Proposals Selected for Negotiation of Contracts

- **Arizona State University-Polytechnic**
  P.O. Box 876011
  Tempe, AZ 85287

  **Alphacore, Inc.**
  304 South Rockford Drive
  Tempe, AZ 85281
  Esko Mikkola (480) 494-5618
  22-1-T4.01-2229 ARC


- **Arizona State University-Tempe**
  University Drive and Mill Avenue
  Tempe, AZ 85281

  **Alphacore, Inc.**
  304 South Rockford Drive
  Tempe, AZ 85281
  Esko Mikkola (480) 494-5618
  22-1-T13.01-2230 SSC


- **Board of Trustees of the University of Illinois (at Urbana-Champaign)**
  3400 North Charles Street
  Champaign, IL 61820

  **Physical Sciences, Inc.**
  20 New England Business Center
Andover, MA 01810
William Marinelli (978) 738-8226
22-1-T5.04-1819 GRC
Photonic Integrated Circuit Assisted Single Photon Detectors (PIQA SPDs) [3]

- Board of Trustees of the University of Illinois (at Urbana-Champaign)
  3400 North Charles Street
  Champaign, IL 61820

  Ten One Aerospace LLC
  1012 10th Street NorthEast
  Washington, DC 20002
  Christopher Roscoe (202) 964-3668
  22-1-T10.03-1349 JPL

- Cal Poly Corporation
  500 Lincoln Drive
  San Luis Obispo, CA 93407

  Empirical Systems Aerospace, Inc.
  3580 Sueldo Street
  San Luis Obispo, CA 93401
  Andrew Gibson (805) 704-1865
  22-1-T15.04-1855 AFRC
  Wind Tunnel and Flight Testing of Scalable Modular Aerial Research Testbed [5]

- Carnegie Mellon University
  5000 Forbes Avenue
  Pittsburgh, PA 15213

  Astrobotic Technology, Inc.
  1016 North Lincoln Avenue
Pittsburgh, PA 15233
Andrew Horchler (216) 272-3882
22-1-T10.03-2033 JPL

Efficient Distributed State Estimation for Swarm Robotics [6]

- Carnegie Mellon University
  5000 Forbes Avenue
  Pittsburgh, PA 15213

  Nokomis, Inc.
  310 5th Street
  Charleroi, PA 15022
  Thomas Ruschel (724) 747-0703
  22-1-T10.04-1383 ARC

  Hiawatha Spacecraft Autonomous System Health (SASH) Management System [7]

- Duke University
  103 Allen Building
  Durham, NC 27708

  Nanohmics, Inc.
  6201 East Oltorf Street, Suite 400
  Austin, TX 78741
  Mike Mayo (512) 389-9990
  22-1-T10.04-1898 ARC

  Demonstration of Space-Qualified Environmental Evaluation Drones with Wireless Intelligent Networked Data Processing (SPEEDWINDs) [8]

- Embry-Riddle Aeronautical University-Daytona Beach
  600 S Clyde Morris Boulevard
  Daytona Beach, FL

  Wayfarer Aircraft Research and Development
  8505 Rockledge Road
La Mesa, CA 91941
Byron Ward (619) 841-2359
22-1-T15.04-1048 AFRC

Integrated High Lift Propulsor [9]

- Florida Institute of Technology
  150 West University Boulevard
  Melbourne, FL

NYRAD, Inc
274 East Eau Gallie Boulevard, Suite 140
Indian Harbour Beach , FL 32938
Rhonda Lyons (321) 482-4944
22-1-T10.05-2368 LaRC

The Exploration Medical Ecosystem Design Infrastructure (ExMEDI): system to build trust within Cyber-Physical-Human (CPH) teams. [10]

- Georgia Tech Research Corporation (GTRC)
  5303
  Atlanta, GA 30318

Physical Sciences, Inc.
20 New England Business Center
Andover, MA 01810
William Marinelli (978) 738-8226
22-1-T8.07-1822 GSFC


- Iowa State University
  4000 Central Florida Boulevard
  Ames, IA

Elder Research, Inc.
300 West Main Street, Suite 301
Charlottesville, VA 22903

William Goodrum (434) 973-7673

22-1-T10.05-1152 LaRC

Uncertainty Quantification of Representations of Unknown Dynamic Systems through Universal Differential Equations [12]

• Johns Hopkins University

3400 North Charles Street

Baltimore, MD

sci_zone

17133 Inavale

Holland, MI 49424

Andrew Santangelo (505) 205-8315

22-1-T10.04-1854 ARC


• Michigan Technological University

103 Allen Building

Houghton, MI

Lunar Outpost, Inc.

17700 South Golden Road, Unit 102

Golden, CO 80401

Justin Cyrus (908) 577-4014

22-1-T7.04-2186 KSC


• Michigan Technological University

103 Allen Building

Houghton, MI

MTRI, Inc.

3600 Green Court, Suite 100
Ann Arbor, MI 48105
Gregory Leonard (734) 913-6871
22-1-T10.03-1993 JPL

**Tool for Autonomous Terrain Exploration of Remote Space** [15]

- **New York Institute of Technology**
  One Grand Avenue
  Old Westbury, NY

  **X-wave Innovations, Inc.**
  555 Quince Orchard Road, Suite 510
  Gaithersburg, MD 20878
  Jennifer Duan (301) 200-8368
  22-1-T13.01-2449 SSC

  **A Wireless, Thin-Film Surface Acoustic Wave (SAW) Sensor System for Rocket Propulsion Test Applications** [16]

- **New York University**
  70 Washington Square South
  New York, NY

  **Air Company Holdings Inc**
  407 Johnson Avenue
  Brooklyn, NY 11206
  Stafford Sheehan (774) 644-4320
  22-1-T7.05-1301 GRC

  **Single-step production of kerosene-based fuels from carbon dioxide and hydrogen** [17]

- **New York University**
  70 Washington Square South
  New York, NY

  **Space Villages Inc.**
  1044 Alderbrook Lane
San Jose, CA 95129

Adolfo Nemirovsky (408) 772-8063

22-1-T11.06-2171 JSC

Hyperrealistic, precise position, multi-astronaut training with XR Redirected Walking [18]

• North Carolina State University at Raleigh

2701 Sullivan Drive

Raleigh, NC 27695

Paragon Space Development Corporation

3481 East Michigan Street

Tucson, AZ 85714

Joel Johnson (520) 382-4854

22-1-T6.08-1881 JSC

Spacesuit Cover against the Abrasive Lunar Environment (SCALE) & eXploration Textile for high Oxygen eNvironments (xTON) [19]

• Oakwood University

7000 Adventist Boulevard NorthWest

Huntsville, AL

SSS Optical Technologies, LLC

515 Sparkman Drive, Suite 122

Huntsville, AL 35816

Sergey Sarkisov (256) 489-0081

22-1-T5.05-2115 MSFC

UV stable coating for sail-embedded PV power [20]

• Ohio State University-Main Campus

190 N. Oval Mall

Columbus, OH

Srico, Inc.

2724 Sawbury Boulevard
Columbus, OH 43235
Andrea Pollick (614) 799-0664
22-1-T5.04-1093 GSFC

[Compact Temperature Tolerant Quantum Entangled Light Source][21]

- Purdue University - Main Campus
  155 South Grant Street
  West Lafayette, IN 47907

  AnalySwift
  444 Jennings Street
  West Lafayette, IN 47906
  Allan Wood (801) 599-5879
  22-1-T12.07-1417 LaRC

  [Tool for Thermomechanical Design of Tailorable Composites and Hybrid Material Systems][22]

- Rector & Visitors of the University of Virginia
  PO Box 400195
  Charlottesville, VA 22904

  Innosense, LLC
  2531 West 237th Street, Suite 127
  Torrance, CA 90505
  Kisholoy Goswami (310) 530-2011
  22-1-T14.01-1651 GRC

  [Nanomaterials Based in situ Hydrogen Sensor for Oxygen Process Streams][23]

- Regents of the University of Colorado
  3100 Marine Street
  Boulder, CO 80303

  Opterus Research and Development, Inc.
  815 14th Street SouthWest, Suite C200

[21] Compact Temperature Tolerant Quantum Entangled Light Source
[22] Tool for Thermomechanical Design of Tailorable Composites and Hybrid Material Systems
[23] Nanomaterials Based in situ Hydrogen Sensor for Oxygen Process Streams
Loveland, CO 80537
Thomas Murphey (505) 250-3006
22-1-T5.05-2204 MSFC

**Solar Sail Tubular Mast** [24]

- **Rochester Institute of Technology**
  1 Lomb Memorial Drive
  Rochester, NY 14623

  **Aktiwave**
  150 Lucius Gordon Drive
  West Henrietta, NY 14586
  Christophe Dorrer (585) 355-2706
  22-1-T8.07-1782 GRC

  **Femtosecond Laser Inscription of 3D Waveguide Beam Splitters and Integrated Photonic Circuits for Mid-IR sensing** [25]

- **Texas A&M Engineering Experiment Station**
  7607 Eastmark Drive
  College Station, TX 77840

  **TRACLabs, Inc.**
  100 Northeast Interstate 410 Loop #520
  San Antonio, TX 78216
  David Kortenkamp (281) 461-7886
  22-1-T10.04-2569 ARC

  **Multi-Agent Anomaly Resolution System (MaARS)** [26]

- **Texas State University**
  601 University Drive
  San Marcos, TX 78666

  **Nanohmics, Inc.**
  6201 East Oltorf Street, Suite 400
Austin, TX 78741
Mike Mayo (512) 389-9990
22-1-T5.05-2038 MSFC
Solar Sail Integrated Antenna Technology [27]

- The Pennsylvania State University
  110 Technology Building
  University Park, PA 16802

Blue Ridge Research and Consulting
29 North Market Street, Suite 700
Asheville, NC 28801
Josh Mellon (828) 252-2209
22-1-T15.04-1263 AFRC
Full-Scale eVTOL Acoustic Measurements, Modeling, Scaling, and Validation [28]

- The University of California San Diego
  9500 Gilman Drive, Mail Code 0934
  La Jolla, CA 92093

ADVR, Inc.
2310 University Way, Building 1-1
Bozeman, MT 59715
Betsy Heckel (406) 522-0388
22-1-T8.06-1605 GSFC
High brightness, waveguide-based IR quantum light sources [29]

- The University of Central Florida Board of Trustees
  70 Washington Square South
  Orlando, FL 32826

Cislune Company
301 North Almansor Street
Alhambra, CA 91801
Erik Franks (661) 390-1060
22-1-T7.04-1066 KSC

**Cislune Regolith Pathways and Landing Pads** [30]

- **The University of Texas at Austin**
  110 Inner Campus Drive
  Austin, TX

  **Omega Optics, Inc.**
  8500 Shoal Creek Boulevard, Building 4, Suite 200
  Austin, TX 78757

  Gloria Chen (512) 996-8833
  22-1-T8.07-2594 GSFC

  **Highly Efficient Atmospheric Gases Detections Using Integrated Vertical Crystal Waveguide Arrays** [31]

- **The University of Texas at San Antonio**
  1644
  San Antonio, TX 78249

  **Astroport Space Technologies, Inc.**
  110 East Houston Street, 7th Floor
  San Antonio, TX 78205

  Sam Ximenes (210) 404-2981
  22-1-T7.04-1851 KSC

  **Lunar Surface Site Preparation for Landing/Launch Pad and Blast Shield Construction** [32]

- **University of California - Davis**
  1850 Research Park Drive, Suite 300
  Davis, CA 95618

  **TRACLabs, Inc.**
  100 Northeast Interstate 410 Loop #520
  San Antonio, TX 78216
David Kortenkamp (281) 461-7886
22-1-T4.01-1828 ARC

ROM3SA: Improved Situational Awareness for Remotely Operating Versatile Semi-Autonomous Robot Systems [33]

- University of California - Santa Barbara
  7000 Adventist Boulevard NorthWest
  Santa Barbara, CA 93106

Systems & Processes Engineering Corporation
4120 Commercial Center Drive, Suite 500
Austin, TX 78744
Natalie Welp (512) 691-8171
22-1-T5.04-2446 GRC
Diamond Quantum Memory [34]

- University of Central Florida
  4000 Central Florida Boulevard
  Orlando, FL

Buendea, LLC.
24 Sw 22nd Road
Miami, FL 33129
Julian Reyes (305) 510-7868
22-1-T11.06-2113 JSC
Real-Time and Cloud-based Simulation Processing for Digital Twin Environments [35]

- University of Colorado Boulder
  OCG, 3100 Marine Street, Room 481, 572 UCB
  Boulder, CO 80303

Diamond Age Technology LLC
15714, Crestbrook Drive
Houston, TX 77059
John Blackwell (512) 470-2817
22-1-T11.06-1681 GSFC

Hyper-realistic Elastically Computed Topologies in Adaptive Reality Environments (HECTARE) [36]

- **University of Colorado Boulder**
  70 Washington Square South
  Boulder, CO 80309

  **Aurora Engineering**
  4 Redbud Court
  Potomac, MD 20854
  Alexander Barrie (814) 441-6410
  22-1-T10.05-2150 GSFC

  Module for Event Driven Operations on Spacecraft (MEDOS) [37]

- **University of Dayton Research Institute**
  300 College Park
  Dayton, OH 45469

  **Orbit Logic, Inc.**
  7852 Walker Drive
  Greenbelt, MD 20770
  Ella Herz (301) 982-6234
  22-1-T4.01-1810 ARC

  Microgravity Environment Autonomy for Robotic Spacecraft (MEARS) [38]

- **University of Dayton Research Institute**
  300 College Park
  Dayton, OH 45469

  **CFD Research Corporation**
  6820 Moquin Drive NorthWest
  Huntsville, AL 35806
  Silvia Harvey (256) 715-6918
22-1-T12.07-1523 LaRC

Design and Optimization Toolkit for Advanced Tailorable Composites [39]

- University of Delaware
  Northern Boulevard
  Newark, DE 19716

Intact Solutions
  345 West Washington Avenue Suite 301
  Madison, WI 53703
  Mary Freytag (608) 469-7292
  22-1-T12.07-1654 LaRC

Intact Fiber: An Application Programming Interface for the Design, Simulation, and Optimization of Tow-Steered Composites [40]

- University of Delaware
  Northern Boulevard
  Newark, DE 19716

STF Technologies, LLC
  18 Shea Way Suite 101-102
  Newark, DE 19713
  Richard Dombrowski (716) 799-5935
  22-1-T6.08-1716 JSC

Multi-Functional Environmental Protection Garment Shell Textile for Extreme Surface Environments [41]

- University of Delaware
  Northern Boulevard
  Newark, DE 19716

Phase Sensitive Innovations, Inc.
  116 Sandy Drive
  Newark, DE 19713
  Ahmed Sharkawy (302) 898-5544
22-1-T8.07-2014 GRC

Electro-Optic Photonic Integrated Circuits in Thin Lithium Niobate [42]

- **University of Florida**
  600 S Clyde Morris Boulevard
  Gainesville, FL 32611

  **Interdisciplinary Consulting Corporation**
  5745 Southwest 75th Street, #364
  Gainesville, FL 32608
  Deontae Lafayette (407) 697-3697

22-1-T13.01-1499 SSC

WIRA - Wireless Instrumentation for Rocket Applications [43]

- **University of Houston**
  212 E. Cullen Building
  Houston, TX

  **Tietronix Software, Inc.**
  1331 Gemini Avenue, Suite 300
  Houston, TX 77058
  Sicilia Liranzo (832) 557-1170

22-1-T11.06-2398 JSC

Shared immersive XR Hyper-Realistic Environment for Extravehicular Activity Surface Operations [44]

- **University of North Texas**
  1155 Union Circle #305250
  Denton, TX 76203

  **L'Garde, Inc.**
  15181 Woodlawn Avenue
  Tustin, CA 92780
  Larry Beebe (714) 259-0771
Design Tool for Highly Accurate Shape and Structural Evaluation of Space Antennas and Structures made with Tailorable Composites - SMART [45]

- **University of Notre Dame**
  400 Main Building
  Notre Dame, IN
  
  **Gossamer Space**
  116 Beth Drive
  Lansdale, PA 19446
  Charles West (828) 582-9051
  22-1-T5.05-1029 MSFC

  Testing and Characterization of A Graphene/Polyethylene Nanocomposite for Solar Sail Applications [46]

- **University of Southern California**
  3720 South Flower Street, 3rd Floor
  Los Angeles, CA 90089

  **Contour Crafting Corporation**
  215 South Douglas Street
  El Segundo, CA 90245
  Behrokh Khoshnevis (310) 430-5255
  22-1-T7.04-1162 KSC

  Novel Payload Conveyance System - Demonstration in Planetary Berm Construction [47]

- **University of Washington**
  4333 Brooklyn Avenue Northeast, Box 359472
  Seattle, WA 98195

  **CFD Research Corporation**
  6820 Moquin Drive NorthWest
  Huntsville, AL 35806
  Silvia Harvey (256) 715-6918
22-1-T8.07-1524 GSFC

Programmable Photonic Integrated Circuits (PICs) for Radio Frequency (RF) applications [48]

• University of Wisconsin-Madison

500 Lincoln Drive

Madison, WI

Protoinnovations, LLC

100 43rd Street

Pittsburgh, PA 15201

Dimitrios Apostolopoulos (412) 916-8807

22-1-T4.01-2647 ARC

A Software Framework for Advancing Perception Capabilities for Rovers Operating in Harsh Lunar Environments [49]

• Utah State University

1415 Old Main Hill, Room 64

Logan, UT 84322

Nexolve Holding Company, LLC

290 Dunlop Boulevard, Southwest, Suite 200

Huntsville, AL 35824

Paul DuPre (256) 836-7785

22-1-T5.05-1391 MSFC

Embedded Sail Antenna Technology [50]

• Virginia Polytechnic Institute and State University

300 Turner Street Northwest, Suite 4200

Blacksburg, VA 24061

Nanosonic, Inc.

158 Wheatland Drive

Pembroke, VA 24136

Amanda Moye (540) 626-6266
NanoLayered Extruded Textiles for Extreme Surface Environments and High Oxygen Atmospheres

Virginia Polytechnic Institute and State University
300 Turner Street Northwest, Suite 4200
Blacksburg, VA 24061

Nanosonic, Inc.
158 Wheatland Drive
Pembroke, VA 24136
Amanda Moye (540) 626-6266
22-1-T12.07-1475 LaRC

Design Tools for Lightweight Affordable Hybrid Space Exploration Cryotanks

Virginia Tech
345 Goodwin Hall
Blacksburg, VA 24061

M4 Engineering, Inc.
4020 Long Beach Boulevard
Long Beach, CA 90807
Kevin Roughen (562) 981-7797
22-1-T12.07-2715 LaRC

Topology Optimization for Design of Highly Tailored Composites for AFP Manufacturing