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Broadening Participation in Computing (BPC)

- Goal: Have all of our diverse population participating in computing
- Emphasis: persons with disabilities along with women, and URMs
- Types of Projects
  - Alliances (large)
  - Demonstration Projects (small)

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Alliances

Alliances broad national or regional collaborations that serve multiple underrepresented groups across a range of the pipeline.

SLC outreach reached 3,615 K-12 students & 749 parents, teachers, counselors, and administrators

STARS Alliance

- Serves broad range of URGs
- 20 institutions, mostly in the SE, each partnering with K-12 & CCs
- Student Leadership Corps runs across Alliance: professional development, research, outreach, & community-based projects
- Task forces to disseminate and implement Best Practices at across member institutions
- Future site of BPC web pages

Alliance Examples (cont.)

ARTSI

- 8 HBCUs & 7 R1 institutions, focused on robotics
- Outreach to K-12, Summer camps, Robotics competitions, Materials for robotics curriculum, REU & peer team research experiences

CRAW / CDC

- National reach (CRA, ACM, IEEE)
- Mentoring: DMP, CREU, Grad Cohort Program, Discipline-Specific Summer Schools
- Information: Careers Workshop, Resources on Attending Grad School

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Examples of BPC Interventions

- Engagement through informal education (using journalism, robotics, story telling, art, virtual worlds, games, cultural preservation)
- K-12 outreach
- High school curriculum (CSTA, College Board)
- Teacher training
- Image, Marketing
- Summer camps, Bridge programs
- Outreach to community colleges,
- Community college articulation agreements
- Partnering with MSIs
- Research experiences
- Mentoring, Peer mentoring, Tiered mentoring
- Community building
- Resources, Information, Assistance

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Research in Disabilities Education (RDE)

Goal: broaden the participation and achievement of people with disabilities in STEM education and associated professional careers

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Research in Disabilities Education (RDE)

1. Regional Alliances for Persons with Disabilities in STEM Education (RDE-RAD)
   - university led networks with linkages throughout academia and in partnership with industry, government, and national research laboratories

2. Focused Research Initiatives (RDE-FRI)
   - investigations of effective pedagogical methods, teaching and learning styles, and supportive practices for people with disabilities in STEM education and careers
   - Research that develops specific and utilitarian assistive technologies to help students with disabilities access STEM educational experiences

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Research in Disabilities Education (RDE)

3. Demonstration, Enrichment, and Information Dissemination projects (RDE-DEI)
   - disseminate information about products, pedagogical approaches, teaching and learning practices, and research for broadening the participation of people with disabilities in STEM fields.
   - initial pilot, or proof-of-concept, research studies or activities to institutionalize accessible products and STEM educational materials.

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CISE IIS Assistive Technology

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