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The Nation's Premier Laboratory for Land Forces

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ARMY Small Business Technology Transfer Program (STTR)

Army STTR Program Office
M. John Smith – Program Manager
Army Research Laboratory (ARL) / Army Research Office (ARO)
Research Triangle Park, NC

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The statutory purpose of the STTR Program...

Stimulate a partnership between innovative Small Business Concerns (SBCs) and Research Institutions (RIs) through Federally-funded research and development.

Create opportunities to move ideas to market; enable researchers to pursue commercial application of technologies; bridge funding gap between basic research and commercial product.

Requires each federal agency with an extramural R&D budget >$1B to set-aside 0.45%.

Army STTR FY17 Budget = $28M, FY18 Budget = $35M.
**STTR Eligibility Criteria**

**Applicant is U.S.-owned Small Business Concern**

- **Formal Cooperative R&D Effort**
  - Minimum 40% by small business
  - Minimum 30% by U.S. research institution
  - Agencies do not broker/arrange these relationships

**U.S. Research Institution**
- College or university; other non-profit research organization; Federal R&D center

**Intellectual Property Agreement**
- Allocation of rights in IP and rights to carry out follow-on R&D and commercialization

**Award is always made to Small Business Concern (SBC)**
Federal and DoD STTR Programs

Federal SBIR + STTR Programs
- Dept. of Defense
- Dept. of Health and Human Services
- Dept. of Energy
- National Aeronautics and Space Administration
- National Science Foundation

DoD STTR Programs
- Army
- Air Force
- Navy
- Missile Defense Agency
- Assistant Secretary of Defense (Research & Engineering)
- Defense Advanced Research Projects Agency
- Defense Health Program
- Joint Science & Technology Office CBD
Army STTR
Small Business Technology Transfer

**Topics**

A Technology Requirement
Written by Army Scientists & Engineers across Army Labs, and R&D Centers in response to Soldiers’ Needs

**Phase I**

Product: Feasibility Study
A short term effort to determine viability of a topic solution
(6 months, $150K)
150-200 proposals received, ~50 PhI awards (~20% rate)

**Phase II**

Product: Prototype
Creation of a prototype to validate & mature the topic solution
(2 years, $1.0M)
~50% PhIs Awarded PhI
Contracts = 25 Ph2s (10% rate)

**Phase III**

Transition
Non-SBIR Funds
• Government
• Industry

**Soldier Critical Needs**
R&D / Innovation / New Capability
Army Modernization Priorities
Army Futures Command (AFC) Priorities

**Soldier Solutions**
Increased Operational Capabilities
Army Program of Record
MDAPs (ACAT I-IV) Integration
Commercial Applications

**2nd Phase II**

“Sequential” Ph2 ($1.0M) Bridges TRL 3-4 of 1st Ph2 to TRL 5-7 in 2nd Ph2; Limited Funding Avail;
Strongest Transition 1st Ph2 Candidates Selected (~25% of active Ph2s)
5-8 Ph2s

**Input from Field**

**Output to Field**

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STTR Budget & Topics
## Army STTR History

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<td><strong>Budget ($M)</strong></td>
<td>$31.8</td>
<td>$29.3</td>
<td>$24.9</td>
<td>$24.7</td>
<td>$20.2</td>
<td>$22.8</td>
<td>$20.9</td>
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<td><strong># Topics</strong></td>
<td>30</td>
<td>29</td>
<td>34</td>
<td>30</td>
<td>21</td>
<td>18</td>
<td>18</td>
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<tr>
<td><strong># Phase I Proposals Received</strong></td>
<td>448</td>
<td>446</td>
<td>477</td>
<td>425</td>
<td>407</td>
<td>191</td>
<td>152</td>
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<td><strong># Phase I Contracts</strong></td>
<td>45</td>
<td>57</td>
<td>60</td>
<td>56</td>
<td>21</td>
<td>38</td>
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<td><strong># Phase II Contracts</strong></td>
<td>22</td>
<td>29</td>
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<td>20</td>
<td>18</td>
<td>15</td>
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</table>
Dates established by OSD Office of Small Business Programs; not all DoD Components participate in each announcement.

A DoD Broad Agency Announcement (BAA) includes:
- DoD Instructions
- Service/Component-specific Instructions, esp PAGE COUNT!

Army STTR participates each year in the XX.B cycle:

<table>
<thead>
<tr>
<th>Solicitation Schedule</th>
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<tbody>
<tr>
<td>Solicitation</td>
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<tr>
<td>SBIR 18.2 &amp; STTR 18.B</td>
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<tr>
<td>SBIR 19.1 &amp; STTR 19.A</td>
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</table>

NEW! DoD SBIR/STTR Closing Times for all Announcements is 8:00pm Eastern Time
STTR Topics

Topics written by DoD Component representatives

Finding Topics

- Federal: www.fedbizopps.gov
"Typical Year"

- $28M (FY17)
- 1 Solicitation per year (18B BAA Cycle)
- 25 Topics
- Phase I: Qty 50, max $150K, 6 months ea.
- Phase II: Qty 25, max $1M, 2 years ea.
- 73 Businesses
- 58 University/RI
- NO CRP (Commercialization Readiness Program) $500K
- NO Phase II Enhancement, $500K
- However! “Sequential” (Follow-on Ph2) $1.0M Potential
  - Bridges TRL “Valley of Death”
  - Available to Limited, but Most Promising Ph2 STTRs
- Technical Assistance Advocates (TAAs)
FY11-17 Average Annual Outlays

Small Business ($14.5M)
University ($7.4M)
FFRDC ($0.4M)
Other ($0.3M)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Individual University or College*</th>
<th>Funding</th>
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<tbody>
<tr>
<td>1</td>
<td>North Carolina State University</td>
<td>$1,731,486</td>
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<tr>
<td>2</td>
<td>University of Virginia</td>
<td>$1,251,479</td>
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<tr>
<td>3</td>
<td>University of Dayton</td>
<td>$1,075,693</td>
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<td>4</td>
<td>University of Wisconsin</td>
<td>$ 974,137</td>
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<td>5</td>
<td>University of Delaware</td>
<td>$ 934,910</td>
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<td>6</td>
<td>Rensselaer Polytechnic Institute</td>
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<td>7</td>
<td>University of New Mexico</td>
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<td>8</td>
<td>University of Alabama</td>
<td>$ 846,132</td>
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<td>9</td>
<td>Northwestern University</td>
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<td>10</td>
<td>Auburn University</td>
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<td>11</td>
<td>University of Arizona</td>
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<td>University of North Carolina</td>
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<td>Georgia Institute of Technology</td>
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<td>Illinois Institute of Technology</td>
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<td>Texas A&amp;M</td>
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<td>University of Colorado</td>
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<td>New York University</td>
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<td>20</td>
<td>University of Pittsburgh</td>
<td>$ 518,995</td>
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* Individual campus data not aggregated

The Nation’s Premier Laboratory for Land Forces
Technology Investment Areas
Top Investments
1. Sensors, Electronics, & Electronic Warfare
2. Materials/Processes
3. Chemical Biological Defense
4. Biomedical
5. Information Systems Technology
• Long Range Precision Fires
• Next Generation Combat Vehicle
• Future Vertical Lift
• Network/C3I
• Air and Missile Defense
• Soldier Lethality

Also, HQ Army Futures Command (AFC) standup, Summer 2018
The Nation’s Premier Laboratory for Land Forces

- Technology Transition Specialists
- Strategically located at Labs/Centers/PEOs
<table>
<thead>
<tr>
<th>Name</th>
<th>TAA Support</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glenn Weaver</td>
<td>TAA Lead</td>
<td>443-275-9228</td>
<td><a href="mailto:glenn.w.weaver.ctr@mail.mil">glenn.w.weaver.ctr@mail.mil</a></td>
</tr>
<tr>
<td>LaVonda Blount</td>
<td>CERDEC, ATEC, PEO-C3T/EIS/IEW&amp;S Sensors, C4ISR</td>
<td>443-861-7678</td>
<td><a href="mailto:lavonda.m.blount.ctr@mail.mil">lavonda.m.blount.ctr@mail.mil</a></td>
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<tr>
<td>Erich Lehnert</td>
<td>MRMC, DHA Medical / Biotechnology</td>
<td>301-619-7406</td>
<td><a href="mailto:erich.k.lehnert.ctr@mail.mil">erich.k.lehnert.ctr@mail.mil</a></td>
</tr>
<tr>
<td>Frederick Waibel</td>
<td>ARDEC / PEO Ammunition</td>
<td>973-724-2873</td>
<td><a href="mailto:Frederick.e.waibel.ctr@mail.mil">Frederick.e.waibel.ctr@mail.mil</a></td>
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<tr>
<td>Darby Moore</td>
<td>AMRDEC (A) / PEO Aviation</td>
<td>256-842-1094</td>
<td><a href="mailto:Darby.p.moore.ctr@mail.mil">Darby.p.moore.ctr@mail.mil</a></td>
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<tr>
<td>Stephen Douglas</td>
<td>NSRDEC/PEO Soldier</td>
<td>508-233-6984</td>
<td><a href="mailto:Stephen.b.douglas2.ctr@mail.mil">Stephen.b.douglas2.ctr@mail.mil</a></td>
</tr>
<tr>
<td>Richard Garland</td>
<td>AMRDEC (M) / PEO Missiles and Space</td>
<td>256-313-8542</td>
<td><a href="mailto:Richard.d.garland.ctr@mail.mil">Richard.d.garland.ctr@mail.mil</a></td>
</tr>
<tr>
<td>Randy Bartley</td>
<td>JPEO-CBD/ECBC/ERDC Chem, Biodefense, Environment</td>
<td>443-345-8248</td>
<td><a href="mailto:Randall.l.bartley.ctr@mail.mil">Randall.l.bartley.ctr@mail.mil</a></td>
</tr>
<tr>
<td>Mike Piatak</td>
<td>TARDEC, Tank and Automotive</td>
<td>586-282-2067</td>
<td><a href="mailto:michael.a.piatak.ctr@mail.mil">michael.a.piatak.ctr@mail.mil</a></td>
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<tr>
<td>Jeff Widder</td>
<td>Army Research Laboratory (ARL), ARO, STTC Basic/Applied Research, Simulation &amp; Training</td>
<td>301-394-0709</td>
<td><a href="mailto:jeffrey.m.widder.ctr@mail.mil">jeffrey.m.widder.ctr@mail.mil</a></td>
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Army STTR Program Office
Email: usarmy.rtp.rdecom-aro.mbx.sttr-pmo@mail.mil

Army SBIR-STTR Program Information & Solicitation Schedules
www.armysbir.army.mil

DoD SBIR/STTR Small Business Portal:
https://sbir.defensebusiness.org

U.S. Small Business Administration (SBA) SBIR/STTR Program:
www.sbir.gov

SBIR/STTR Gateway (Non-Govt Administered Website)
http://www.zynsys.com/sbir/
Open Campus Initiative

Started in FY14 to link ARL with the global research community; partners and ARL S&Es working side-by-side in research facilities.

Collaborations focused on Army-specific challenges of mutual importance to all partners

Partners from Army, Industry and Academia engage in research with shared access to people, infrastructure and resources

Expanded S&T Research Ecosystem

ARL Open Campus is “a role model to the broader defense research enterprise”

- Defense Science Board (DSB) Task Force on Defense Research Enterprise Assessment, January 2017

Army Benefits as of February 2018:

$38.7M in-kind research

$82M in-kind research since Open Campus start

138 Active CRADAs

61 CRADAs with Academia

77 CRADAs with Industry

342 CRADAs projects

163 CRADAs projects in negotiation

700 visiting researchers

80 visiting researchers from 22 different nations

Successful pilot at ARL-Adelphi, Moving to implement at APG
How can you engage in ARL’s Open Campus?

  - Review collaboration opportunities and ARL Facilities
  - Start a dialog with ARL researcher
  - If appropriate, develop joint statement of work within CRADA
  - Army Science Planning & Strategy
  - ARL Technical Strategy 2015-2035
  - Research@ARL
  - ARL Facilities
- Open Campus Open House