
# National Science Foundation
# SaTC program

Dr. Cliff Wang, NSF

# SECURE AND TRUSTWORTHY CYBERSPACE (SaTC): One of NSF's Largest Research Programs

SaTC approaches security and privacy as a socio-technical problem involving deep scientific and engineering problems as well as vulnerabilities that arise from human behaviors

# >1000 Active Awards Across Broad Topic Areas

- Authentication
- Biometrics
- Cryptography
  - Applied and Theory
- Cyber Physical Systems
- Cybersecurity Education
- Formal Methods
- Hardware Security Architecture/Des
- Data Science
- Information Integrity
- Language-Based Security
- Mathematics and Statistics
- Networking & Intrusion Detection
  - Wired and Wireless
- Privacy
  - Applied and Theory
- Social, Behavioral and Economic Sciences
- Software
- Systems
- Transition to Practice (TTP)
- Usability and Human Interaction

# SaTC Core Solocitation- NSF 24-504

https://www.nsf.gov/pubs/2024/nsf24504/nsf24504.htm

| CORE: | Transition to Practice (TTP): | Education (EDU): |
|---|---|---|
| Focus: Fundamental research in one/more of CISE/SBE/MPS/ENG<br><br>Funding levels:<br>• **Small**: Up to 3 years, $600K<br>• **Medium**: Up to 4 years, $1.2M<br><br>No submission deadlines for **Small** or **Medium**<br><br>Open to universities & non-profits; PI may submit 2 proposals/FY<br><br>Int'l collaboration programs with Israel, Ireland, Canada, Germany, India, Czechia<br><br>**Medium** MUST include BPC plan at time of submission | Focus: transitioning existing research results to practice<br><br>Funding levels:<br>• **Small**: Up to 3 years, $600K<br>• **Medium**: Up to 4 years, $1.2M<br><br>No submission deadlines<br><br>Open to universities & non-profits; PI may submit 1 proposal/FY<br><br>**Medium** MUST include BPC plan at time of submission | Focus: cybersecurity education<br><br>Funding levels:<br>• Up to 3 years, $400K<br>• If include both computer scientist and education specialist, up to $500K<br><br>No submission deadlines<br><br>Open to universities & non-profits; PI may submit 1 proposal/FY |

# SaTC International Partnerships

**1) US-Canada** collaborations through Natural Sciences and Engineering Research Council of Canada (NSERC). https://www.nsf.gov/pubs/2022/nsf22031/nsf22031.jsp

**2) US-Czech** collaborations through Czech Research Foundation (GACR). https://www.nsf.gov/pubs/2023/nsf23094/nsf23094.jsp

**3) US-Germany** collaborations through German Research Foundation (DFG). https://www.nsf.gov/pubs/2023/nsf23051/nsf23051.jsp

**4) US-Republic of Ireland-Northern Ireland** collaborationshttps://www.nsf.gov/pubs/2020/nsf20064/nsf20064.jsp

**5) US-Israel** collaborations through the US-Israel Binational Science Foundation (BSF). https://www.nsf.gov/pubs/2020/nsf20094/nsf20094.jsp

**6) US-India** collaborations through the Department of Science and Technology (DST) of India. https://www.nsf.gov/pubs/2023/nsf23114/nsf23114.jsp

# BROADENING PARTICIPATION IN COMPUTING (Medium proposals only)

- **BPC aim to address the underrepresentation of many groups in CISE** relative to their participation in postsecondary education (https://ncses.nsf.gov/pubs/nsb20223/data). Broadening participation will require a range of measures, including institutional programs and activities as well as culture changes across colleges, departments, classes, and research groups.
- **Each Medium project with a lead or non-lead organization** (department, school, or institute) that primarily carries out research and education in computer science, computer engineering, information science, and/or other closely-related field, **must include a BPC plan**
- **BPC plan should answer positively to the following questions**:
  1. Goal and Context: Does the plan describe a goal and the data from your institution(s) or local community that justifies that goal?
  2. Intended population(s): Does the plan identify the characteristics of participants, including school level?
  3. Strategy: Does the plan describe activities that address the stated goal(s) and intended population(s)?
  4. Measurement: Is there a plan to measure the outcome(s) of the activities?
  5. PI Engagement: Is there a clear role for each PI and co-PI? Does the plan describe how the PI is prepared (or will prepare or collaborate) to do the proposed work?

# SaTC DCLs for special targets

- Inviting Proposals Related to Open-Source Software Security to the Secure and Trustworthy Cyberspace Program (23-149)
- Supporting Cybersecurity & Privacy Education and Workforce Development (23-091): 202 2-pagers, 53 invitations, 21 EAGER awards, 6 supplements
- Enabling Secure and Trustworthy Cyberspace (SaTC) CISE-SBE Interdisciplinary Collaborations (21-122 & 3 previous): 163 2-pagers, 38 invitations, 10 EAGER awards
- Request for Information on Future Directions for the NSF Secure & Trustworthy Cyberspace Program (23-063)
- Inviting Proposals Related to Information Integrity to the Secure and Trustworthy Cyberspace Program (22-050)
- Cybersecurity Education in the Age of Artificial Intelligence (20-072)

# SaTC Aspiring PI Workshop

The workshop will provide participants with opportunities to meet and network with NSF mentors and PDs in addition to attend panels and sessions covering topics such as:

- Crafting a Research Proposal Narrative
- Research Project Development
- Presentation Strategies
- The Panel Review Process
- Mock-Review Modules
- Overview of Common Proposal Mistakes
- …and more!


**2024 Aspiring PI meeting:**
**May, Chicago**

**Look out for the call for participation announcement coming out in near future.**

# SaTC Interdisciplinary Staff

- **Cindy Bethel:** Usability (CISE/IIS)
- **Dan Cosley:** Usability, data analytics (CISE/IIS)
- **Jeremy Epstein**: Cluster lead, systems, biometrics (CISE/CNS)
- **Sol Greenspan**: Software security (CISE/CCF)
- **Tim Hodges:** Math (MPS/DMS)
- **Karen Karavanic:** Systems (CISE/CNS)
- **Sara Kiesler**: Privacy, social and behavioral sciences, usability, information authenticity (SBE/SES)
- **Andrew Pollington**: Number theory, theoretical cryptography (MPS/DMS)
- **Phil Regalia**: Information theory, wireless networking, cyber physical systems, cryptography (CISE/CCF)
- **Ambareen Siraj**: Education, CyberCorps ® SFS, cyber operations (EDU/DGE)
- **Anna Squicciarini:** Privacy (CISE/CNS)
- **Cliff Wang:** Networking, hardware, transition to practice (CISE/CNS)
- **Li Yang**: Education, CyberCorps® SFS, cyber operations (EDU/DGE)
- **Qioayan Yu (Expert)**: Hardware security (CISE/CNS)
- **ChunSheng (Sam) Xin**: Education, CyberCorps® SFS, cyber operations (EDU/DGE)
- Administrative Staff (CISE/CNS): **Richard Sheehey**, **Dasia Holmes**, **Pam Shaw**