. at the Venetian, Casanova Room 502.

## Media Contact

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# CHIARO TECHNOLOGIES, LLC



# CHROMATION PARTNERS, LLC

[chromationspec.com](http://chromationspec.com)



Booth Number 75203

NSF Grant Numbers  
1152707, 1047063



## Company

Chromation's reconfigurable wavelength sensor is a compact, low-cost component that allows for software-based selection of measurement wavelengths. The components sense in the UV-VIS-NIR ranges, enabling integration of color and light measurement into consumer products and handheld devices., with applications that include water testing, point of care diagnostics, and color matching in paint, printing, and textiles.

## Booth Demonstration

Chromation's demonstration will show three applications for the reconfigurable wavelength sensors: a consumer application for color matching of paint swatches, an identification test for different light bulbs (e.g. incandescent, fluorescent, LED), and a rapid diagnostic for test strips. The demonstrations will show the utility of the core product, the reconfigurable wavelength sensor, in applications across the visible spectrum.

## Media Contact

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## COHORT FS, LLC

cohortfs.com



Booth Number 75411

NSF Grant Numbers  
1152560, 1014137



### Company

CohortFS is currently developing a cloud-distributed storage platform with advanced security, data affinity and wide-area replication abilities. The platform has novel mechanisms for dynamic data placement, transparent encryption, and flexible replication in a petascale storage system. CohortFS extends the Ceph petascale storage system with a scalable, parallel NFSv4.1 access facility and dynamic data placement and partitioning mechanisms developed in its NSF SBIR Phase I research.

### Booth Demonstration

Representatives will be on hand to discuss and highlight the utility of the CohortFS platform.

### Media Contact

Elizabeth Ziph  
elizabeth@linuxbox.com

## CVISION TECHNOLOGIES, INC.



## DOT METRICS TECHNOLOGIES, INC.

dotmetricstech.com



Booth Number 75305

NSF Grant Number 0848759



### Company

Dot Metrics Technologies develops UV-LED based systems, currently for disinfection or UV-curing applications. The company takes a multi-physics based approach to engineering UV-LED solutions, combining fluid dynamics, optical design, and custom electrical interfaces. Experts in UV-C LEDs, Dot Metrics also offers custom solutions and is seeking partners to assist in rapidly translating the unique LED expertise and IP into new products.

### Booth Demonstration

Dot Metrics Technologies will demonstrate the UV Pearl™, what the company says is the world's first commercial, LED-based, water disinfection system. It is a mercury free, compact system, with remote on-off capabilities for batch processing. The company will also demonstrate the UV Tetra™, a modular, UV-A LED array that allows a user to assemble units into larger arrays as needed for curing or use as single units for fluorescence.

### Media Contact

Paolo Batoni  
pbatoni@dotmetricstech.com

# ENERGID TECHNOLOGIES

energid.com  
robai.com



Booth Number 75406  
NSF Grant Number 0848925



## Company

Energid provides advanced robotics and 3D vision systems for the medical, energy, defense, space, transportation, agriculture and manufacturing markets worldwide. Energid's Actin and Selectin software platforms drive sensor-guided manipulation, autonomous grasping and straightforward control of complex robotics. With NSF funding, Energid has created a line of small-footprint, seven-axis robot arms, the Cyton Gammas, offered through Robai. They are safe near people, can be trained through manual motions or 3D graphical tasking, and with payloads ranging from ounces to a few pounds, support a wide range of manipulation and inspection tasks.

## Booth Demonstration

From vehicle testing to light assembly to component inspection, Cyton is a general-purpose tool that is readily tasked to solve specific problems. Visitors will be able to unpack the Cyton, clamp it down, teach it a task, and watch it go. Consumer device manufacturers can learn how accessible robotics can enhance component handling, light assembly, and product inspection, while researchers can experience how the humanoid Cyton arms can function as service robots and educational tools.

## Media Contact

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# ESENSORS, INC.

eesensors.com



Booth Number 75207  
NSF Grant Number 923942



## Company

Eensors, Inc. is an electronic sensor development company established in 2000 by D. Wobschall. Its long-term goal is to develop, manufacture and market digital sensors with network capabilities. Because of a close relationship with the State University of New York at Buffalo, and engineers in the Buffalo area, the company has access to a high level of expertise in the area of electronic engineering, cooperating on several federal SBIR projects. The company's current focus is in the area of networked sensors for the smart grid and smart buildings.

## Booth Demonstration

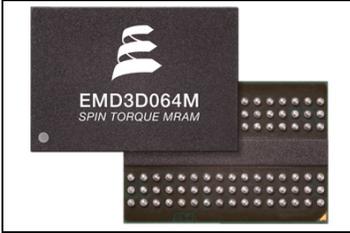
The demonstration will feature power monitors, wireless sensors and other sensors for the smart grid and smart buildings, along with terahertz receivers for remote gas sensing.

## Media Contact

Ron Peterson  
ron.peterson@eEsensors.com

# EVERSPIN TECHNOLOGIES

[everspin.com](http://everspin.com)



Booth Number 75111

NSF Grant Numbers  
0946127, 1058552



## Company

Everspin Technologies develops and manufactures standalone and embedded magnetic-based memory (MRAM) for a variety of applications worldwide. The company claims to be the world's first volume MRAM supplier, and an industry leader in next-generation Spin-Torque (ST-MRAM) technology development.

## Booth Demonstration

Everspin will describe their MRAM products, including the recently announced Spin Torque MRAM first commercial product, the 64Mb DDR3 ST-MRAM.

## Media Contact

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# EVIGIA SYSTEMS, INC.

[evigia.com](http://evigia.com)



Booth Number 75202

NSF Grant Numbers  
0810652, 0956908, 1128726



## Company

Evigia Systems is a privately-held company headquartered in Ann Arbor, Mich., with expertise in the design and commercialization of specialized wireless sensors, MEMS and RFID technologies. Evigia was founded in 2004 by Navid Yazdi based upon 20 years of experience in developing wireless sensing and identification systems using proprietary microsystem and sensor technologies. Evigia's focus is the development of commercial applications in logistics and asset tracking, cold-chain tracking, hazardous material management, specialized sensing, integrated RFID systems, NFC technologies, and specialized sensors and communications for mobile and consumer products.

## Booth Demonstration

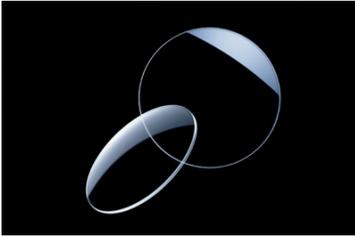
Evigia will feature detailed case studies and a multimedia presentation of products and technology covering commercial applications and current research/pre-release products. Highlighted products include research in battery-less RFID tags that integrate temperature, humidity and shock/vibration sensors with embedded non-volatile (CMOS) memory, long range unpowered wireless sensors and a pre-release product that enables safety equipment manufacturers to integrate high-resolution wireless impact sensors into products to provide real-time data and cumulative or historical data on acceleration and impact conditions.

## Media Contact

Michael Young  
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**FAIRFIELD  
CRYSTAL  
TECHNOLOGY,  
LLC**

[fairfieldcrystal.com](http://fairfieldcrystal.com)



Booth Number 75103

NSF Grant Numbers

1026380, 0943961, 0738794



**Company**

Fairfield Crystal has developed proprietary crystal growth techniques and other proprietary source purification technology to grow high-purity single crystals that can be fabricated into high performance optical components suitable for commercial, industrial and military applications. Additionally, the company has expertise in polishing crystals for a variety of optical components such as prisms, lenses, waveplates, and a variety of other specialized components.

**Booth Demonstration**

The company will be displaying their crystals and optics.

**Media Contact**

Andy Timmerman

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**INNOVEGA, INC.**  
[innovega-inc.com](http://innovega-inc.com)



Booth Number 75308

NSF Grant Number 1057840



**Company**

Innovega was created to address the quality gap between digital media and the limits of conventional mobile displays. Innovega has eliminated standard, bulky, magnifying, eyewear-display optics by integrating them into a soft contact lens that both improves normal (ambient) vision and streams personalized media. The system comprises two parts: micro-projectors wrapped into eyewear and novel contact lenses that deliver a crisp view of near-eye media.

**Booth Demonstration**

At the 2012 CES Eureka Park, Innovega featured their unique contact-lens enabled, wearable display. The new demonstration will show how the system can simultaneously deliver an in-focus view of real-world surroundings in concert with a high-quality display of a user's personal media, blended into a single optical overlay.

**Media Contact**

Steve Willey

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**INTEGRATED  
SURFACE  
TECHNOLOGIES**  
insurftech.com



Booth Number 75105

NSF Grant Number 1026571



**Company**

Integrated Surface Technologies (IST) is a premier nano-technology materials provider that has developed a mechanically durable, conformal, super-hydrophobic coating that can be applied to electronic circuitry via a dry, high throughput deposition process.

**Booth Demonstration**

Integrated Surface Technologies will present their technology for visitors.

**Media Contact**

Jeff Chinn

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**KWJ**



**NCD TECHNOLOGIES, LLC**



# PERPETUA POWER SOURCE TECHNOLOGIES, INC.

[perpetuapower.com](http://perpetuapower.com)



Booth Number 75010

NSF Grant Number 1058551



## Company

Perpetua Power Source Technologies, Inc. manufactures a flexible, thin-film, thermoelectric, energy-harvesting technology for converting body heat into electric energy. Called TEGwear™ Technology, it is the result of decades of development at Pacific Northwest National Laboratory, the University of Oregon, Thermo Life® Energy Corporation, and Perpetua R&D. The constantly available power source can greatly extend the life of batteries, offer added energy for added functionality, or replace batteries altogether in certain applications. Applications could include wireless medical monitoring, sports and fitness monitoring, and other low-power, mobile, consumer electronic devices.

## Booth Demonstration

Perpetua will demonstrate a body-heat powered, wireless, location-monitoring device. The demonstration makes use of Perpetua's innovative TEGwear™ Technology, which has been specifically engineered to convert body heat into electrical energy. The renewable energy will supply power to a Bluetooth 4.0 radio incorporated into a wristband, which will transmit data to a nearby laptop.

## Media Contact

Jerry Wiant

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# PHOENIX BIOSYSTEMS

[phoenixbiosystem.com](http://phoenixbiosystem.com)

Booth Number 75408

NSF Grant Number 1026459



## Company

Phoenix Biosystems is integrating science, medicine and communication into a single solution by using smart phones, a proprietary chip technology, and single drops of blood to help diagnose and treat patients. Their system will provide mobile communication and care for hospitals, medical practices, home health care providers and patients.

## Booth Demonstration

Phoenix Biosystems representatives will present their technology.

## Media Contact

Kumar Subramanian

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POTOMAC  
PHOTONICS, INC.  
potomac-laser.com



Booth Number 75211  
NSF Grant Number 1058133



Company

Potomac Photonics, a leader in micro-fabrication, has a history of innovative contributions to medical device manufacturing, biotechnology development, and electronics fabrication, and has developed techniques for producing, in electronic dielectric materials, extremely small electrically conducting traces and vias that allow a higher component-packing density, fewer interconnection layers, and overall miniaturization. Currently, they are developing a complete technology for miniaturization of wireless sensor platforms that include power supply, communication and data processing subsystems, conductor networks and an outer package for environmental protection.

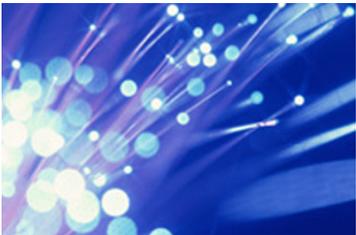
Booth Demonstration

Potomac will show a video overview of some of the micro scale components and assemblies that it has produced or that are currently under development. They will also show a miniature wireless accelerometer system and an example of size reduction for a microcontroller circuit.

Media Contact

Dr. C. Paul Christensen  
pchristensen@potomac-laser.com

QUANTTERA  
quanttera.com



Booth Number 75311  
NSF Grant Numbers  
0946000, 1127568



Company

QuantTera is a microelectronics company that specializes in custom, high-performance, electronic and photonic devices for telecommunications and wireless applications, with a mission to develop functional, cost-effective, power-efficient, nano-engineered electronic and photonic chip technologies. QuantTera provides design, device fabrication and testing services and has a fully equipped laboratory and facilities to test and fabricate prototype chip designs.

Booth Demonstration

QuantTera will demonstrate state-of-the-art LASERs for telecommunications, high-performance transistor power-amplifier technology for cellular communications, quantum-dot based high-efficiency light emitters, instrumentation for highly sophisticated measurement of microelectronics metrics, and novel materials fabrication utilizing pulsed laser deposition and wafer bonding techniques.

Media Contact

Matt Kim  
mk@quanttera.com

REMOTE REALITY CORPORATION



**ROADNARROWS,  
LLC**  
roadnarrows.com



Booth Number 75109  
NSF Grant Numbers  
0848762, 0711909, 1113964



**Company**

RoadNarrows provides innovative solutions to meet the demands of next-generation autonomous systems and intelligent products. Since 2002, RoadNarrows has developed a diverse portfolio of successful projects including distributed robotic platforms, software architecture frameworks, and embedded devices. RoadNarrows' capabilities span the entire product development cycle from conception through new product introduction.

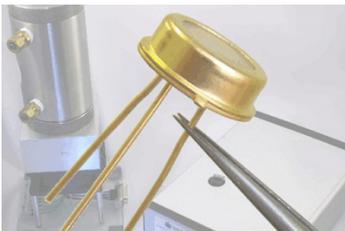
**Booth Demonstration**

RoadNarrows is showing two of its flagship products: a robotic, six-degrees-of-freedom, customizable manipulator named Hekateros and the Eudoxus mobile 3D-vision platform. Hekateros will run the "Stale Mate" application--a demonstration to recognize and manipulate objects in a game of chess-- and a manual, user-controller interface. The Exodus is a structured-light vision sensor that combines power with mobility, and it will stream live 3D images as it is carried through the exhibition center. Both products relate to a third RoadNarrows robot, the Kuon mobile platform, which is a heavy-duty, multi-purpose robotic capable of operating in harsh environments.

**Media Contact**

Maurice Woods

**SENSOR  
ELECTRONIC  
TECHNOLOGY,  
INC.**  
s-et.com



Booth Number 75007  
NSF Grant Numbers  
0912472, 1026217, 0912471,  
1003474, 0839492, 0956746  
0610828, 0512450, 0620525



**Company**

Sensor Electronic Technology, Inc. (SETi) claims to be the world's leading supplier of deep-UV LEDs, with emission wavelengths shorter than 365nm. Using proprietary and patented technology, SETi develops, manufactures and sells UV LED products under the trademarks UVTOP® and UVCLEAN® for public- and private-sector clients. SETi claims to manufacture and integrate the world's only commercially viable germicidal LEDs, which eradicate bacteria, viruses and mold on surfaces, in the air and in water, in a user-friendly and environmentally safe manner, enabling applications not available with traditional UV light sources.

**Booth Demonstration**

At Eureka Park, SETi will demonstrate a new health and lifestyle concept: a smartphone-cleaning device that is integrated with a belt-clip/phone cover that uses invisible ultraviolet (UV) light to kill germs. SETi has chosen to showcase its smartphone cleaner to demonstrate the portability and ease of use that comes with using LEDs. Smartphones are an ideal breeding ground for germs and bacteria present on a smartphone end up on users' hands. SETi will demonstrate how cleaning your phone can be as simple as putting it back in its carry case, or clipping it to your belt.

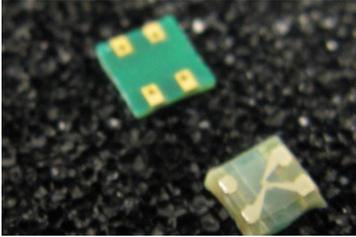
**Media Contact**

Tim Bettles  
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**SUN INNOVATIONS, INC.**



**SYNKERA  
TECHNOLOGIES,  
INC.**  
[synkera.com](http://synkera.com)



Booth Number 75208

NSF Grant Numbers

0548757, 0724408, 0724478



**Company**

Synkera Technologies, Inc. is a Colorado corporation formed in 2003 to develop, manufacture, and market innovative, yet practical, devices based on a combination of nanotechnology, microfabrication and advanced materials science.

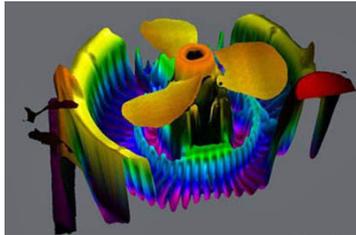
**Booth Demonstration**

The company will demonstrate the newest member of the Synkera sensor product line, the UltraKera SMT™, which provides environmental gas monitoring capabilities to small, low-power consumer devices including cell phones, appliances, and HVAC equipment.

**Media Contact**

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**TETRAVUE, INC.**  
[tetravue.com](http://tetravue.com)



Booth Number 75504

NSF Grant Numbers

1058607, 0945402



**Company**

True 3D imagery and data provides an object's exact shape and location in three dimensions, enabling perspective to be adjusted after data capture. TetraVue's true 3D camera captures shape and texture at the same instant for every pixel, acquires millions of 3D pixels (voxels) per frame, achieves millimeter-class shape resolution from up to 200 feet away, operates in all lighting conditions indoors and outdoors, records fast moving objects and leverages 2D camera technology. TetraVue's technology eliminates limitations in distance, accuracy, and resolution and will provide the point-and-shoot simplicity of traditional 2D camcorders for applications including biometrics and security, advanced and green construction techniques, virtual learning, sports and sports medicine, and movie special effects and interactive video games.

**Booth Demonstration**

For its demonstration, TetraVue will be displaying a video loop showing 3D imagery of a variety of objects captured using its prototype 3D camera. The sample videos illustrate the technology's ability to record objects in motion under both indoor and outdoor lighting conditions.

**Media Contact**

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**TRIUNE SYSTEMS**



# VORBECK MATERIALS CORP

[vorbeck.com](http://vorbeck.com)



Booth Number 75206

NSF Grant Numbers

1152700, 1046880, 1142890



## Company

Vorbeck Materials Corp. is a technology company established in 2006 to manufacture and develop applications using Vor-x<sup>®</sup>, Vorbeck's patented graphene material developed at Princeton University. Vorbeck is a leading producer of graphene and graphene-based consumer products, operating a multi-ton-scale plant, and claims to be the only company with EPA approval for commercial sale of graphene-based products and claims to have launched the world's first commercial graphene product, Vor-ink<sup>™</sup>, a graphene-based conductive ink for electronics applications. Products using Vor-ink<sup>™</sup> circuits are available in major retail chains today.

## Booth Demonstration

Vorbeck will demonstrate hands-on prototype devices made using Vor-x<sup>®</sup> graphene, including wearable and washable electronic clothing, flexible circuits, medical sensors, and fast charging batteries for consumer electronics.

## Media Contact

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