

## Secure and Trustworthy Cyberspace Program (SaTC) at NSF

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## In Today's Networked, Distributed, and Asynchronous World



cybersecurity involves hardware, software, networks, data, people, and integration with the physical world



## Society's Overwhelming Reliance on this Complex Cyberspace has exposed its Fragility and Vulnerabilities



A truly secure cyberspace requires addressing both scientific and engineering problems and vulnerabilities that arise from human behaviors



SaTC (Secure and Trustworthy Cyberspace) is NSF's flagship research program that approaches security and privacy as a multidisciplinary subject to find fundamentally new ways to design, build and operate cyber systems, protect existing infrastructure, and motivate and educate individuals about cybersecurity.



## SaTC Spans Across Five NSF Directorates



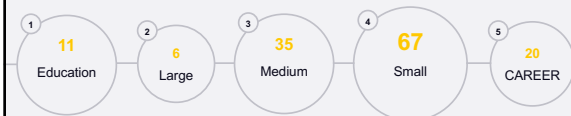
## SaTC: Broad Range of Topics in Cybersecurity



additional details on topics can be found in the most recent SaTC solicitation



## 2017 SaTC Program: 139 Awards






### SaTC

- **Small**  
up to \$500K over 3 years
- **Medium**  
up to \$1.2M over 4 years
- **Large & Frontier**  
Large up to \$3M over 5 years; Frontier up to \$10M over 5 years
- **Education**  
up to \$500K over 3 years



### Small

- “Let a thousand flowers bloom”
- Small awards for high risk, high reward exploratory efforts, often by single principle investigators
- Approximately 60 projects awarded per year
- Most competitive category and highly prestigious




### Medium

- Medium awards are multi-investigator efforts in areas of special concern where NSF investment can make an impact
- Approximately 20 projects awarded per year



### Large & Frontier

- Large and Frontier awards are the biggest investments in the SaTC portfolio
- Topic areas where SaTC wants to move the needle
- Approximately 2-3 awards per year




### Education

- Workforce development is a critical issue with a shortage of 1.5 million professionals in the cybersecurity field by 2020
- Leverage successful results from research in cybersecurity and research on student learning to address the challenge of expanding existing educational opportunities and resources in cybersecurity



### Other Opportunities

- TTP (in conjunction with Small/Medium)
- CRII and early CAREER awards
- Partnerships with industry, such as Intel and STARSS
- International collaborations with Israel, Netherlands, and Brazil
- EAGERs
- Dear Colleague Letters (DCLs)



### 2018 SaTC Solicitation – Major Changes over Previous Solicitations

- No Large/Frontier competition
- No deadlines – proposals accepted as of October 1, 2018
- Limit on number of proposals per PI/Co-PI for period of October 1, 2018 – September 30, 2019:
  - 1 Small/Medium
  - 1 TTP
  - 1 EDU
- BPC Plan

For details see solicitation:  
<https://www.nsf.gov/pubs/2018/nsf18572/nsf18572.htm>



### Broadening Participation in Computing (BPC)

“It will take more than good intentions or business as usual, however, to reverse longstanding underrepresentation. ~~It will take committed, focused, and sustained efforts on the part of many in the computing community.~~”

**ALMOST  
EVERYONE**

“CISE will address BP programmatically both through focused activities and through ~~the inclusion of BP efforts as an accepted and expected part of its research and education award portfolios.~~”



[https://www.nsf.gov/cise/oad/cise\\_bp.jsp](https://www.nsf.gov/cise/oad/cise_bp.jsp)

### BPC Activities Seen To Date

- Outreach to K-12 students
- Recruitment of students from underrepresented populations
- Speaking at campus-based student groups on research and/or STEM careers
- Sponsoring students from underrepresented groups to attend research conferences



### Guiding Principle for BPC Effort

- BPC requires **culture change** in colleges/universities, departments, classes, research groups, professional organizations & K-12
- Culture change begins with **enhanced exposure** to BPC throughout the CISE community
- PI engagement must be **tailored to individuals and organizations** as appropriate



### SaTC-announce Mailing List

Announcements relevant to the SaTC program

To subscribe:

Send email to: [listserv@listserv.nsf.gov](mailto:listserv@listserv.nsf.gov)  
 with message body = “subscribe SaTC-announce”



### NSF CyberCorps®: Scholarship for Service (SFS) Program



#### Goals

- Increase the number of qualified employees working for Federal, State, Local, and Tribal governments in cybersecurity
- Increase the capacity of US education enterprise to produce professionals in cybersecurity



#### Eligibility

- Institution: National CAE/IAE designation or offers coherent formal cybersecurity program
- Student: US citizen or Permanent Resident, enrolled in cybersecurity program (full time)

## NSF CyberCorps®: Scholarship for Service (SFS) Program



### Benefits

- Full tuition, stipend (\$22.5K/\$34K per year), and fees/insurance/allowance (up to \$9K per year), up to 3 years
- Summer internship, JobFair, post-graduation service requirement (work in government positions equal to scholarship length)



## NSF CyberCorps®: Scholarship for Service (SFS) Program



### Capacity Building Activities



## Contact Information

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