

Proposal Title	Organization	PI	Email	PM Mentor	Office
Enhancing the Ambient Stability of Biologics through Fluorous Dispersion	Pennsylvania State University	Scott Medina	shm126@psu.edu	Seth Cohen	BTO
MMHEALTH: Multimodal Health Sensing to Identify COVID-19 Signatures	University of California, Los Angeles	Achuta Kadambi	achuta@ee.ucla.edu	Jean-Paul Chretien	BTO
Microbiome Regulation of Glycosaminoglycan in the Synovial Joint	Purdue University	Deva Chan	chand@purdue.edu	Linda Chrisey	BTO
Electrical coupling between sensory receptor neurons: a shortcut mechanism for swift execution of a motor program	University of California San Diego	Johnatan Aljadeff	aljadeff@ucsd.edu	Gopal Sarma	BTO
RNA-targeting to control invasive plant species	Colorado State University	Todd Gaines	todd.gaines@colostate.edu	Blake Bextine	BTO
Upconversion photoluminescence from 2D materials with strain-enabled broadband operation	Missouri University of Science and Technology	Jie Gao	gaojie@mst.edu	Rohith Chandrasekar	DSO
From 3D Perception to Spatial Intelligence: Self-supervising Hierarchical Neural 3D Perceptual Simulators for Transferring Learned Physics and Policies across Views, Objects, Scenes and Tasks	Carnegie Mellon University	Katerina Fragkiadaki	katfe@cs.cmu.edu	Jiangying Zhou	DSO
A homological approach to machine reasoning	The University Corporation at CSUN	Jason Lo	Jason.lo@csun.edu	Jiangying Zhou	DSO
Multifunctional Exoskeletons from Robust and Responsive 2D Molecular Frameworks	Johns Hopkins University	Thomas J. Kempa	tkempa@jhu.edu	William Carter	DSO
Exploiting strong coupling between colloidal quantum dots and avalanche amorphous-selenium for high performance hybrid mid-wave infrared sensors and detectors	New York University	Ayaskanta Sahu	asahu@nyu.edu	Mark Wrobel	DSO
Game-Theoretic Reasoning and Synthesis of Defense with Strategic Deception and Counter-Deception	University of Florida	Jie Fu	fujie@ufl.edu	Ted Senator	DSO
Tracking Corporate Relationships at Scale	University of Central Florida	Paul Gazzillo	paul.gazzillo@ucf.edu	Mark Flood	I2O

Computational Narrative Representations for Information Operations	Florida International University	Mark Finlayson	markaf@fiu.edu	Brian Kettler	I2O
Guarding Against User Misperceptions of Differential Privacy	Columbia University	Rachel Cummings	rac2239@columbia.edu	Joshua Baron	I2O
Effective Software Monitoring Leveraging Hardware Debugging Extensions	Stevens Institute of Technology	Georgios Portokalidis	gportoka@stevens.edu	William Martin	I2O
Autonomous Group Introspective Learning and coopEtition (AGILE) for Cross-Capability Multi-Robot Adaptation	Colorado School of Mines	Hao Zhang	hzhang@mines.edu	John-Francis Mergen	I2O
A Material-Device-Circuit Co-Design of Reliable and Logic-Compatible Hfo2 based Ferroelectric FET	Rochester Institute of Technology	Kai Ni	kai.ni@rit.edu	Ali Keshavarzi	MTO
Engineering the gate-dielectric stack in ferroelectric field-effect transistors	Georgia Institute of Technology	Asif Islam Khan	asif.khan@ece.gatech.edu	Ali Keshavarzi	MTO
GaN/ Ga2O3 wafer-Bonded Aperture VERTical Transistor (BAVET) for RF applications	University of Michigan	Elaheh Ahmadi	eahmadi@umich.edu	Thomas Kazior	MTO
Compact Efficient Cryogenic Electroluminescent Coolers	University of California, Los Angeles	Aaswath Pattabhi Raman	aaswath@ucla.edu	Whitney Mason	MTO
Chiral exceptional point manifested active tuning in integrated photonics	University of Delaware	Tingyi Gu	tingyigu@udel.edu	Gordon Keeler	MTO
Miniaturized and Power-Efficient MMW Arrays with Precise Electrical and Thermal Optimization for Future Low-Cost Standardization	University of Florida	Najme Ebrahimi	najme@ece.ufl.edu	Thomas Kazior	MTO
Acoustic and vibration sensing metamaterials enabled by electro momentum coupling	The Univ. of Texas at Austin, DBA Applied Res. Lab	Michael Haberman	haberman@arlut.utexas.edu	Jeffrey Rogers	STO
Piezoelectric metamaterials with engineered electro momentum coupling	The Regents of the University of California, Berkeley	Grace X. Gu	ggu@berkeley.edu	Jeffrey Rogers	STO

Secure privacy preserving access to networks with ML (SpanML)	University of Massachusetts Lowell	Sashank Narain	sashank_narain@uml.edu	Mary Schurgot	STO
Optically rewritable photonic integrated circuits based on phase change materials	University of Washington	Arka Majumdar	arka@uw.edu	Robert Saperstein	STO
Programmable lithography-free integrated photonics for signal control and networking	University of Pennsylvania	Liang Feng	fenglia@seas.upenn.edu	Robert Saperstein	STO
Hypersonic Sonic Boom Theory based on Line-Distributed Energy Impulse Source: Lift, Shape, and Thermochemistry	University of Minnesota	Suo Yang	suo-yang@umn.edu	Andrew Baker	TTO
Analytical Prediction of Near-Field Hypersonic Aerodynamics	University of Florida Board of Trustees	Steven A. E. Miller	saem@ufl.edu	Andrew Baker	TTO
Cephalopods-inspired Self-morphing Stretchable Soft Skin from Twisted and Coiled Artificial Muscles	University of Iowa	Caterina Lamuta	caterina-lamuta@uiowa.edu	CDR Kyle Woerner	TTO
Next generation of wireless power transfer network of Unmanned Aircraft System using electromechanical beamforming	University of North Texas	Ifana Mahbub	ifana.Mahbub@unt.edu	Lt Col Paul Calhoun	TTO
Free-flight force and moment measurement in hypersonic impulse facilities using multi camera telecentric visualization and massively parallel scene reconstruction	University of Maryland	Stuart Laurence	stuartl@umd.edu	Lt. Col. Josh Stults	TTO