

WINNERS OF THE FY 2015 COMPETITION UNDER THE DEFENSE UNIVERSITY RESEARCH INSTRUMENTATION PROGRAM -- Page 1 of 6

Principal Investigator	Institution	State	Brief Description of Instrumentation or Research it Supports	Awarding Office
Adamovich, Igor	Ohio State University	OH	Studies of molecular energy conversion	AFOSR
Adibi, Ali	Georgia Institute of Technology	GA	Comprehensive characterization of integrated nanophotonic structures	ARO
Akinwande, Akintunde	Massachusetts Institute of Technology	MA	Vacuum nano-electronic devices high current & long life cathodes/ion sources	AFOSR
Alexander, Dennis	University of Nebraska, Lincoln	NE	Tunable laser source	ONR
Amet, Francois	Appalachian State University	NC	Ultra-high vacuum sputtering system	ARO
Amirkhizi, Alireza	University of Massachusetts, Lowell	MA	Coupled atomic force and apertured infrared scanning near-field optical microscopy	ONR
Anderson, Scott	University of Utah	UT	Heated, variable pressure gas cell	AFOSR
Appelgate, Bruce	University of California, San Diego	CA	A next-generation towed vehicle for ocean profiling	ONR
Arehart, Aaron	Ohio State University	OH	Nanometer-scale defect microscope and spectrometer	ONR
Bahl, Gaurav	University of Illinois	IL	Telecom-wavelength Raman spectroscopy	AFOSR
Bajwa, Waheed	Rutgers University, New Brunswick	NJ	Multimodal imaging suite	ARO
Bardet, Philippe	George Washington University	DC	Very high-speed three dimensional velocity and profilometry measurements	ONR
Bathe, Mark	Massachusetts Institute of Technology	MA	High-throughput assembly and characterization tools	ONR
Bazhenov, Maksim	University of California, San Diego	CA	Computer cluster for large-scale modeling and data analysis	ONR
Bein, Doina	California State University, Fullerton	CA	Environmental-aware situation assessment	AFOSR
Blenner, Mark	Clemson University	SC	Fluorescence activated cell sorting	AFOSR
Boesl, Benjamin	Florida International University	FL	In-situ nanoindenter	ONR
Bowen, Kit	Johns Hopkins University	MD	Beam-line for the clusterdeposition - surface analytical apparatus	ONR
Brewer, Luke	University of Alabama	AL	High power laser system	ONR
Brown, Donald	Worcester Polytechnic Institute	MA	Distributed multi-input multi-output communication systems	ARO
Brownstead, Cale	Pennsylvania State University	PA	Broadband navigation sonar demonstration testbed	ONR
Carpick, Robert	University of Pennsylvania	PA	Atomic force microscopy and surface spectroscopy	AFOSR
Caruso, Anthony	University of Missouri, Kansas City	MO	High power microwave characterization	ONR
Cetiner, Bedri	Utah State University	UT	Millimeter-wave measurement system	AFOSR
Chawla, Nikhilesh	Arizona State University	AZ	Lab-scale X-ray diffraction contrast tomography system	ONR
Chen, Guoning	University of Houston	TX	Scalable interactive visual computing infrastructure	ARO
Cheng, Bo	Pennsylvania State University	PA	Biologically inspired sensing & control and networked robotic systems	ARO
Ciocarlie, Matei	Columbia University	NY	Mobile manipulation platform	ONR
Cola, Baratunde	Georgia Institute of Technology	GA	Custom designed thermal evaporator	ARO
Cronin, Stephen	University of Southern California	CA	Electron beam and magnetron sputtering system	AFOSR
Dahl, Peter	University of Washington	WA	In-situ vector acoustic receiver	ONR

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Datta, Anubhav	University of Maryland, College Park	MD	Mach-scale high-speed tilt-rotor test rig	ONR
Davis, Larry	University of Maryland, College Park	MD	Heterogeneous graphics processing unit cluster	ONR
Degen, Cassandra	South Dakota School of Mines and Technology	SD	Combined mechanical and optical experimental setup	AFOSR
Diott, Dana	University of Illinois, Urbana-Champaign	IL	Ultrafast optical measurements of shocked reactive materials	ARO
Doyle, John	Harvard University	MA	Laser cooling of polyatomic and diatomic molecules	AFOSR
D'Spain, Gerald	University of California, San Diego	CA	Wideband, directional, modular, autonomous passive acoustic monitoring systems	ONR
Dukovic, Gordana	University of Colorado, Boulder	CO	Investigation of excited state dynamics	AFOSR
Duncan, James	University of Maryland, College Park	MD	Measurement system for the impact of a flexible plate on a water surface	ONR
Eckmann, David	University of Pennsylvania	PA	Bioscience metabolic assessment of distressed cells	ONR
Espinosa, Horacio	Northwestern University	IL	Miniaturized mechanical tester	AFOSR
Frolov, Sergey	University of Pittsburgh	PA	Ultra-high vacuum electron beam evaporation system	ONR
Fu, Jinglin	Rutgers University, Camden	NJ	Fluorescence correlation microscopy	ARO
Gao, Wei	University of Tennessee, Knoxville	TN	Adaptive mobile networking at the tactical edge	ARO
Garg, Siddharth	New York University	NY	Advanced hardware reverse engineering and integrated circuit imaging	ARO
Giebink, Noel (Chris)	Pennsylvania State University	PA	Streak camera ultrafast spectroscopy and imaging system	AFOSR
Gilerson, Alex	The City College of the City University of New York	NY	Hyperspectral polarimetric system for imaging and detection of underwater objects	ONR
Glebov, Leonid	University of Central Florida	FL	Tunable laser system for complex volume holographic optical elements recording	ARO
Glezer, Ari	Georgia Institute of Technology	GA	High-speed system for advanced flow control diagnostics	ONR
Gloster, Clay	North Carolina A&T State University	NC	Field-programmable gate array testbed	ARO
Gokhale, Aniruddha	Vanderbilt University	TN	Evaluating secure cyber operations	AFOSR
Goldbogen, Jeremy	Stanford University	CA	Mobile active acoustic system	ONR
Gorodetsky, Alon	University of California, Irvine	CA	Analysis of macromolecules	AFOSR
Gramann, Richard	University of Texas, Austin	TX	Advanced signal processing computational hardware	ONR
Greenspan, Ralph	University of California, San Diego	CA	Imaging brain activity	AFOSR
Gulian, Armen	Chapman University	CA	Synthesis of very-high temperature superconductors	ONR
Guo, Ruyan	University of Texas, San Antonio	TX	Hybrid 3-dimensional digital deposition platform	ONR
Gupta, Abhinav	Carnegie Mellon University	PA	Lifelong learning from videos and physical interactions	ONR
Gupta, Ashwani	University of Maryland, College Park	MD	Advanced diagnostics for high temperature distributed combustion	ONR
Ham, Donhee	Harvard University	MA	330-GHz vector network analyzer	AFOSR
Hammel, Peter	Ohio State University	OH	Ultrasensitive pulsed nuclear spin magnetic resonance spectrometer	ARO
Hanson, Ronald	Stanford University	CA	Laser diagnostics	AFOSR

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Heath, Jr., Robert	University of Texas, Austin	TX	Prototyping for millimeter wave communication and radar	ARO
Hermans, Ive	University of Wisconsin	WI	Chemisorption to characterize multifunctional materials	ARO
Hoppe, Wally	University of Dayton	OH	Additive manufacturing quality inspection system	AFOSR
Hou, I-Hong	Texas A&M Engineering Experiment Station	TX	Research in networks and systems	ARO
Huffman, John	University of Denver	CO	Raman microspectroscopic system	ARO
Hulet, Randall	Rice University	TX	Ultra-stable laser	ONR
Hwang, James	Lehigh University	PA	Broadband network analyzer	AFOSR
Ince, Ayhan	Purdue University	IN	3-dimensional stereo microscope digital image correlation system	AFOSR
Jayne, Steven	Woods Hole Oceanographic Institution	MA	Profiling float system for the Arctic Ocean	ONR
Jerolmack, Douglas	University of Pennsylvania	PA	Novel experiment to examine failure and flow of earth materials	ARO
Ji, Qiang	Rensselaer Polytechnic Institute	NY	Large-scale immersive virtual reality	ARO
Jin, Rongchao	Carnegie Mellon University	PA	Cryogenic optical absorption spectroscopy system	AFOSR
Juliano, Thomas	University of Notre Dame	IN	Large hypersonic quiet tunnel	AFOSR
Kado, Deborah	University of California, San Diego	CA	Evaluating and enhancing muscular fitness via the biodex	ONR
Karaman, Ibrahim	Texas A&M Engineering Experiment Station	TX	Multi-material bulk deposition and characterization system	AFOSR
Khodaparast, Giti	Virginia Polytechnic Institute and State University	VA	Femtosecond Laser	AFOSR
Kidane, Addis	University of South Carolina	SC	3-dimensional dynamic deformation measurement system and stereo microscope	AFOSR
Kim, Youngsoo	San Jose State University	CA	High performance computing for radar signal processing acceleration	ARO
Kisailus, David	University of California, Riverside	CA	3-dimensional rendering electron microscope system	ARO
Lattimer, Brian	Virginia Polytechnic Institute and State University	VA	Lightweight robotic arms	ONR
Lee, Craig	University of Washington	WA	Autonomous seaglidors and moored instrumentation	ONR
Leone, Stephen	University of California, Berkeley	CA	Millijoule class laser upgrade	AFOSR
Leskovec, Jure	Stanford University	CA	Hardware infrastructure for network analytics on very large graphs	ARO
Lewandowski, Heather	University of Colorado, Boulder	CO	Single quantum-state molecular ions	AFOSR
Li, Bingbing	California State University, Northridge	CA	Selective laser melting system	AFOSR
Liu, Ping	University of Texas, Arlington	TX	Magnetic property measurement system with EverCool®	ARO
Lo, Yu-Hwa	University of California, San Diego	CA	Cryogenic probe station	ONR
Losert, Wolfgang	University of Maryland, College Park	MD	Broadband coherent anti-stokes raman scattering system	AFOSR
Madhukar, Anupam	University of Southern California	CA	Synthesis and optical characterization of multifunctional optical metamaterial systems	ARO
Marder, Seth	Georgia Institute of Technology	GA	Analysis of organic and hybrid materials	AFOSR
Maria, Jon-Paul	North Carolina State University	NC	High throughput X-ray optics	ONR

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Martin, Pino	University of Maryland, College Park	MD	Centralization, management, and analysis of hypersonic flow database	AFOSR
Martukantz, Richard	Pennsylvania State University	PA	Development and adoption of hybrid additive manufacturing technology	ONR
McBride, Michael	University of California, Irvine	CA	Instrumentation for experimental social science laboratory	ARO
Meyer, Richard	Pennsylvania State University	PA	Advanced processing system for piezoceramic materials	ONR
Meyer, Terrence	Purdue University	IN	In situ spectroscopy and damage assessment	AFOSR
Meyhofer, Edgar	University of Michigan	MI	Probing near-field radiation and thermophotovoltaic energy conversion	ARO
Mikhail Lukin	Harvard University	MA	Low-temperature system for integrated quantum nodes	ARO
Miles, Richard	Princeton University	NJ	Silicon carbide semiconductor array	ARO
Minary-Jolandan, Majid	University of Texas, Dallas	TX	In situ nanomechanics instrumentation	AFOSR
Mohan, Ram	North Carolina A&T State University	NC	3-dimensional printer	ARO
Mohapatra, Prasant	University of California, Davis	CA	Millimeter wave human tracking and activity monitoring	ARO
Monika Schleier-Smith	Stanford University	CA	Ultraviolet laser system for quantum many-body physics	ARO
Monroe, Newman	University of North Carolina, Chapel Hill	NC	Next-generation defenses against web-based exploits	ARO
Morton, Yu (Jade)	Colorado State University	CO	Multi-constellation global navigation satellite system data collection array	AFOSR
Murray, Richard	California Institute of Technology	CA	Automation for rapid, cell-free design space exploration and robustness analysis	AFOSR
Myers, Roberto	Ohio State University	OH	Magneto-optical system	ARO
Nash, Jonathan	Oregon State University	OR	Remotely-operated surface samplers	ONR
Novikova, Irina	College of William and Mary	VA	Quantum imaging system	AFOSR
Owen, Jonathan	Columbia University	NY	Imaging neural networks with time-resolved fluorescence microscopy	ARO
Peacock, Thomas	Massachusetts Institute of Technology	MA	Pop-up data shuttle, current and pressure recording inverted echo sounders	ONR
Peng, Jing	Montclair State University	NJ	Dynamic data-driven fusion and scene understanding	AFOSR
Philpot, William	Cornell University	NY	Field-portable, laboratory-grade spectroradiometer	ARO
Pratt, Thomas	University of Notre Dame	IN	Coherent multiple-input and multiple-output transceiver	ONR
Preble, Stefan	Rochester Institute of Technology	NY	Quantum silicon photonics measurement system	AFOSR
Ramakrishnan, Subramanian	Florida Agricultural and Mechanical University	FL	2-dimensional/3-dimensional printing	AFOSR
Rangamani, Padmini	University of California, San Diego	CA	High-performance computing cluster	AFOSR
Ravindran, Binoy	Virginia Polytechnic Institute and State University	VA	Scalable and power-efficient scale-out systems software	AFOSR
Ren, Jason	University of Colorado, Boulder	CO	Multi-channel potentiostat system	ONR
Rhoads, Jeffrey	Purdue University	IN	Integrated test for system energetic and related composite materials	ONR
Rocca, Jorge	Colorado State University	CO	Petawatt upgrade of high repetition rate titanium-sapphire laser	AFOSR

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Rueppell, Olav	University of North Carolina, Greensboro	NC	Monitoring social foraging behavior in a biological model system	ARO
Russell, Thomas	University of Massachusetts, Amherst	MA	Roll-to-roll printing to fabricate thin film photovoltaics	ONR
Samimy, Mohammad	Ohio State University	OH	Advanced optical diagnostics	AFOSR
Sastry, Sosale	University of California, Berkeley	CA	Provably correct mixed initiative human-robot decision making	ONR
Schatz, Michael	Georgia Institute of Technology	GA	High-energy, high-pulse-rate light sources	ARO
Schaub, Hanspeter	University of Colorado, Boulder	CO	Space object charging and electrostatic actuation	AFOSR
Schuster, David	University of Chicago	IL	Quantum optics at 100 GHz	ARO
Sentis, Luis	University of Texas, Austin	TX	Next generation humanoid robots	ONR
Shakarian, Paulo	Arizona State University	AZ	High-memory workstations in support of cyber-socio research	ARO
Sharma, Satish	San Diego State University	CA	Quasi-far-field system upgrade	ONR
Shaw, Scott	University of Iowa	IA	Vibrational sum frequency generation spectrometer	ARO
Sheehan, JP	University of Michigan	MI	Space simulation chamber	AFOSR
Siddique, Zahed	University of Oklahoma	OK	Biomechanical modeling & measurement of blast injury and hearing protection mechanisms	ARO
Sigmarsson, Hjalti	University of Oklahoma	OK	Multi-material 3-dimensional printing platform	AFOSR
Slabaugh, Carson	Purdue University	IN	High-speed imaging system	AFOSR
Slough, John	University of Washington	WA	High-speed optical diagnostics	AFOSR
Smith, Jonathan	Clemson University	SC	Grid computing laboratory	AFOSR
Snoke, David	University of Pittsburgh	PA	High-power, stabilized laser for studies of electrical transport properties	ARO
Steer, Michael	North Carolina State University	NC	Transient capture of chaotic microwave signals	ARO
Strank, Shannon	University of Texas, Austin	TX	Assessing military microgrid effectiveness	ARO
Subhash, Ghatu	University of Florida	FL	Upgrades for raman spectroscope	ARO
Szalewicz, Krzysztof	University of Delaware	DE	Computer cluster for predictions of structure and properties of cocrystals	ARO
Tang, Jian	Syracuse University	NY	Leveraging massively parallel data processing	AFOSR
Tehraniipoor, Mark	University of Florida	FL	Precise nano-fabrication and advanced circuit edit	AFOSR
Thompson, James	University of Washington	WA	Next generation surface wave instrument floats with tracking	ONR
Thurow, Brian	Auburn University	AL	Plenoptic imaging system	AFOSR
Tobler, Michael	Kansas State University	KS	Study of physiological effects and processing hydrogen sulfide	ARO
Van Duyne, Richard	Northwestern University	IL	Two color electrochemical tip-enhanced raman spectroscopy	AFOSR
Vassilevski, Panayot	Portland State University	OR	Computational science research	ARO
Wagener, Kenneth	University of Florida	FL	Dynamic mechanical analyzer and stress-controlled rheometer	ARO

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Wang, Kang	University of California, Los Angeles	CA	Broadband tunable femtosecond laser system	ARO
Wang, Qing	Pennsylvania State University	PA	Processability of Dielectric Polymers and Nanocomposites	ONR
Wang, Wenye	North Carolina State University	NC	Opportunistic communications prototype with spectrum contention and cascades	ARO
Welch, Gregory	University of Central Florida	FL	Transportable human-surrogate interaction system	ONR
Wetz, David	University of Texas, Arlington	TX	Modeling and simulation of next generation shipboard electrical power architectures	ONR
Wheeldon, Ian	University of California, Riverside	CA	Advanced circular dichroism spectrometer	ARO
Whitely, Marvin	University of Texas, Austin	TX	Scanning electrochemical microscope	ARO
Wicks, Gary	University of Rochester	NY	III-V semiconductor crystal growth and device characterization	ARO
Wilcock, William	University of Washington	WA	Scientific upgrades for research vessel Thomas G Thompson	ONR
Wilde, Elisabeth	Baylor College of Medicine	TX	Calibrated measurement of traumatic brain injury brain integrity	ONR
Willner, Alan	University of Southern California	CA	Optical transmitter	AFOSR
Wise, Frank	Cornell University	NY	Spatio-temporal dynamics of multimode optical pulse propagation	ONR
Wood, Robert	Harvard University	MA	Scanning laser doppler vibrometer	ARO
Xia, Tian	University of Vermont	VT	Adaptive surveillance radar system	ONR
Xin, Hao	University of Arizona	AZ	Fabrication of novel electromagnetic, acoustic and mechanical meta-structures	AFOSR
Yetter, Richard	Pennsylvania State University	PA	Ultra high pressure optical chamber for propellant and combustion studies	ARO
Yew, Joanee	University of Hawaii	HI	Real time mass spectrometry for extreen-free chemical profiling	ARO
Yu, Nanfang	Columbia University	NY	Infrared cameras and broadly tunable light sources	AFOSR
Zhang, Fuzhong	Washington University in St. Louis	MO	Atomic force microscope	ONR
Zhang, Xi-Cheng	University of Rochester	NY	Bright THz instrument and nonlinear THz science	ARO
Zhang, Yong-Hang	Arizona State University	AZ	Upgrade of a molecular beam epitaxy system and cleanroom research equipment	AFOSR/ARO
Zhao, Xuanhe	Massachusetts Institute of Technology	MA	Smart sea skin: flexible multi-sensing system	ONR