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

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

SLC outreach reached 3,615 K-12 students & 749 parents, teachers, counselors, and administrators
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
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
Research in Disabilities Education (RDE)

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