



## Proposals Selected for Negotiation of Contracts

- **Regher Solar, LLC**

7700 South River Parkway

Tempe, AZ 85284

Stanislau Herasimenka (520) 838-9404

19-1-S3.01-3362 GRC

[A Path to Low-Cost Space Solar Arrays Based on Si Blankets and In-Orbit Array Construction](#) [1]

- **ADA Technologies, Inc.**

11149 Bradford Road

Littleton , CO 80127

James Budimlya (303) 792-5615

19-1-Z1.04-2824 GRC

[High Energy Density, Long Cycle Life Li-S Batteries for Space Applications](#) [2]

- **Additive Manufacturing Innovations, LLC**

65 Main Sreet, Suite 3008

Potsdam, NY 13676

Ajit Achuthan (315) 262-4998

19-1-A1.07-3714 GRC

[A Multiscale Model for Material Systems with Hierarchical Microstructure using Generalized Method of Cells \(GMC\)](#) [3]

- **Advanced Ceramics Manufacturing**

7800 South Nogales Highway

Tucson, AZ 85756

Mark Angier (520) 547-0856

19-1-A1.10-3499 LaRC

[Additive Manufacturing of SiC-SiC CMCs](#) [4]

- **Advanced Cooling Technologies, Inc.**

1046 New Holland Avenue

Lancaster, PA 17601

William Anderson (717) 205-0602

19-1-Z2.01-3007 GSFC

[Variable Conductance Cold Plate for Spatial and Temporal Temperature Uniformity](#) [5]

- **Advanced Cooling Technologies, Inc.**

1046 New Holland Avenue

Lancaster, PA 17601

William Anderson (717) 205-0602

19-1-S4.02-3013 JPL

[Autonomous Melting Probe for Icy Planets Exploration](#) [6]

- **Advanced Manufacturing, LLC**

222 Pitkin Street, Suite 109

East Hartford, CT 6108

Dongsheng Li (678) 439-8812

19-1-A1.10-3760 GRC

[Additive Manufacturing of Complex gamma-TiAl Components for hypersonic Application](#) [7]

- **Advanced Space, LLC**

2100 Central Avenue, Suite 102

Boulder, CO 80301

Bradley Cheetham (720) 545-9189

19-1-H9.07-3158 GRC

[Onboard Data Infrastructure for Spacecraft \(ODIS\)](#) [8]

- **Advanced Space, LLC**

2100 Central Avenue, Suite 102

Boulder, CO 80301

Bradley Cheetham (720) 545-9189

19-1-H9.03-3159 GSFC

[Neural Net Control for Electric Propulsion in 3-Body Orbits](#) [9]

- **Advanced Systems & Technologies, Inc.**

12 Mauchly, Building H

Irvine, CA 92618

Beth Imlay (949) 733-3355

19-1-S2.03-3668 MSFC

[Reconfigurable Optoelectronic Mirror Evaluation \(ROME\) System](#) [10]

- **Advent Innovations Limited**

612 Dutchmans Creek Trail

IRMO, SC 29063

Ritubarna Banerjee (480) 234-5267

19-1-Z11.01-3602 LaRC

[Damage Detection Using Two-Stage Compressive Sensing](#) [11]

- **ADVR, Inc.**

2310 University Way, Building 1-1

Bozeman, MT 59715

Betsy Heckel (406) 522-0388

19-1-Z4.01-3481 LaRC

[Utilization of Materials International Space Station Flight Facility to Advance TRL of Seed Laser for Space-Based Lidar Measurements](#) [12]

- **Aerodyne Research, Inc.**

45 Manning Road

Billerica, MA 1821

David Gordon (978) 663-9500

19-1-S1.08-4126 LaRC

[Advanced Multi-Pass Cell Technology](#) [13]

- **AeroMancer Technologies Corporation**

1375 Kenyon Street Northwest, Apartment 408

Washington, DC 20010

Anand Mylapore (202) 556-0625

19-1-A2.01-4116 AFRC

[3D Aerosol Backscatter Correlation Lidar Velocimeter for Flight Testing](#) [14]

- **AGILE Space Propulsion Company**

1334 Airport Road

Durango, CO 81303

Julian Miller (813) 416-8079

19-1-S4.03-3713 JPL

[Simple Sample Return](#) [15]

- **Air Squared, Inc.**

510 Burbank Street

Broomfield, CO 80020

Bryce Shaffer (513) 238-9778

19-1-H4.01-3223 JSC

[Spinning Scroll Boost Compressor](#) [16]

- **AKELA, Inc.**

5551 Ekwill Street

Santa Barbara, CA 93111

Allan Hunt (805) 683-6414

19-1-H12.06-3146 JSC

[Remote Vital Sign Sensing Using Vehicle-Embedded Sensors and Nonlinear Radar](#) [17]

- **Alphacore, Inc.**

398 South Mill Avenue, Suite 304

Tempe, AZ 85281

Kimberlee Olson (520) 518-0135

19-1-H4.01-3803 JPL

[Self-Calibrating, Lightweight Radiation Hardened Isolated DC-DC Converter](#) [18]

- **Alphacore, Inc.**

398 South Mill Avenue, Suite 304

Tempe, AZ 85281

Kimberlee Olson (480) 494-5618

19-1-S1.03-3822 JPL

[RFI Mitigating \(RFIM\) Receiver Backend ASIC](#) [19]

- **Alphacore, Inc.**

398 South Mill Avenue, Suite 304

Tempe, AZ 85281

Kimberlee Olson (480) 494-5618

19-1-S1.04-3865 JPL

[DROIC High Dynamic Range](#) [20]

- **American GNC Corporation**

888 Easy Street

Simi Valley, CA 93065

Emily Melgarejo (805) 582-0582

19-1-A1.09-3425 AFRC

[Adaptive RuGgedized Ubiquitous Sensor Network for Aircraft Health Monitoring \(ARGUS-4AHM\) System](#) [21]

- **American GNC Corporation**

888 Easy Street

Simi Valley, CA 93065

Emily Melgarejo (805) 582-0582

19-1-H6.01-4058 MSFC

[BRoad Advanced Intelligent Networked \(BRAIN\) System](#) [22]

- **Amphionic, LLC**

875 North Lima Center Road

Dexter, MI 48130

Mark Hammig (734) 660-9412

19-1-S3.03-4063 GRC

[Lightweight Ultra-Strong Flexible Conductors from Metallic Nanoparticles and Aramid Nanofibers](#) [23]

- **Analytical Mechanics Associates, Inc.**

21 Enterprise Parkway, Suite 300

Hampton, VA 23666

John Abrams (303) 953-1016

19-1-H5.01-4072 LaRC

[Sunflower Array](#) [24]

- **Antara Teknik, LLC**

5233 Castlereigh Court

Granite Bay, CA 96746

Mehmet Adalier (916) 622-6960

19-1-Z6.01-3112 JPL

[Reliable and Real Time Linux for HPSC](#) [25]

- **Applied Material Systems Engineering, Inc. (AMSENG)**

2309 Pennsbury Court

Schaumburg, IL 60194-3884

Mukund Deshpande (630) 372-9650

19-1-S3.06-2547 GSFC

[Advanced Plasma Sprayed Conductive Thermal Control Material Systems \(TCMS\) - For Improved Performance](#) [26]

- **Apsidal, LLC**

11420 Santa Monica Boulevard, Unit 25295

Los Angeles, CA 90025

Sonal Patel (310) 430-3391

19-1-H8.01-3615 ARC

[Laser-Doppler-Anemometry Assisted Hypercognitive Manufacturing in Microgravity](#) [27]

- **Architecture Technology Corporation**

9971 Valley View Road

Eden Prairie, MN 55344

Lisa Knopik (952) 829-5864

19-1-A3.01-3070 LaRC

[Graceful Degradation of TBO Automation](#) [28]

- **Arizona Systems Engineering Group, LLC**

4572 South Avenida Paisano

Tucson, AZ 85746

Maria Escott Flores (520) 665-9089

19-1-S4.02-3614 JPL

[Application of the Robo-Tether: Sample Manipulation on the Surface of Venus](#) [29]

- **Ascending Node Technologies, LLC**

2548 East 4th Street

Tucson, AZ 85716

Sanford Selznick (520) 314-5595

19-1-S5.04-3174 JPL

[Interactive Rapid Generation of Simulated Science Data](#) [30]

- **ASRC Federal Astronautics, LLC**

289 Dunlop Boulevard, Building 300

Huntsville, AL 35824

Patrick McKenzie (256) 656-8782

19-1-H10.01-4455 SSC

[Highly Compatible, Additively Manufactured LOX Injectors](#) [31]

- **ASTER Labs, Inc.**

155 East Owasso Lane

Shoreview, MN 55126

Suneel Sheikh (651) 484-2084

19-1-S3.05-2607 AFRC

[Titan Aerial Research Vehicle for Scientific Exploration](#) [32]

- **Astrobotic Technology, Inc.**

2515 Liberty Avenue

Pittsburgh, PA 15222

Michael Provenzano (845) 399-0843

19-1-S1.02-3110 JPL

[Under-Rover Ultra-Wide Band Non-Contact Ground Penetrating Radar Antenna](#) [33]

- **Astrobotic Technology, Inc.**

2515 Liberty Avenue

Pittsburgh, PA 15222

Jeffrey Apeldoorn (571) 232-5029

19-1-S3.04-4200 GSFC

[Ultra Low SWaP Relative Navigation](#) [34]

- **ATA Engineering, Inc.**

13290 Evening Creek Drive South, Suite 250

San Diego, CA 92128

Joshua Davis (858) 480-2028

19-1-A1.02-2701 LaRC



[High-Resolution Source Characterization and Modeling for Efficient Prediction of Propulsion-Airframe Aeroacoustics](#) [35]

- **ATLAS Space Operations**

10850 East Traverse Highway, Suite 3355

Traverse City, MI 49684

Edward McCarty (719) 360-0496

19-1-H9.07-3346 GSFC

[Cognitive Constellation Management Scheduling](#) [36]

- **Atmospheric & Space Technology Research Associates, LLC**

282 Century Place Suite 1000

Louisville, CO 80027

Gerald Thompson (303) 478-1780

19-1-H9.07-3277 GRC

[COgnitive Radio Frequency Utilization by Constellations of Spacecrafts \(CORUS\)](#) [37]

- **ATSP Innovations**

60 Hazelwood Drive

Champaign, IL 61820

Jacob Meyer (217) 778-4400

19-1-S4.04-3349 GRC

[Extreme Environment Tribological Characterization of Advanced Bearing Materials](#) [38]

- **Autonomous Healthcare, Inc.**

132 Washington Street, Suite 305

Hoboken, NJ 7030

Behnood Gholami (347) 774-1617

19-1-H12.06-2566 ARC

[Remote Cardiopulmonary Sensing](#) [39]

- **Avalanche Technology**

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3540 West Warren Avenue

Fremont, CA 94538

Danny Sabour (510) 897-3000

19-1-H6.22-4274 ARC

[pMTJ STT-MRAM based Chiplelets for Neuromorphic Computing](#) [40]

- **Azavea, Inc.**

990 Spring Garden Street, 5th Floor

Philadelphia, PA 19123

Robert Cheetham (215) 701-7713

19-1-S5.02-3514 JPL

[Advancing Hyperspectral Data Cube Query Capabilities through Apache Spark DataFrame Abstraction](#) [41]

- **Bally Ribbon Mills**

23 North 7th Street

Bally, PA 19503

Bert Harries (610) 845-2211

19-1-Z7.03-4421 ARC

[Novel Diagnostic Tools for Production of WTPS](#) [42]

- **Banpil Photonics, Inc.**

4800 Patrick Henry Drive, Suit 120

Santa Clara, CA 95054

Achyut Dutta (408) 282-3628

19-1-S1.04-3859 JPL

[Advanced Multipurpose Digital Read-Out Integrated Circuit \(DROIC\) For Remote Sensing and Earth Observation IR Image Sensors](#) [43]

- **Barron Associates, Inc.**

1410 Sachem Place, Suite 202

Charlottesville, VA 22901

Connie Hoover (434) 973-1215

19-1-A3.04-3620 ARC

[Design and Validation of Dynamic Planning Algorithms to Enable Heterogeneous Airspace Operations and UAM](#) [44]

- **Beam - CA, LLC**

2324 Marwick Avenue

Long Beach, CA 90815

Elena Khitun (562) 343-2526

19-1-S1.06-3582 GSFC

[Vector Magnetometer Based on Spin Wave Phased-array Antenna](#) [45]

- **BEAM Engineering for Advanced Measurements**

1300 Lee Road

Orlando, FL 32810

Nelson Tabirian (407) 734-5222

19-1-Z7.01-3556 LaRC

[Non-Mechanical Dual-Mode Beam Control System for LiDARs](#) [46]

- **Benchmark Space Systems, Inc.**

2 Gregory Drive

South Burlington, VT 5403

Michael McDevitt (802) 999-8211

19-1-Z8.01-3357 GRC

[Warm Gas Generator Resistojet Micropropulsion System](#) [47]

- **Blacksky Aerospace, LLC**

623 19th Street South

Arlington, VA 22202

Raymond Hoheisel (202) 500-3743

19-1-H9.05-3487 GRC

[DataCell - A Solar Cell Integrated Modulating Retroreflector](#) [48]

- **Blue Star Advanced Materials, LLC**

6238 East Sunny Drive

Tucson, AZ 85712

Lori Bracamonte (520) 869-3106

19-1-A1.10-3612 LaRC

[Enhanced Thermal Conductivity Commercial Alloys for Spacecraft Applications Using an Additive Manufacturing Approach](#) [49]

- **Blue Star Advanced Materials, LLC**

6238 East Sunny Drive

Tucson, AZ 85712

Lori Bracamonte (520) 869-3106

19-1-Z3.01-3319 MSFC

[High Performance Tungsten Carbide Cermet and Composite Friction Stir Welding Tools](#) [50]

- **Blueshift, LLC**

575 Burbank Street G

Broomfield, CO 80020

Ryan Garvey (850) 445-3431

19-1-Z5.05-3716 GRC

[Terramechanics Modeling of Soil-Wheel Interactions at the Lunar Poles](#) [51]

- **bluShift Aerospace, Inc.**

74 Orion Street, #116

Brunswick, ME 4011

Sascha Deri (207) 619-1703

19-1-Z9.01-3259 MSFC

[Modular Adaptable Rocket Engine for Vehicle Launch \(MAREVL\)](#) [52]

- **Bolder Flight Systems, Inc.**

2614 30th Avenue Northeast

Minneapolis, MN 55418

Brian Taylor (719) 246-4559

19-1-A2.02-2709 LaRC

[Real Time Flight Envelope Estimation and Feedback for UAS Verification, Validation, and Certification](#) [53]

- **Bolder Flight Systems, Inc.**

2614 30th Avenue Northeast

Minneapolis, MN 55418

Brian Taylor (719) 246-4559

19-1-A3.02-2710 ARC

[Performance Based Autonomous Precision Approach and Landing System](#) [54]

- **Boston Micromachines Corporation**

30 Spinelli Place, Suite 103

Cambridge, MA 2138

Paul Bierden (617) 868-4178

19-1-S2.01-3210 JPL

[Eliminating High-Spatial-Frequency Topography due to Print-Through in MEMS Deformable Mirrors](#) [55]

- **Busek Company, Inc.**

11 Tech Circle

Natick, MA 1760

Judy Budny (508) 655-5565

19-1-Z3.02-3008 MSFC

[Welding and Repair in Space](#) [56]

- **Busek Company, Inc.**

11 Tech Circle

Natick, MA 1760

Judy Budny (508) 655-5565

19-1-Z10.02-3371 GRC

[Compact High Impulse Electrospray Thrusters for Large Observatory Precision Pointing](#) [57]

- **C-Suite Services, LLC**

114 Mulberry Drive

Metairie, LA 70005

Kevin Pollard (303) 594-4300

19-1-H10.01-3010 SSC

[Cryogenic Cam Butterfly Valve](#) [58]

- **CAL Analytics**

4031 Colonel Glenn Highway, Suite 300

Beavercreek, OH 43214

Ryan Pleskach (315) 216-5310

19-1-A3.03-2960 ARC

[Data Fusion for Anomaly and Degradation Detection](#) [59]

- **CAL Analytics**

4031 Colonel Glenn Highway, Suite 300

Beavercreek, OH 43214

Ryan Pleskach (315) 216-5310

19-1-A3.03-2911 ARC

[Enhancing UTM Ecosystem Resiliency and Robustness](#) [60]

- **CertainTech, Inc.**

20695 Settlers Point Place

Sterling, VA 20165

Ponniah Srinivasan (703) 584-5721

19-1-H3.03-3928 JPL

[Chitosan-Based Disinfectants for Spacecraft Potable Water Systems](#) [61]

- **CFD Research Corporation**

701 McMillian Way Northwest, Suite D

Huntsville, AL 35806

Silvia Harvey (256) 726-4858

19-1-Z7.04-2725 LaRC

[Plume-Surface Interaction in Rarefied Environments](#) [62]

- **CFD Research Corporation**

701 McMillian Way Northwest, Suite D

Huntsville, AL 35806

Silvia Harvey (256) 726-4858

19-1-Z1.03-2732 GRC

[Silicon Carbide-based Power Electronics for Small Fission Reactors](#) [63]

- **CFD Research Corporation**

701 McMillian Way Northwest, Suite D

Huntsville, AL 35806

Silvia Harvey (256) 726-4858

19-1-Z7.04-2726 LaRC

[Measurement and Modeling of High Speed Polydisperse Granular Flow Under Plume/Surface Interaction Conditions](#) [64]

- **CleanNG, LLC**

10738 East 55th Place

Tulsa, OK 74146

Robert Villarreal (405) 714-3241

19-1-Z4.01-3282 LaRC

[MISSE Experiments for Evaluation of Reliability of Cryogenic Tank Systems and Materials](#) [65]

- **CMSoft, Inc.**

566 Glenbrook Drive

Palo Alto, CA 94306

Francoise Farhat (650) 898-9585

19-1-A1.01-3405 ARC

[Integrating Distributed Control into High-Fidelity Aircraft Multidisciplinary Design Optimization](#) [66]

- **Colorado Power Electronics, Inc.**

120 Commerce Drive, Unit 1

Fort Collins, CO 80524

Ashley Smith (970) 482-0191

19-1-S3.03-3185 GRC

[Scalable Hall Thruster Power Processing Unit for Greater than 12kW using Wide Range Power Bricks](#) [67]

- **Combustion Research and Flow Technology**

6210 Keller's Church Road

Pipersville, PA 18947

Brian York (215) 766-1520

19-1-Z10.01-2859 MSFC

[Simulation of Chillover Process with a Sub-Grid Boiling Model](#) [68]

- **Combustion Research and Flow Technology**

6210 Keller's Church Road

Pipersville, PA 18947

Brian York (215) 766-1520

19-1-A1.03-3403 GRC

[An Enhanced Software Toolkit for OpenNCC to Reduce NOx in Commercial Supersonic Transport Combustors](#) [69]

- **Connecticut Analytical Corporation**

696 Amity Road

Bethany, CT 6524

Joseph Bango (203) 393-9666

19-1-S1.07-2573 JPL

[Chip-Based High Vacuum Pump for Planetary Mass Spectrometry](#) [70]



- **Connecticut Analytical Corporation**

696 Amity Road

Bethany, CT 6524

Joseph Bango (203) 393-9666

19-1-S4.06-4367 JPL

[In-Situ SEM Morphological Analysis of Possible Ocean Life From Ice Grains](#) [71]

- **CoolCAD Electronics, LLC**

7101 Poplar Avenue

Takoma Park, MD 20912

Lisa Sachar (301) 529-9517

19-1-S4.04-4172 GSFC

[High Temperature CMOS Control and Power Converter Electronics](#) [72]

- **Copious Imaging, LLC**

83 Hartwell Avenue, Suite 150

Lexington, MA 2421

Justin Baker (978) 457-4539

19-1-S1.04-4100 JPL

[Computational Pixel Imager \(CPI\) Readout Integrated Circuits for Next Generation High Performance and Low SWaP Sensors](#) [73]

- **Cornerstone Research Group, Inc.**

510 Earl Boulevard

Miamisburg, OH 45342

Chrysa Theodore (937) 320-1877

19-1-Z4.02-3197 LaRC

[Modular Palletizing System for In-Space Assembly](#) [74]

- **Cornerstone Research Group, Inc.**

510 Earl Boulevard

Miamisburg, OH 45342

Chrysa Theodore (937) 320-1877

19-1-Z9.01-3198 LaRC

[Low Pressure Assisted Composite Molding](#) [75]

- **Corvid Technologies**

145 Overhill Drive

Mooresville, NC 28117

Ted Berna (704) 799-6944

19-1-Z11.01-3711 LaRC

[Pulsed Radiation-Induced Acoustics for Non-Destructive Testing](#) [76]

- **Cosmic Microwave Technology, Inc.**

15703 Condon Avenue, Suite C4

Lawndale, CA 90260

Stephen Smith (424) 456-7744

19-1-H9.01-3429 JPL

[A Low Noise, Low Power, Cryogenic Differential Amplifier for Reducing the Timing Jitter in Superconducting Nanowire Single Photon Detectors](#) [77]

- **Creare, LLC**

16 Great Hollow Road

Hanover, NH 3755

Robert Kline-Schoder (603) 640-2487

19-1-S3.05-2923 JPL

[A Novel Aerial Drone Platform for Exploration of Titan](#) [78]

- **Creare, LLC**

16 Great Hollow Road

Hanover, NH 3755

Robert Kline-Schoder (603) 640-2487

19-1-S3.06-2933 JPL

[High-Capacity Thermal Storage for Passive Thermal Control Systems](#) [79]

- **Creare, LLC**

16 Great Hollow Road

Hanover, NH 3755

Robert Kline-Schoder (603) 640-2487

19-1-S1.09-3031 GSFC

[High-Performance Recuperator for Low-Temperature Turbo-Brayton Cryocoolers](#) [80]

- **Creare, LLC**

16 Great Hollow Road

Hanover, NH 3755

Robert Kline-Schoder (603) 640-2487

19-1-S3.01-2806 GRC

[Miniature Resilient Power Converter for Low-Power Radioisotope Heat Sources](#) [81]

- **Creare, LLC**

16 Great Hollow Road

Hanover, NH 3755

Robert Kline-Schoder (603) 640-2487

19-1-H4.01-2931 JSC

[Boost Compressor for xPLSS CO2/H2O Control on Mars](#) [82]

- **CU Aerospace, LLC**

3001 Newmark Drive

Champaign, IL 61822

David Carroll (217) 239-1703

19-1-Z8.06-2641 MSFC

[CubeSail-D: A Module for Accelerated Spacecraft Deorbiting](#) [83]

- **CU Aerospace, LLC**

3001 Newmark Drive

Champaign, IL 61822

David Carroll (217) 239-1703

19-1-Z8.01-2640 ARC

[Low Flame Temperature Monopropellant Propulsion Unit for Cubesats \(MPUC\)](#) [84]

- **Cybel, LLC**

1195 Pennsylvania Avenue

Bethlehem, PA 18018

Jean-Marc Delavaux (610) 691-7012

19-1-S1.01-4160 LaRC

[Compact Multi-Watt 2 to 2.13um Holmium Doped Fiber Laser Transmitter for Space](#) [85]

- **D&P, LLC**

3409 North 42nd Place

Phoenix, AZ 85018

Lei Tang (480) 518-0981

19-1-A1.05-3335 ARC

[An Artificial Intelligence Tool for Computational Sciences](#) [86]

- **Deployable Space Systems, Inc.**

153 Castilian Drive

Goleta, CA 93117

Brian Spence (805) 722-8090

19-1-H5.01-4299 GRC

[Deployable and Retractable Solar Array for Lunar Surface/Lander Mobility Operations](#) [87]

- **Deployable Space Systems, Inc.**

153 Castilian Drive

Goleta, CA 93117

Brian Spence (805) 722-8090

19-1-S3.01-4222 GRC

[Innovative Deployable Solar Array for SmallSat and CubeSat Applications](#) [88]

- **Digital Optics Technologies, Inc.**

1645 Hicks Road, Suite H

Rolling Meadows, IL 60008

Selim Shahriar (847) 358-2592

19-1-S1.10-3398 GSFC

[Compact and Highly-Sensitive Multi-Axes Gyroscope using Large Momentum Transfer Point Source Atom Interferometry](#) [89]

- **DornerWorks, Ltd.**

3445 Lake Eastbrook Southeast

Grand Rapids, MI 49546

Lance Hilbelink (616) 245-8369

19-1-Z6.01-3138 GSFC

[Xen Project Hypervisor for the High Performance Space Computing Platform](#) [90]

- **ElectroChem, Inc.**

400 West Cummings Park

Woburn, MA 1801

Radha Jalan (781) 938-5300

19-1-Z1.04-3606 GRC

[RFC Combing Non-Flow-Through Fuel Cell and Self-Pressurized Electrolyzer](#) [91]

- **Emergent Space Technologies, LLC**

7901 Sandy Spring Road, Suite 511

Laurel, MD 20707

Everett Cary (301) 345-1535

19-1-S3.08-3447 GSFC

[Processor Redundancy Enabled Software Event Recovery with Voting \(PRESERV\)](#) [92]

- **En'Urga, Inc.**

1201 Cumberland Avenue, Suite R

West Lafayette, IN 47906

Deepa Divakaran (765) 497-3269

19-1-H10.01-3412 SSC

[A Modular Sensor Suite for Propulsion Testing](#) [93]

- **ExoTerra Resource, LLC**

10499 Bradford Road, Suite 105

Littleton, CO 80127

Michael VanWoerkom (303) 565-6898

19-1-S3.01-4310 GRC

[AMBEC: Advanced Micro Brayton Energy Conversion](#) [94]

- **Exploration Institute, LLC**

Metro Office Park, Metro Parque 7, Street 1 Suite 204

Guaynab, PR 968

Armin Ellis (617) 599-0774

19-1-H6.22-3264 ARC

[Neuromorphic Spacecraft Fault Monitor](#) [95]

- **Extreme Diagnostics, Inc.**

6960 Firerock Court

Boulder, CO 80301

Robert Owen (303) 523-8924

19-1-S2.02-2444 JPL

[In-Space Demonstration of Submicron Active Optomechanical Control](#) [96]

- **Fibertek, Inc.**

13605 Dulles Technology Drive

Herndon, VA 20171

Tracy Perinis (703) 471-7671

19-1-S1.01-3517 LaRC

[Ultra-Compact Laser for Space-Based Cloud & Aerosol LIDAR](#) [97]

- **Final Frontier Design**

63 Flushing Avenue, Unit 163, Building 3, Suite 606

Brooklyn, NY 11215

Theodore Southern (347) 512-0082

19-1-H4.04-3430 JSC

[Surface Space Suit Boot](#) [98]

- **FluxMagic**

2828 Southwest Corbett Avenue

Portland , OR 97201

Jonathan Bird (704) 421-1864

19-1-A1.04-3853 GRC

[Magnetically Geared Aircraft Drivetrain](#) [99]

- **Freedom Photonics, LLC**

41 Aero Camino

Santa Barbara, CA 93117

Kristin Snyder (805) 967-4900

19-1-S1.01-3529 LaRC

[A novel chip-scale seed source at 1645nm for methane LIDARs](#) [100]

- **Freedom Photonics, LLC**

41 Aero Camino

Santa Barbara, CA 93117

Kristin Snyder (805) 967-4900

19-1-S1.01-4145 LaRC

[Monolithic Integrated Coherent Optical Receiver for Space Vehicle LIDAR Sensors](#) [101]

- **Freedom Photonics, LLC**

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41 Aero Camino

Santa Barbara, CA 93117

Kristin Snyder (805) 967-4900

19-1-S1.01-3244 GSFC

[Widely Tunable Fast Semiconductor Laser Seed Source at 1045nm for LIDAR Remote Sensing](#) [102]

- **Freedom Photonics, LLC**

41 Aero Camino

Santa Barbara, CA 93117

Kristin Snyder (805) 967-4900

19-1-S1.03-4425 GSFC

[Integrated RF Photonics Channelizer and Down inverter](#) [103]

- **Frontier Astronautics**

609 Windmill Road

Chugwater, WY 82210

Timothy Bendel (307) 331-3043

19-1-Z9.01-3549 MSFC

[Innovative Hydrogen Peroxide Turbopump Design for Affordable Small Launch Vehicles.](#) [104]

- **Geoplasma Research, LLC**

111 Veterans Memorial Boulevard, Suite 1600

Metairie, LA 70005

Amy Trosclair (504) 405-3386

19-1-Z10.03-3833 MSFC

[Additive Manufacturing of Refractory Metal Alloys for Nuclear Thermal Propulsion Components](#) [105]

- **GeoVisual Technologies, Inc.**

9191 Sheridan Boulevard, Suite 300

Westminster, CO 80031

Jeffrey Orrey (303) 955-1575



19-1-S5.03-4162 GSFC

[Multi-Resolution Deep Learning for Land Use Applications](#) [106]

- **Giner, Inc.**

89 Rumford Avenue

Newton, MA 2466

Cortney Mittelsteadt (781) 529-0529

19-1-Z1.04-3054 GRC

[Reduced Part Count NFTFC for Lunar Energy Storage](#) [107]

- **Giner, Inc.**

89 Rumford Avenue

Newton, MA 2466

Cortney Mittelsteadt (781) 529-0529

19-1-A1.04-3055 GRC

[High Energy Density and High Cycle Life Lithium-Sulfur Battery For Electrified Aircraft Propulsion](#) [108]

- **Global Technology Connection, Inc.**

2839 Paces Ferry Road, Suite 1160

Atlanta, GA 30339

Janice Healy (770) 803-3001

19-1-H6.01-3076 MSFC

[Resource Management Strategies for a Resilient Habitat Advanced Life Support \(ALS\) System](#) [109]

- **Gloyer-Taylor Laboratories, LLC**

112 Mitchell Boulevard

Tullahoma, TN 37388

Paul Gloyer (931) 455-7333

19-1-Z10.01-2544 GRC

[Low Boiloff Transfer Lines](#) [110]

- **Gloyer-Taylor Laboratories, LLC**

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112 Mitchell Boulevard

Tullahoma, TN 37388

Paul Gloyer (931) 455-7333

19-1-Z10.01-2545 JSC

[High Pressure BHL Spherical Cryotank](#) [111]

- **Grainflow Dynamics, Inc.**

1141 Catalina Drive, Private Mailbox 270

Livermore, CA 94550

Otis Walton (925) 447-4293

19-1-Z12.01-3877 KSC

[Size-Sorted Regolith Streams for ISRU](#) [112]

- **Handix Scientific, LLC**

5485 Conestoga Court, Suite 104B

Boulder, CO 80301

Gavin McMeeking (970) 310-5186

19-1-S1.08-3402 LaRC

[A Balloon-Borne Open-Path Cavity Ringdown Spectrometer for Measuring Atmospheric Extinction and Validating Remote Sensing Products](#) [113]

- **Hedgefog Research, Inc.**

1891 North Gaffey Street, Suite 224

San Pedro, CA 90731

Alex Kolessov (310) 935-2206

19-1-H3.02-4030 ARC

[Multiphase Effluents Flowmeter](#) [114]

- **Helden Aerospace Corporation**

2463 Saluda Drive

Acworth, GA 30101

John Hooker (678) 849-8420

19-1-A1.05-3574 LaRC

[HeldenDesign: An Automated Aircraft Drag Optimization Method Using Knowledge-Based Design Tools](#) [115]

- **Heliospace Corporation**

932 Parker Street, Suite 2

Berkeley, CA 94710

Gregory Delory (415) 527-0994

19-1-S1.06-3322 GSFC

[Development of Helical Boom Manufacturing](#) [116]

- **Impossible Sensing, LLC**

911 Washington Avenue, Suite 501

St. Louis, MO 63101

Pablo Sobron (314) 695-6993

19-1-S1.11-2711 GSFC

[HARPOON - High Access Raman Probe with Onboard Optical Numerization](#) [117]

- **Impossible Sensing, LLC**

911 Washington Avenue, Suite 501

St. Louis, MO 63101

Pablo Sobron (314) 695-6993

19-1-S1.07-2925 ARC

[DiSCO: Dual In-Situ Spectroscopy and Coring](#) [118]

- **Incom, Inc.**

294 Southbridge Road

Charlton, MA 1507

Steven Morrill (508) 909-2316

19-1-S1.05-3618 JPL

[Imaging Quality Microchannel Plates for UV-VIS Spectrometers](#) [119]

- **Infibertech, Corp.**

8 Indian Lane

Sharon, MA 2067

Ram Yahalom (781) 806-5625

19-1-S3.04-2772 MSFC

[Low Noise Miniature IMU for Harsh Space Environment](#) [120]

- **Innoflight, Inc.**

9985 Pacific Heights Boulevard, Suite 250

San Diego, CA 92121

David Andaleon (858) 638-1580

19-1-Z6.01-3427 GSFC

[InnoSwitch - A Flexible HPSC Switch/Router](#) [121]

- **Innoflight, Inc.**

9985 Pacific Heights Boulevard, Suite 250

San Diego, CA 92121

David Andaleon (858) 638-1580

19-1-S3.05-3428 GSFC

[Balloon SATCOM](#) [122]

- **InnoSys, Inc.**

2900 South Main Street

Salt Lake City, UT 84115

Larry Sadwick (801) 975-7399

19-1-S4.04-3555 JPL

[Space Exploration Extreme Environment Communication Transceiver](#) [123]

- **Innovative Aerospace, LLC**

8 Woodland Ridge

Southwick, MA 1077

Lynne Stapleton (413) 426-8121

19-1-H4.04-3751 JSC

[Space Boot Binding System for Surface Missions](#) [124]

- **Innovative Scientific Solutions, Inc.**

7610 McEwen Road

Dayton, OH 45459

Larry Goss (937) 429-4980

19-1-A1.08-3485 LaRC

[Unsteady Skin Friction and Pressure for Wind Tunnel Measurements](#) [125]

- **Intelligent Automation, Inc.**

15400 Calhoun Drive, Suite 190

Rockville, MD 20855

Mark James (301) 294-5221

19-1-S1.02-3636 JPL

[Wireless Timing Synchronization \(WITIS\) for Multi-static Radar Systems](#) [126]

- **Intelligent Automation, Inc.**

15400 Calhoun Drive, Suite 190

Rockville, MD 20855

Mark James (301) 294-5221

19-1-A3.02-3684 LaRC

[GUMP: General Urban Area Microclimate Predictions Tool for Small UAS](#) [127]

- **Intelligent Automation, Inc.**

15400 Calhoun Drive, Suite 190

Rockville, MD 20855

Mark James (301) 294-5221

19-1-A3.02-3680 ARC

[A Trajectory Generator for UAM Flights](#) [128]

- **Intelligent Fiber Optic Systems Corporation**

2363 Calle Del Mundo

Santa Clara, CA 95054

Behzad Moslehi (408) 565-9004

19-1-S4.02-2652 JPL

[Robotic System with Spectroscopic and Haptic Capabilities for Comet Subsurface Ice Sampling](#) [129]

- **Intelligent Fiber Optic Systems Corporation**

2363 Calle Del Mundo

Santa Clara, CA 95054

Behzad Moslehi (408) 565-9004

19-1-Z5.04-2654 JSC

[Sensor-Fused Interactive Perception for Adaptive Space Robotics](#) [130]

- **Intelomed, Inc.**

535 Keystone Drive

Warrendale, PA 15086

William Malloy (724) 516-1184

19-1-H12.06-3510 JSC

[A Video-Based Non-Contact Method for Advanced Remote Cardiopulmonary Vital Sign Monitoring](#) [131]

- **InterCAX, LLC**

2402 Lively Trail

Atlanta, GA 30345

Dirk Zwemer (404) 592-6897

19-1-H6.04-4348 JPL

[Models as Microservices for Enabling Agile and Distributed MBSE](#) [132]

- **Interdisciplinary Consulting Corporation**

5745 Southwest 75th Street, #364

Gainesville, FL 32608

Stephen Horowitz (256) 698-6175

19-1-A1.02-3531 LaRC

[Field Deployable Wireless Data Acquisition System for Ground-Test Arrays](#) [133]

- **Interdisciplinary Consulting Corporation**

5745 Southwest 75th Street, #364

Gainesville, FL 32608

Stephen Horowitz (256) 698-6175

19-1-A2.01-3489 GRC

[Ultra-Low Profile, Flat-Packaged Microphones for In-Flight Aeroacoustic Measurements](#) [134]

- **International Scientific Technologies, Inc.**

P.O. Box 757

Dublin, VA 24084

Wanda Gibson (540) 633-1424

19-1-Z4.01-4192 LaRC

[Measurement of Advanced Radiation-Shielding Materials for Deployment on MISSE-FF](#) [135]

- **IRPI, LLC**

11535 Southwest 67th Avenue

Portland, OR 97223

Ryan Jenson (503) 545-2501

19-1-H8.01-3356 JSC

[Advanced Superhydrophobic Fluids Processing for Life Support](#) [136]

- **IRPI, LLC**

11535 Southwest 67th Avenue

Portland, OR 97223

Ryan Jenson (503) 545-2501

19-1-H8.01-4033 KSC

[Autonomous Plant Watering System for Spacecraft](#) [137]

- **KALSCOTT Engineering, Inc.**

P.O. Box 3426

Lawrence, KS 66046

Suman Saripalli (785) 979-1116

19-1-A3.04-2970 LaRC

[Chip-Based ADS-B for High Density, Low Altitude UAV Operations](#) [138]

- **Kraenion**

17094 Lon Road

Los Gatos, CA 95033

Binu Mathew (650) 283-9142

19-1-S5.03-4464 GSFC

[Machine Learning for Earth Science](#) [139]

- **L'Garde, Inc.**

15181 Woodlawn Avenue

Tustin, CA 92780

Arthur Palisoc (714) 259-0771

19-1-Z8.06-2584 ARC

[Compact, Lightweight Bolt-on Deorbit Device for Spacecraft](#) [140]

- **LambdaVision, Inc.**

400 Farmington Avenue

Farmington, CT 6032

Jordan Greco (860) 690-5713

19-1-H8.01-3699 JSC

[Optimization of the Manufacturing Parameters for the Assembly of Protein-Based Retinal Implants in Microgravity](#) [141]

- **Leiden Measurement Technology, LLC**



1230 Mountain View Alviso Road, Suite A

Sunnyvale, CA 94089

Nathan Bramall (510) 301-8980

19-1-S1.07-3832 ARC

[Sample Pre-Processing Instrument for Chemical Exploration \(SPICE\)](#) [142]

- **Leiden Measurement Technology, LLC**

1230 Mountain View Alviso Road, Suite A

Sunnyvale, CA 94089

Nathan Bramall (510) 301-8980

19-1-S1.11-4267 ARC

[Hyperspectral Microscope for the Detection of Life](#) [143]

- **Lenzner Research, LLC**

125 East Canyon View Drive

Tucson, AZ 85704

Matthias Lenzner (347) 301-5402

19-1-S3.04-3870 MSFC

[High Sensitivity Light Gyro and Accelerometers](#) [144]

- **LightSpin Technologies, Inc.**

P.O. Box 7140

Endicott, NY 13761

Jared Bowling (607) 725-5143

19-1-S1.05-3706 GSFC

[Ultraviolet and Solar Blind Single Photon Diode Arrays](#) [145]

- **Litespar, Inc.**

7010 North Doane Drive

Tucson, AZ 85718

William Austin (520) 404-7982

19-1-S1.01-4359 GSFC

[MOPA Laser Transmitter with Passive Q-Switch for Space LIDAR](#) [146]

- **LM Group Holdings, Inc.**

26497 Rancho Parkway South

Lake Forest, CA 92630

Ricardo Salas (832) 463-4400

19-1-Z3.01-3795 LaRC

[Manufacturing of Bulk Metallic Glass Laminate Composites and Cladded Surfaces using Ultrasonic Additive Manufacturing](#) [147]

- **LongWave Photonics, LLC**

958 San Leandro Avenue

Mountain View, CA 94043

Alan Lee (617) 399-6405

19-1-S1.03-3725 GSFC

[Laser Sources for Frequency Calibration of Far-Infrared Spectrometers](#) [148]

- **Lorand Technologies, Inc.**

3259 Progress Drive

Orlando, FL 32826

Ronald Hellmer (737) 615-0279

19-1-H10.01-3423 SSC

[Wireless Vibration Monitors for Advanced Propulsion Systems Ground Testing](#) [149]

- **Lunar Outpost, Inc.**

2830 East College Avenue, #106

Boulder, CO 80303

Justin Cyrus (908) 577-4014

19-1-Z5.05-3809 GRC

[Cryogenic Thermal Management Systems for Lunar Outpost Mobile Autonomous Prospecting Platform \(MAPP\) Rover](#) [150]

- **Lynntech, Inc.**

2501 Earl Rudder Freeway South

College Station, TX 77845

Darla Hisaw (979) 764-2219

19-1-Z11.01-2784 LaRC

[Generative Adversarial Networks for Real-Time Realistic Physics Simulations](#) [151]

- **Lynntech, Inc.**

2501 Earl Rudder Freeway South

College Station, TX 77845

Darla Hisaw (979) 764-2219

19-1-Z1.04-2790 GRC

[Energy Dense Advanced Li Ion Batteries for Lunar Surface Missions](#) [152]

- **Lynntech, Inc.**

2501 Earl Rudder Freeway South

College Station, TX 77845

Darla Hisaw (979) 764-2219

19-1-S3.03-2785 GRC

[Fluoride Ion Solid State Battery for Terrestrial Venus Applications](#) [153]

- **M4 Engineering, Inc.**

4020 Long Beach Boulevard

Long Beach, CA 90807

Kevin Roughen (562) 981-7797

19-1-Z4.03-4412 LaRC

[Lightweight Conformal Structures](#) [154]

- **Made in Space, Inc.**

8226 Philips Highway, Suite 102

Jacksonville, FL 32256

Kevin DiMarzio (941) 408-5504

19-1-Z3.02-3224 MSFC

[Mobile End-Effector Laser Device \(MELD\)](#) [155]

- **MagiQ Technologies, Inc.**

11 Ward Street

Somerville, MA 2143

Caleb Christensen (617) 661-8300

19-1-S3.04-2964 MSFC

[Stabilizing and Miniaturizing a Fast Light Enhanced Gyroscope for Navigation](#) [156]

- **Magnolia Optical Technologies, Inc.**

52B Cummings Park, Suite 314

Woburn, MA 1801

Yash Puri (978) 821-7500

19-1-S1.04-2990 JPL

[Development of Nanostructured Antireflection Coatings Technology for UV and IR Bands for Improved Detector Array and Sensor Performance](#) [157]

- **Mainstream Engineering Corporation**

200 Yellow Place

Rockledge, FL 32955

Michael Rizzo (321) 631-3550

19-1-Z2.01-4490 JPL

[Extreme Temperature Vapor Compression Heat Pump](#) [158]

- **Mainstream Engineering Corporation**

200 Yellow Place

Rockledge, FL 32955

Michael Rizzo (321) 631-3550

19-1-Z2.01-4419 JSC

[Single-Loop Thermal Control System Enabling Compressor](#) [159]

- **Makel Engineering, Inc.**

1585 Marauder Street

Chico, CA 95973

Darby Makel (530) 895-2771

19-1-S1.07-4193 GRC

[Venus In-Situ Mineralogy Reaction Array \(VIMRA\) Sensor Platform](#) [160]

- **Masten Space Systems, Inc.**

1570 Sabovich Street

Mojave, CA 93501

Matthew Kuhns (216) 308-6111

19-1-Z7.04-3871 MSFC

[Testing Deep Cratering Physics to Inform Plume Effects Modeling for Masten Space Systems](#) [161]

- **Masten Space Systems, Inc.**

1570 Sabovich Street

Mojave, CA 93501

Matthew Kuhns (216) 308-6111

19-1-S3.06-3881 MSFC

[Surviving the Lunar Night Using Metal Oxidation Warming Systems](#) [162]

- **Materials Research and Design, Inc.**

300 East Swedesford Road

Wayne, PA 19087

Craig Iwano (610) 964-9000

19-1-H5.02-3902 MSFC

[Domestically Available C/C for Hot Structure](#) [163]

- **Materials Research and Design, Inc.**

300 East Swedesford Road

Wayne, PA 19087

Gary Tiscia (610) 964-9000

19-1-Z9.01-3916 MSFC

[Rapid Fabrication of CMCs with Aligned Discontinuous Reinforcement via Reactive Melt Infiltration](#) [164]

- **Metron, Inc.**

1818 Library Street

Reston, VA 20190

Seth Blackwell (703) 787-8700

19-1-A3.03-3366 LaRC

[In-Time Flight Anomaly Detection and Risk Prediction with Neural Networks](#) [165]

- **Microelectronics Research Development Corporation**

4775 Centennial Boulevard, Suite 130

Colorado Springs, CO 80919

Karen Van Cura (719) 531-0805

19-1-Z8.03-2829 LaRC

[Low Cost Methodology to Radiation Hardening of Legacy Integrated Circuits](#) [166]

- **MicroLink Devices, Inc.**

6457 Howard Street

Niles, IL 60714

Noren Pan (847) 588-3001

19-1-S3.01-3213 GRC

[High Specific Power Radiation Hard Bifacial Back Metal Mirror Solar Cells for Flex Arrays](#) [167]

- **Microscale, Inc.**

800 West Cummings Park, Suite 3350

Woburn, MA 1801

Xingtao Wu (339) 927-1996

19-1-S2.01-2952 JPL

[Manufacturing Optimization of High-Actuator-Count Deformable Mirrors for Mirror Quality and Actuator Yield Assurance](#) [168]

- **MicroXact, Inc.**

6580 Valley Center Drive, Suite 312

Radford, VA 24141

Elena Kochergina (540) 394-4040

19-1-S1.05-3345 GSFC

[Wide Energy Range X-Ray Neutral Density Filters](#) [169]

- **Millennitek LLC**

631 Barbro Lane

Knoxville, TN 37932

Steve Getley (865) 966-2170

19-1-Z1.03-3409 GRC

[Integral Neutron and Gamma Shield Material](#) [170]

- **Millimeter Wave Systems LLC**

9 Research Drive, Suite #8

Amherst, MA 1002

Brenda Mangels (413) 345-6467

19-1-S1.02-4165 JPL

[V-Band Switch \(65-70 GHz\)](#) [171]

- **Mosaic ATM, Inc.**

540 Fort Evans Road Northeast, Suite 300

Leesburg, VA 20176

Chris Stevenson (540) 454-7458

19-1-A3.01-3035 ARC

[Contingency Planning for TFM Decision Support](#) [172]

- **Mosaic ATM, Inc.**

540 Fort Evans Road Northeast, Suite 300

Leesburg, VA 20176

Chris Stevenson (540) 454-7458

19-1-A3.03-3040 LaRC

[Smart UAS Information Network](#) [173]

- **Mosaic ATM, Inc.**

540 Fort Evans Road Northeast, Suite 300

Leesburg, VA 20176

Chris Stevenson (540) 454-7458

19-1-A3.02-3037 LaRC

[Increasing Autonomy with Automated Trajectory Negotiation](#) [174]

- **Motiv Space Systems, Inc.**

350 North Halstead Street

Pasadena, CA 91107

Tom McCarthy (626) 389-5783

19-1-S4.04-3728 JPL

[Cryogenic Focus Mechanism](#) [175]

- **Motiv Space Systems, Inc.**

350 North Halstead Street

Pasadena, CA 91107

Chris Thayer (626) 389-5785

19-1-Z5.05-4027 JSC

[Fast Advanced Scout Terrain Rover \(FASTR\) Mobility Architecture for Lunar Missions](#) [176]

- **Multiscale Systems, Inc.**

101 Moreland Green Drive

Worcester, MA 1609

Jesse Silverberg (781) 964-7911



19-1-A1.06-3665 LaRC

[Ultra-Lightweight Mechanical Metamaterials for Mitigating Impacts and Crashes of Urban Air Mobility Vehicles](#) [177]

- **N&R Engineering**

6659 Pearl Road, #201

Parma Heights, OH 44130

Vinod Nagpal (440) 845-7020

19-1-A1.07-2626 GRC

[Probabilistic/Reliability Software Tool for Ceramic Matrix Composite/Environmental Barrier Coating Interface Modeling](#) [178]

- **Nabla Zero Labs**

535 Old Mill Road

San Marino, CA 91108

Juan Arrieta (626) 319-0263

19-1-H9.03-2971 GSFC

[A Networked Flight Dynamics Platform for Collaborative Design and Optimization](#) [179]

- **Nalu Scientific, LLC**

2800 Woodlawn Drive, Suite 240

Honolulu, HI 96822

Isar Mostafanezhad (808) 343-9204

19-1-S1.01-4294 GSFC

[SWELL: Single-Photon-Sensitive Waveform Enhanced and Lightweight LIDAR](#) [180]

- **Nanohmics, Inc.**

6201 East Oltorf Street, Suite 400

Austin, TX 78741

Mike Mayo (512) 389-9990

19-1-H3.03-3415 JPL

[Aptamer Beacon Sensor for Manual and Remote Automated Microbial Detection](#) [181]

- **NanoMEMS Research, LLC**

4000 Barranca Parkway, Suite 250

Irvine, CA 92604

Hector De Los Santos (949) 682-7702

19-1-H9.05-3976 GRC

[Plasmon-Plasmon Scattering Digital Logic](#) [182]

- **Nanosonic, Inc.**

158 Wheatland Drive

Pembroke, VA 24136

Melissa Campbell (540) 626-6266

19-1-Z8.03-3077 GRC

[Lightweight Radiation Shielding Composites for Small Spacecraft](#) [183]

- **Navatek, LLC**

841 Bishop Street, Suite 1110

Honolulu, HI 96813

Todd Peltzer (808) 551-4713

19-1-H6.01-3742 MSFC

[Reinforcement Learned Adversarial Agent for Active Fault Detection in Space Habitats](#) [184]

- **Navitas Advanced Solutions Group, LLC**

4880 Venture Drive, Suite 100

Ann Arbor, MI 48108

Ben Benedict (734) 205-1410

19-1-Z1.04-4174 GRC

[Extended Cycle Life High Energy Lithium Sulfur Batteries](#) [185]

- **Near Earth Autonomy, Inc.**

150 North Lexington Street

Pittsburgh, PA 15208

Marcel Bergerman (412) 513-6110

19-1-A2.02-3901 LaRC

[Long Term Autonomy for Aerial Urban Mobility](#) [186]

- **New Electricity Transmission Software Solutions (NETSS)**

22 Weir Hill Road

Sudbury, MA 1776

Eric Allen (518) 447-9400

19-1-A1.04-3011 GRC

[Integrated Control and Protection Methodology Based on Energy-Space Modeling for EAP Aircraft](#) [187]

- **Nexolve Holding Company, LLC**

290 Dunlop Boulevard, Southwest Suite 200

Huntsville, AL 35824

Paul Dupre (256) 836-7785

19-1-H5.01-4161 MSFC

[Simple Reliable Retractable Lunar Lander Solar Array](#) [188]

- **NextGen Battery Technologies, LLC**

1901 North Monroe Street, Suite 1200

Arlington, VA 22209

C. Michael Booth (770) 296-7941

19-1-Z1.04-3583 GRC

[Advanced Rechargeable Lithium Battery for Space Applications](#) [189]

- **nFlux**

550 North Figueroa Street, Apartment 5084

Los Angeles, CA 90012

Seyed Sajjadi (818) 934-3093

19-1-H6.03-3723 ARC

[Sigma as an Augmented Cognitive Architecture for Deep Space Exploration](#) [190]

- **NHanced Semiconductors**

1415 Bond Street, Suite 155

Naperville, IL 60563

Robert Patti (630) 561-6813

19-1-S1.05-3535 JPL

[8k x 8k Delta Doped 3D Advanced Hybrid Detector Prototype For UV](#) [191]

- **Nodeln**

12 Deerfield Trace

Burlington, CT 6013

Suresh Kannan (404) 313-0228

19-1-A2.02-4019 GRC

[Information Hedging from Sensing to Cognition to ensure Coherent Decision Making](#) [192]

- **Nokomis, Inc.**

310 5th Street

Charleroi, PA 15022

Eli Polovina (724) 483-3946

19-1-A1.09-4472 GRC

[Hiawatha OnBoard Electronic Sensing](#) [193]

- **OEwaves, Inc.**

465 North Halstead Street, Suite #140

Pasadena, CA 91107

Debra Coler (626) 351-4200

19-1-S1.09-4431 JPL

[Cryogenic Microphotonic Accelerometer](#) [194]

- **OEwaves, Inc.**

465 North Halstead Street, Suite #140

Pasadena, CA 91107

Debra Coler (626) 351-4200

19-1-S1.10-3876 JPL

[Miniature Laser System for Yb Ion Clock](#) [195]

- **Opterus Research and Development, Inc.**

4221 Rolling Gate Road

Fort Collins, CO 80526

Thomas Murphey (505) 250-3006

19-1-S2.02-2947 JPL

[Precision Multifunction Autonomous Connections](#) [196]

- **Opterus Research and Development, Inc.**

4221 Rolling Gate Road

Fort Collins, CO 80526

Thomas Murphey (505) 250-3006

19-1-H5.01-2946 LaRC

[Monolithic Truss Segment](#) [197]

- **Opterus Research and Development, Inc.**

4221 Rolling Gate Road

Fort Collins, CO 80526

Thomas Murphey (505) 250-3006

19-1-Z12.01-2951 GRC

[Deployable Solar Concentrator](#) [198]

- **Optical Coating Solutions, Inc.**

P.O. Box 1064

Emmett, ID 83617

Carol Martinez (805) 890-0053

19-1-S1.08-2454 JPL

[Passive UV Imaging Polarimeter For Atmospheric Studies](#) [199]

- **Optimax Systems, Inc.**

6367 Dean Parkway

Ontario, NY 14519

Thomas Starin (585) 265-1020

19-1-S2.03-3687 GSFC

[Mitigation of Mid-Spatial Frequency Errors](#) [200]

- **OPTINAV, Inc.**

10914 Northeast

Bellevue, WA 98004

Robert Dougherty (425) 891-4883

19-1-A1.02-3576 LaRC

[Innovative Measurement of Airframe Noise Sources](#) [201]

- **OptiPro Systems, LLC**

6368 Dean Parkway

Ontario, NY 14519

James Munro (585) 265-0160

19-1-S2.04-3275 GSFC

[Chromatic Interferometric Probe](#) [202]

- **OptiPro Systems, LLC**

6368 Dean Parkway

Ontario, NY 14519

Matthew Carlson (585) 265-0160

19-1-S2.04-3272 GSFC

[Advanced Nanometer Coordinate Measuring Machine](#) [203]

- **Orbion Space Technology, Inc.**

101 West Lakeview Drive

Houghton, MI 49931

Jason Makela (906) 362-2509

19-1-Z10.02-3947 GRC

[Reliable Non-Swaged Cathode Heater Designs](#) [204]

- **Orbit Logic, Inc.**

7852 Walker Drive

Greenbelt, MD 20770

Ella Herz (301) 982-6234

19-1-S5.05-2756 ARC

[FLAPPER: Fault Learning Agent for Predication, Protection and Early Response](#) [205]

- **Orbital Transports, LLC**

130 South Canal Stret, Suite 819

Chicago, IL 60606

David Hurst (773) 218-6151

19-1-Z8.07-3323 LaRC

[METIS: A System and MBSE Methodology for Small Spacecraft Development](#) [206]

- **Ozark Integrated Circuits, Inc.**

700 West Research Center Boulevard

Fayetteville, AR 72701

Matt Francis (479) 409-5201

19-1-S4.04-2992 GRC

[Extreme Environment System Integration Techniques for Venus In-Situ Processing](#) [207]

- **Parabilis Space Technologies, Inc.**

1195 Linda Vista Drive, Suite F

San Marcos, CA 92078

David Brynes (619) 750-4484

19-1-H10.01-3329 SSC

[Hermetically Sealed Rotary Bellows for Reducing Stem Seal Leak Rates](#) [208]

- **Paragon Space Development Corporation**

3481 East Michigan Street

Tucson, AZ 85714

Leslie Haas (520) 903-1000

19-1-H3.02-3541 ARC

[Separation Technology of On-Orbit Liquid and Excrement \(STOOLE\)](#) [209]

- **Paragon Space Development Corporation**

3481 East Michigan Street

Tucson, AZ 85714

Leslie Haas (520) 903-1000

19-1-Z2.01-3790 MSFC

[Smart Passively Articulating High-Turndown Radiator \(SPAHR\)](#) [210]

- **Paragon Space Development Corporation**

3481 East Michigan Street

Tucson, AZ 85714

Leslie Haas (520) 903-1000

19-1-Z10.01-3542 JSC

[Ellipsoidal Propellant Tank \(EPT\)](#) [211]

- **Parallel Flight Technologies, Inc.**

1120 Sylvia Way

Ben Lomond, CA 95005

Joshua Resnick (831) 252-4175

19-1-A1.04-2500 GRC

[Parallel Hybrid Multi-Rotor](#) [212]

- **PH Matter, LLC**



6655 Singletree Drive

Columbus, OH 43229

Paul Matter (614) 657-4683

19-1-Z1.04-2439 JPL

[Reversible Fuel Cell Energy Storage System](#) [213]

- **Phoenix Integration**

1715 Pratt Drive, Suite 2000

Blacksburg, VA 24060

Robin Campbell (540) 961-7215

19-1-S5.04-3336 JPL

[EngineeringHub: A Trusted Collaborative Framework for Model Based Engineering Sharing](#) [214]

- **Photon Sciences, Inc.**

4520 Savino Drive

Plano, TX 75093

Gary Evans (214) 207-9427

19-1-S5.01-3085 ARC

[Low power 7.2 Terabit Transmitter for Exascale Computing](#) [215]

- **Photonwares Corporation**

15 Presidential Way

Woburn, MA 1801

Rick Lusignea (617) 285-8805

19-1-S1.03-4389 JPL

[A Novel Passively Mode-Locked Femtosecond Fiber Ring Laser of High Stability and Ultra Compactness](#) [216]

- **Physical Sciences, Inc.**

20 New England Business Center

Andover, MA 1810

B. David Green (978) 689-0003

19-1-Z7.04-3492 MSFC

[High Temperature Nozzle Seals for Dissimilar Materials](#) [217]

- **Physical Sciences, Inc.**

20 New England Business Center

Andover, MA 1810

B. David Green (978) 689-0003

19-1-Z12.01-2741 GRC

[Solar Concentrator System for Lunar ISRU Applications](#) [218]

- **Pioneer Astronautics**

11111 West 8th Avenue, Unit A

Lakewood, CO 80215

Robert Zubrin (303) 980-0890

19-1-Z12.02-2588 KSC

[Lunar Exploration Gas Spectrometer](#) [219]

- **Pioneer Astronautics**

11111 West 8th Avenue, Unit A

Lakewood, CO 80215

Robert Zubrin (303) 980-0890

19-1-Z1.04-2912 GRC

[Lunar Flow Battery](#) [220]

- **Plasma Processes, LLC**

4914 Moores Mill Road

Huntsville, AL 35811

Timothy McKechnie (256) 851-7653

19-1-Z10.03-3771 MSFC

[Dispersion Strengthened Refractory Metal Claddings for NTP](#) [221]

- **Plasma Processes, LLC**

4914 Moores Mill Road

Huntsville, AL 35811

Timothy McKechnie (256) 851-7653

19-1-Z10.03-3769 GRC

[Refractory Metal Coated Uranium Nitride Fuel for Nuclear Thermal Propulsion](#) [222]

- **Polaronyx, Inc.**

2526 Qume Drive, Suites 17 and 18

San Jose, CA 95131

Jian Liu (408) 573-0930

19-1-Z10.02-2650 GRC

[High Emissivity Surface Micro-Structuring](#) [223]

- **Polaronyx, Inc.**

2526 Qume Drive, Suites 17 and 18

San Jose, CA 95131

Jian Liu (408) 573-0930

19-1-S2.03-2649 MSFC

[Large SiC Mirror Support Architecture Manufacturing](#) [224]

- **PolyK Technologies, LLC**

2124 Old Gatesburg Road

State College, PA 16803

Shihai Zhang (518) 605-6897

19-1-S4.04-4361 JPL

[Long Life, Long Stroke, Low Power, and High Torque-Force Actuators \(TriLHFA\) for Extreme Space Environments](#) [225]

- **Powdermet, Inc.**

24112 Rockwell Drive

Euclid, OH 44117

Andrew Sherman (216) 404-0053

19-1-A1.07-4445 GRC

[Advanced Soft Magnetic Nanocomposites for High-Frequency Power Applications in Electrified Aircraft Propulsion](#) [226]

- **Precision Combustion, Inc.**

410 Sackett Point Road

North Haven, CT 6473

Anthony Anderson (203) 287-3700

19-1-Z1.04-3829 JSC

[High Specific Power Primary Fuel Cell System](#) [227]

- **Predictive Science, Inc.**

9990 Mesa Rim Road, Suite 170

San Diego, CA 92121

Meaghan Marsh (858) 450-6494

19-1-S5.06-3247 GSFC

[An Extensible Tool for Estimating Space Weather Benchmarks](#) [228]

- **Predictive Science, Inc.**

9990 Mesa Rim Road, Suite 170

San Diego, CA 92121

Meaghan Marsh (858) 450-6494

19-1-S5.01-3661 ARC

[GPU-Scceleration of the CORona-HELiosphere Solar Wind and CME Modeling Suite](#) [229]

- **Prixarc, LLC**

2673 Commons Boulevard, Suite 55

Beavercreek, OH 45431

Vamsy Chodavarapu (937) 782-8206

19-1-H6.22-3899 GRC

[Energy Efficient High-Throughput Neuromorphic Processor for Deep Reinforcement Learning](#) [230]

- **Protoinnovations, LLC**

5453 Albemarle Avenue

Pittsburgh, PA 15217

Dimitrios Apostolopoulos (412) 916-8807

19-1-Z5.05-3903 ARC

[Intelligent Robotic Lunar Wheel with Accurate and Robust Real-Time Mobility Assessment and Response Capabilities](#) [231]

- **Q-Peak, Inc.**

135 South Road

Bedford, MA 1730

B. David Green (978) 689-0003

19-1-H9.01-2754 JPL

[High Power SM Fiber Connectors](#) [232]

- **Q-Peak, Inc.**

135 South Road

Bedford, MA 1730

B. David Green (978) 689-0003

19-1-S1.07-3087 GSFC

[Deep UV Laser for Lunar Exploration](#) [233]

- **QorTek, Inc.**

1965 Lycoming Creek Road, Suite 205

Williamsport, PA 17701

Cathy Bower (570) 322-2700

19-1-S1.06-3761 GSFC

[Fast Transient Response High Voltage Power Converter for Space Applications](#) [234]

- **Qrona Technologies, LLC**

7624 Executive Drive

Eden Prairie, MN 55344

Amir Dabiran (612) 386-3349

19-1-S4.04-3611 JPL

[High Temperature, Radiation-Hard, Metal-Oxide Based Power Electronics](#) [235]

- **Qualtech Systems, Inc.**

100 Corporate Place, Suite 220

Rocky Hill, CT 6067

Sudipto Ghoshal (860) 761-9341

19-1-H6.04-3562 MSFC

[TEAMS Fault Management Extension for SysML](#) [236]

- **Qualtech Systems, Inc.**

100 Corporate Place, Suite 220

Rocky Hill, CT 6067

Sudipto Ghoshal (860) 761-9341

19-1-S5.05-2499 MSFC

[Model Based Data Integration and Fault Management \(FM\) Architecture Design Trade Studies](#) [237]

- **Quantitative Scientific Solutions, LLC**

4601 N Fairfax Drive, Suite 1200

Arlington, VA 22203

David Guarrera (516) 669-2166

19-1-S5.06-3255 JPL

[Real-Time Prediction and Forecasting of Geoelectric Fields Using Machine Learning](#) [238]

- **Quantum Applied Science and Research, Inc.**

16744 West Bernardo Drive

San Diego, CA 92127

Tracey Wrightson (858) 412-1800

19-1-H12.06-2646 ARC

[Individualized, Noninvasive Speech Indicators for Tracking Elevations in Stress \(INSITES\)](#) [239]

- **Quartus Engineering, Inc.**

9689 Towne Centre Drive

San Diego, CA 92121

Andrea Cuneo (858) 875-6988

19-1-S2.03-4264 LaRC

[SBIR NASA CUBESAT Phase 1 Technical Proposal](#) [240]

- **Qubitekk**

1400 Norris Road

Bakersfield, CA 93308

Stephanie Rosenthal (760) 599-5104

19-1-H9.05-3791 GRC

[Narrow-Spectrum Two-Photon Sources for Space-Based Quantum Communication](#) [241]

- **Quest Thermal Group**

6452 Fig Street Unit A

Arvada, CO 80004

Alan Kopelove (303) 395-3100

19-1-S1.09-2880 GSFC

[Light Weight Dewar: Low Mass High Performance IMLI/Dewar for Cryogenic Balloon Instruments](#) [242]

- **Quest Thermal Group**

6452 Fig Street Unit A

Arvada, CO 80004

Alan Kopelove (303) 395-3100

19-1-Z2.01-3897 MSFC

[Lander Variable Radiator: High Turndown Spacecraft Radiator for Lunar Lander](#) [243]

- **QuesTek Innovations, LLC**

1820 Ridge Avenue

Evanston, IL 60201

Kevin Creely (847) 425-8226

19-1-Z3.01-3986 MSFC

[Tool Material Design for Friction Stir Welding of High Strength Materials](#) [244]

- **Radiation Detection Technologies, Inc.**

4615 Dwight Drive

Manhattan, KS 66502

Grace Friedel (785) 532-7087

19-1-Z12.02-2955 KSC

[NeuRover: Rover Enabled Neutron Energy Detector for Lunar Resource Mapping](#) [245]

- **RC Integrated Systems, LLC**

24234 Madison Street

Torrance, CA 90505

Naibing Ma (760) 383-1218

19-1-Z10.03-2564 SSC

[Fiber Optic Multimodal Sensing System](#) [246]

- **Red Canyon Software**

1200 Pennsylvania Street, Suite 100

Denver, CO 80203

Barry Hamilton (303) 864-0556

19-1-H6.03-3305 ARC

[Evaluation of Three Sequence Engines for Use in Spacecraft Operations](#) [247]

- **Robust Analytics**

1303 Cronson Boulevard, Suite B

Crofton, MD 21114

Peter Kostiuk (410) 980-3667



19-1-A3.04-4013 LaRC

[City Air Mobility Evaluation Operations Suite](#) [248]

- **Robust Analytics**

1303 Cronson Boulevard, Suite B

Crofton, MD 21114

Peter Kostiuk (410) 980-3667

19-1-A3.01-3938 LaRC

[Operational Risk Coordination Assistant for Metroplex Arrivals](#) [249]

- **ROCCOR, LLC**

2602 Clover Basin Drive, Suite D

Longmont, CO 80503

Stephanie Amend (300) 200-0068

19-1-Z8.06-3592 MSFC

[Sail Trimming Actuator for Targeted Reentry \(STARTR\)](#) [250]

- **ROCCOR, LLC**

2602 Clover Basin Drive, Suite D

Longmont, CO 80503

Stephanie Amend (300) 200-0068

19-1-H8.01-3589 JSC

[Space Demonstration of FlexCool Thin Flat Heat Pipes](#) [251]

- **Rocket Propulsion Systems, LLC**

6127 Northeast 2nd Lane

Renton, WA 98059

Maksud Ismailov (425) 516-8677

19-1-H10.01-2792 SSC

[Injector for LOX-GH Stable Combustion at Low Pressure and High Velocity](#) [252]

- **Scientific Applications & Research Associates, Inc.**

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6300 Gateway Drive

Cypress, CA 90630

Ruth Craig (714) 224-4410

19-1-A2.02-3874 AFRC

[Acoustic Detection, Ranging and Improved Situational Awareness System](#) [253]

- **SciGlob Instruments & Services, LLC**

4656 Tall Maple Court

Ellicott City, MD 21043

Matthew Kowalewski (410) 420-7561

19-1-S1.08-3758 GSFC

[Advanced Hyperspectral Remote Sensing Radiometer for Trace Gas and Aerosol Observations](#) [254]

- **SeeQC, Inc.**

175 Clearbrook Road

Elmsford, NY 10523

John Levy (917) 660-0227

19-1-S1.04-3652 GSFC

[Two-Dimensional Cryogenic Readout for Far IR Bolometers](#) [255]

- **Sequent Logic, LLC**

1300 North 200 East, Suite 118

Logan, UT 84341

Ryan Seeley (435) 915-4425

19-1-A2.01-4144 AFRC

[Optical Sensor for High-Performance, Low-Cost Distributed Sensing Platform](#) [256]

- **SET Group, LLC**

650 North Cannon Avenue, Suite 314

Lansdale, PA 19446

Raul Alvarado (844) 738-9933

19-1-S3.03-3762 GRC

[High Density Bi-Directional Modular Power Converter with Additive Manufactured Magnetics](#) [257]

- **Silicon Space Technology Corporation**

1501 South MoPac Expressway, Suite 350

Austin, TX 78746

Ross Bannatyne (512) 550-2954

19-1-Z8.03-2466 GSFC

[Radiation-Hardened Latch-Up Monitor IC](#) [258]

- **Simultac, LLC**

1640 S Bellemeade Drive

Bloomington, IN 47401

Matthew Anderson (812) 320-4818

19-1-S5.01-3777 ARC

[Smart Memory Accelerator for Data Intensive and High Performance Computing Applications](#) [259]

- **Skyhaven Systems, LLC**

25557 Bella Vista Circle, P.O. Box 770252

Steamboat Springs, CO 80477

Michael Kimble (970) 846-0547

19-1-Z2.01-3048 JSC

[Lunar Lander PCM Heat Exchangers](#) [260]

- **Soar Technology, Inc.**

3600 Green Court, Suite 600

Ann Arbor, MI 48105

Lindsay Bayles (734) 887-7609

19-1-H6.03-2629 ARC

[Autonomous Agent Cognitive Architectures for Human Exploration](#) [261]

- **Southwest Sciences, Inc.**

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1570 Pacheco Street, Suite E-11

Santa Fe, NM 87505

Alan Stanton (505) 984-1322

19-1-S1.08-2687 ARC

[Multigas Diode Laser Instrument for Unmanned Aerial Vehicles](#) [262]

- **Southwest Sciences, Inc.**

1570 Pacheco Street, Suite E-11

Santa Fe, NM 87505

Alan Stanton (505) 984-1322

19-1-A2.01-3104 AFRC

[Imaging, Filtered Light Scattering Velocity Diagnostic](#) [263]

- **Space Hazards Applications, LLC**

1909 Arapahoe Street

Golden, CO 80401

Janet Green (720) 222-0533

19-1-S5.06-3342 GSFC

[A Tool for Defining Solar Particle Access to the Magnetosphere \(SPAM\) for Satellite Anomaly Attribution](#) [264]

- **Space Lab Technologies, LLC**

5455 Spine Road, Suite ME

Boulder, CO 80301

Christine Escobar (720) 309-8475

19-1-Z2.01-3993 JSC

[FRESR: Freezable Radiator for Efficient, Safe, and Robust Single Loop Thermal Control](#) [265]

- **Space Lab Technologies, LLC**

5455 Spine Road, Suite ME

Boulder, CO 80301

Christine Escobar (720) 309-8475

19-1-H3.02-3992 ARC

[Smart Hybrid Ultrasonic Robust Flowmeter for Waste Processor Effluent Gases](#) [266]

- **Space Micro, Inc.**

10237 Flanders Court

San Diego, CA 92121

David Strobel (858) 332-0700

19-1-H8.01-2492 LaRC

[Hosted Communications Payload to Leverage Commercial LEO Constellations](#) [267]

- **Space Tech, LLC**

111 Satula Lane

Clemson, SC 29631

Matthew Redmond (864) 624-7000

19-1-S3.06-2922 LaRC

[Pop-Up Flat Folding Habitat \(PUFF-Hab\) for Robotic Lunar Exploration](#) [268]

- **Spectral Energies, LLC**

4065 Executive Drive

Dayton, OH 45430

Sivaram Gogineni (937) 266-9570

19-1-A1.08-4064 LaRC

[High-Repetition-Rate, Narrow-Linewidth Burst-Mode Optical Parametric Oscillator for High-Speed Flow and Combustion Diagnostics](#) [269]

- **Stable Laser Systems, Inc.**

4946 63rd Street

Boulder, CO 80301

Mark Notcutt (303) 542-0427

19-1-S1.10-3981 GSFC

[Rugged, Compact Atomic Clock Laser with a Path Toward Flight Qualification](#) [270]

- **Steelhead Composites**

500 Corporate Circle, Suite O

Golden, CO 80401

Steven Arzberger (720) 933-9136

19-1-Z4.03-4154 LaRC

[Ultralightweight, All Composite Conformal Pressure Vessel](#) [271]

- **Stellar Science Ltd Co**

6565 Americas Parkway Northeast, Suite 925

Albuquerque, NM 87110

David Myers (505) 417-1919

19-1-H9.03-3622 GSFC

[Efficient Realistic Conjunction Analysis \(EReCA\)](#) [272]

- **STF Technologies, LLC**

18 Shea Way Suite 101-102

Newark, DE 19713

Richard Dombrowski (716) 799-5935

19-1-Z4.01-3401 MSFC

[MISSE Testing of Impact-Resistant, Damage-Tolerant Composites with STF Energy Absorbing Layers](#) [273]

- **Storagenergy Technologies, Inc.**

3666 West 2100 South

Salt Lake City, UT 84120

Lynn Zhang (801) 803-1303

19-1-Z1.04-3238 GRC

[All Solid State Li-S Batteries](#) [274]

- **Stratos Perception, LLC**

4385 North MacGregor Way

Houston, TX 77004

Rube Williams (713) 205-4745

19-1-Z2.01-3548 GRC

[Intelligent Two-Phase Flow Phenomena Sensor for Enhanced Thermal Management Control](#) [275]

- **Sunlite Science & Technology, Inc.**

4811 Quail Crest Place

Lawrence, KS 66049

Fong Suo (785) 393-2538

19-1-S2.01-3667 JPL

[Linear Regulators for Efficiently Driving a Deformable Mirror](#) [276]

- **SynaptiCAD Sales, Inc.**

605 Alleghany Street

Blacksburg, VA 24060

Donna Mitchell (540) 953-3390

19-1-S5.04-4181 GSFC

[Collaborative Multi-Fidelity Modeling and Architecture for Complex Systems Engineering](#) [277]

- **Systems Technology, Inc.**

13766 Hawthorne Boulevard

Hawthorne, CA 90250

Peter Gondek (310) 679-2281

19-1-A1.01-3664 AFRC

[Flexible Flight Dynamics and Control-Enhanced Aircraft Multidisciplinary Design Optimization](#) [278]

- **T.E.A.M., Inc.**

841 Park East Drive

Woonsocket, RI 02895

Aaron Tomich (401) 762-1500

19-1-Z7.03-2515 ARC

[Novel Warp Tension and Thickness Control Feedback Loop for Weaving of Thick 3D-TPS Preforms](#) [279]

- **Techshot, Inc.**

7200 Highway 150

Greenville, IN 47124

John Vellinger (812) 728-8133

19-1-H8.01-2768 JSC

[In-Space Manufacturing of Microfluidic Chips for Biological Research](#) [280]

- **TentGuild Engineering Company**

4740 Table Mesa Drive

Boulder, CO 80305

Gyula Greschik (866) 666-7761

19-1-H5.01-2900 LaRC

[Software for the Rapid Comparative Design of Solar Arrays](#) [281]

- **Tethers Unlimited, Inc.**

11711 North Creek Parkway South, Suite D113

Bothell, WA 98011

Robert Hoyt (425) 486-0100

19-1-S4.04-3523 JPL

[Gimbal Mechanism for Extreme Environments](#) [282]

- **Tethers Unlimited, Inc.**

11711 North Creek Parkway South, Suite D113

Bothell, WA 98011

Robert Hoyt (425) 486-0100

19-1-Z4.02-3856 LaRC

[HyperBus Cargo Platform](#) [283]

- **Tethers Unlimited, Inc.**

11711 North Creek Parkway South, Suite D113



Bothell, WA 98011

Robert Hoyt (425) 486-0100

19-1-Z5.05-3420 ARC

[Sensing and Positioning in Deep Environments with Retrieval \(SPIDER\)](#) [284]

- **Tethers Unlimited, Inc.**

11711 North Creek Parkway South, Suite D113

Bothell, WA 98011

Robert Hoyt (425) 486-0100

19-1-Z5.04-4459 JSC

[Versatile Hot-Swappable Robotic Interface](#) [285]

- **The ExOne Company**

127 Industry Boulevard

North Huntingdon, PA 15642

Jesse Blacker (724) 610-4778

19-1-A1.04-4350 GRC

[Binder Jet Additive Manufacturing of Silicon Carbide Heat Exchangers](#) [286]

- **The Innovation Laboratory, Inc.**

2360 Southwest Chelmsford Avenue

Portland, OR 97201

Jimmy Krozel (503) 242-1761

19-1-A3.04-2876 LaRC

[Technologies Enabling Urban Air Mobility All-Weather Vertiport Operations](#) [287]

- **The Innovation Laboratory, Inc.**

2360 Southwest Chelmsford Avenue

Portland, OR 97201

Jimmy Krozel (503) 242-1761

19-1-A3.04-2878 ARC

[On-Demand Cost Situational Awareness for Urban Air Mobility](#) [288]

- **The Peregrine Falcon Corporation**

1051 Serpentine Lane, Suite 100

Pleasanton, CA 94566

Robert Hardesty (925) 461-6800

19-1-H5.02-4010 LaRC

[Multi-Layer Metal Insulation with Aerostructure for Hot Structure](#) [289]

- **The Peregrine Falcon Corporation**

1051 Serpentine Lane, Suite 100

Pleasanton, CA 94566

Robert Hardesty (925) 461-6800

19-1-Z2.01-4062 MSFC

[Lunar Lander - Autonomous Variable Radiator](#) [290]

- **ThermAvant Technologies, LLC**

1000 Pannell Street, Suite A

Columbia, MO 65201

Joseph Boswell (573) 397-6912

19-1-A1.10-3896 GRC

[A Multifunctional Hypersonic Leading Edge with Integrated Thermal Management](#) [291]

- **Tietronix Software, Inc.**

1331 Gemini Avenue, Suite 300

Houston, TX 77058

Frank Hughes (281) 461-9300

19-1-S5.04-2788 GSFC

[Model-Based Engineering Trade Evaluation Tool Suite](#) [292]

- **Trimer Technologies, LLC**

3905 Varsity Drive

Ann Arbor, MI 48108

Henry Sodano (480) 205-1202

19-1-A1.07-4311 GRC

[Graphene Interleaves for High Strength and Toughness Composites](#) [293]

- **Twinleaf, LLC**

300 Deer Creek Drive Suite 300

Plainsboro, NJ 8536

Elizabeth Foley (609) 759-0859

19-1-S1.11-4225 JPL

[Advanced Magnetometer Components for Space and Planetary Exploration](#) [294]

- **Ultramet**

12173 Montague Street

Pacoima, CA 91331

Craig N. Ward (818) 899-0236

19-1-S4.04-3998 JPL

[Coatings for Protection against Hot Hydrogen in Solar-Thermal Propulsion](#) [295]

- **Ultramet**

12173 Montague Street

Pacoima, CA 91331

Craig N. Ward (818) 899-0236

19-1-S4.03-3996 JPL

[Design and Fabrication of a Mars Ascent Vehicle Reaction Control System](#) [296]

- **Ultrasonic Technology Solutions**

12649 Bayview Drive

Knoxville, TN 37922

Ayyoub M. Momen (352) 870-3714

19-1-H3.02-2796 ARC

[Ultra-Efficient Ultrasonic Drying for Spacecraft Solid Waste](#) [297]

- **UMPQUA Research Company**

P.O. Box 609

Myrtle Creek, OR 97457

Tracy Everett (541) 863-2655

19-1-H3.02-3285 ARC

[Graded Temperature Fecal Dryer-Densifier](#) [298]

- **UMPQUA Research Company**

P.O. Box 609

Myrtle Creek, OR 97457

Tracy Everett (541) 863-2655

19-1-H3.03-4124 JPL

[Halogen Binding Resins for Potable Water Disinfection](#) [299]

- **University Technical Services, Inc.**

6411 Ivy Lane, Suite 108

Greenbelt, MD 20770

John McKinley (301) 345-3797

19-1-A3.04-3836 ARC

[Ground based Ultrawideband Multistatic Positioning System for VTOL Guidance and GPS Integrity Monitoring](#) [300]

- **Urbineer, Inc.**

1855 Industrial Street, Unit 703

Los Angeles, CA 90021

Stuart Marshall (202) 997-3499

19-1-A1.06-4281 LaRC

[Composite Crash Attenuators for UAM Vehicle Crashworthiness](#) [301]

- **US Hybrid Corporation**

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445 Maple Avenue

Torrance, CA 90503

Abas Goodarzi (310) 212-1200

19-1-A1.04-3812 GRC

[Robust, Compact, and Low-Maintenance Magnetic Gear System](#) [302]

- **Vestigo Aerospace LLC**

5373 Gardenia Court

West Lafayette, IN 47906

David Spencer (770) 331-2340

19-1-Z8.06-2483 MSFC

[Aerodynamically Stable DragSails for Spacecraft Deorbit](#) [303]

- **Virginia Diodes, Inc.**

979 Second Street, Southeast

Charlottesville, VA 22902

Thomas Crowe (434) 297-3257

19-1-S1.02-3256 JPL

[G-Band Solid State Power Amplifier for Remote Sensing Radars](#) [304]

- **Voxel Innovations**

3420 Tarheel Drive, Suite 300

Raleigh, NC 27609

Daniel Herrington (336) 414-7825

19-1-Z3.01-3103 MSFC

[Processing of Bulk Metallic Glass by Pulsed Electrochemical Machining](#) [305]

- **Voxtel, Inc.**

15985 Northwest Schendel Avenue, Suite 200

Beaverton, OR 97006

Debra Ozuna (971) 223-5646

19-1-H9.01-4143 JPL

[Geiger-Mode Avalanche Detector Array for Optical Communications](#) [306]

- **Voxtel, Inc.**

15985 Northwest Schendel Avenue, Suite 200

Beaverton, OR 97006

Debra Ozuna (971) 223-5646

19-1-S2.03-3536 LaRC

[Compact High-Degrees-of-Freedom Freeform Beam-Expander Optics](#) [307]

- **Warrant Technologies, LLC**

115 North College Avenue, Suite 111

Bloomington, IN 47404

Mike Norris (812) 361-6721

19-1-H6.22-4121 GRC

[Neuroevolution of Electronic Liquid State Machines](#) [308]

- **Warwick Machine & Tool Company, Inc.**

1917 Mcfarland Drive

Landisville, PA 17538

Rebecca Shank (717) 413-9051

19-1-S3.06-3922 GSFC

[Water Azeotrope Working Fluids for Advanced Spacecraft Thermal Management](#) [309]

- **Windhover Labs**

2115 Castle Drive

League City, TX 77573

Mathew Benson (832) 640-4018

19-1-A2.02-4236 ARC

[Integrated Development Environment for Core Flight Software Based Projects](#) [310]

- **X-wave Innovations, Inc.**

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Jennifer Duan (301) 200-8368

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- **X-wave Innovations, Inc.**

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- **XAnalytix Systems**

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Clarence Center, NY 14032

Pamela Crassidis (716) 741-6395

19-1-S3.04-3753 GSFC

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- **XSB, Inc.**

21 Bennetts Road, Suite 100

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Daria Mathew (631) 371-8102

19-1-H6.04-3666 ARC

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- **Zero-G Horizons Technologies, LLC**

158 Deep Woods Way

Ormond Beach, FL 32174

Sathya Gangadharan (386) 212-3412

19-1-H8.01-3572 JSC

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- **Zeteo Tech, Inc.**

6935 Warfield Avenue

Sykesville, MD 21784

Charles Call (505) 459-2156

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