Proposal to Create a Special Interest Group on Broadening Participation in Computing (SIGBP)

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1. Introduction

On behalf of the ACM SIGBP formation committee, we propose the creation of a Special Interest Group on Broadening Participation in Computing (SIGBP).\(^1\) The SIGBP would comprise an international BPC community to reference, support, highlight, and connect the many existing initiatives for broadening participation in computing.

In sections 2 and 3, we briefly motivate the need to broaden participation in computing and summarize some of the many existing BPC activities and communities. In section 4, we describe the proposed SIGBP and answer key questions regarding the SIGBP’s: 1) Scope, 2) Primary focus, 3) Primary audience and need to be served, 4) Initial activities, and 5) Overlap with other ACM SIGs. In section 5, we list the SIGBP formation committee members; convey the strong community support for the SIGBP; and summarize excerpts from the endorsements received. We conclude in section 6 with a description of the SIGBP organization and leadership. Appendices A and B respectively include the Figures and Tables referenced herein. Appendix C includes the 18 organizational letters of endorsement for the SIGBP. Appendix D lists the names of the 75 people who signed a petition saying that they may volunteer to serve on the SIGBP organizing committee. The complete list of 300+ people who signed a petition indicating that they support the formation of and would join the SIGBP will be provided upon request.

2. Broadening Participation in Computing (BPC)

Computing and Information technology (IT) are driving innovation and economic growth in almost every societal and business sector. Not surprisingly, computing and IT are among the fastest-growing areas of job growth. As such, people who are eligible to work in computing and IT jobs have the opportunity for personal economic prosperity, and, importantly, these people have the opportunity to contribute to innovations with far-reaching global societal consequences, such as healthcare, energy, sustainability, and security. It stands to reason, that the 21\(^{st}\) century technology workforce should be accessible to all demographic groups and world citizens in developing nations – to provide all people with fair access to gainful employment, as well as to infuse a diversity of talent, creativity and perspectives for shaping future innovations and applications of computing.

However, there have been longstanding disparities in the participation of women, persons with disabilities, and underrepresented minorities in computing.\(^2\) In the United States, the low participation of women and minorities (over 70% of the population) is exacerbating a

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\(^2\) A demographic group is “underrepresented” when the group’s participation in computing is less than their representation within the population at large. In the U.S. the following groups are underrepresented in computing: Women, persons with disabilities, African Americans, Hispanics, American Indians, Alaska Natives, Native Hawaiians, and Pacific Islanders, NSF data, http://www.nsf.gov/statistics/wmpd/.
misalignment between the education pipeline and workforce needs. For example: Since 2000, the number of students enrolling and graduating from college in domestic computing programs has declined sharply, down by 70% with only recent improvements in enrollments (Fig. 1, Appendix A). Meanwhile, the participation gap in computing has been widening. The participation of women and minorities taking the high school Advanced Placement test for computer science (an indicator of interest in computing) is well below the enrollment of these groups (Fig. 2, Appendix A). Women and minorities are underrepresented among computing college degree recipients (Fig. 3, Appendix A). The lack of parity for degree conferral to women in computing is even worse than for math and science disciplines (Fig. 4, Appendix A). From 1986 to 2005, the percentage of women and underrepresented minorities obtaining college degrees in computing dropped by 4%, while this percentage increased for engineering and science (Fig. 5, Appendix A). Although women comprise 58% of the U.S. professional workforce, they hold only 25% of professional computing jobs and 11% of corporate officer positions in fortune 500 technology companies\(^3\). Furthermore, 56% of women leave technology companies at the mid-career level\(^4\). By 2018, there will be 1.4 million computer specialist job openings in the United States, and U.S. universities will have generated enough graduates to fill about 1/3 of these openings\(^3\). U.S. Information Technology companies cited a shortage of qualified talent as the greatest human capital challenge facing IT companies.\(^5\) Similar sentiments are echoed by Canada and in the U.K.\(^6\)

At least for the U.S., Canada, and U.K., broadening participation in computing (BPC) is essential to meet 21\(^{st}\) century workforce demands. Globally, BPC is essential to provide economic opportunities for individuals and to infuse a diversity of thought for addressing important societal issues.

3. Existing BPC Activities and Communities

In the past decade, a large number of organizations, communities and initiatives have emerged with the overarching goal of broadening participation in computing. The BPC activities carried out by these groups can be categorized in a number of ways, such as: by the discipline housing the BPC activity; by the stakeholders contributing to or participating in the BPC activity; or by the groups that are studied or targeted for engagement in BPC activities, where groups can be further categorized by Kindergarten through workforce juncture and/or by demographic group. Examples of these categorizations of BPC activities are given below:

- Disciplines undertaking or offering BPC activities, e.g.,
  - Computing
  - Engineering
  - Science
  - Education
  - Gender studies
  - Ethnic studies
  - Psychology
  - Sociology
  - Student affairs

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\(^3\) NCWIT By the Numbers, www.ncwit.org/pdf/BytheNumbers09.pdf


\(^5\) http://www.pressreleasepoint.com/tech-companies-see-us-talent-shortage-barrier-innovation

Human resources

- Stakeholders in BPC activities, e.g.,
  - Researchers (from the many disciplines) adding to the knowledge of effective practices for BPC
  - Service Providers (e.g., researchers, teachers, faculty, computing professionals) who implement programs to broaden participation
  - Professionals (e.g., teachers, HR professionals, computing professionals) who seek to enroll students or employ professionals in computing
  - Consumers (e.g., underrepresented students or professionals) who are eligible to participate in BPC programs

- Pipeline juncture studied and/or targeted for engagement in BPC activities, e.g.,
  - K-12 education ~ K-5, middle school, high school
  - Higher education ~ community college, four-year college, graduate school
  - Workforce ~ entry-level, mid-career, executive

- Demographic group studied and/or targeted for engagement in BPC activities, e.g.,
  - Women
  - Underrepresented minority group
  - Persons with disabilities
  - First-generation college
  - Lower income
  - Persons in other disciplines

The organizations and communities involved with BPC activities vary widely with respect to services provided and communities served. In the sections below, we broadly categorize and summarize examples of the types of organizations and communities that exist today with an overarching BPC goal. This is not a comprehensive list, but merely examples.

3.1 Research

BPC research can be broadly classified as including one or both of the following components:

1. Research that attempts to answer questions related to the reasons for the lack of participation. For example: Why do women with good grades drop out of undergraduate computer science programs? How does self-identity of minority students affect performance in computer science classes? Why do so few women progress to executive ranks in the technology workforce? This type of research often involves user studies to collect data from the population being studied, but does not necessarily involve the application of interventions.

2. Research that attempts to demonstrate effective practices by implementing and assessing novel interventions or by bringing to scale already proven interventions for broadening participation. Example hypothesis tested by this research include: Can the use of robotics or gaming increase children’s interest in computing careers? Can pair learning improve academic performance of women in programming classes? Will targeted marketing messages encourage more Latino women to enroll in computer science? Can mid-career mentoring propel more women to executive ranks in the technology workforce? These types of studies often require large-scale user studies that take place at an academic, community, or workplace setting to test hypothesis.
Research that informs BPC efforts is distributed among many disciplines. Examples of publications that include research that informs BPC are listed in Table 4 (Appendix B). For example, BPC research is informed by research that studies attitude, behavior, and cognitive changes in women and minorities with the goal of understanding how indicators such as self-identity affect a person's attitude towards and success in science, technology, engineering and math (STEM) disciplines. This research is found in the Annual Review of Psychology, the Journal of Black Psychology, the American Journal of Community Psychology, the American Behavioral Scientist, the American Sociological Review, the American Sociological Association Research Brief, the American Educational Research Journal, and the Journal of Women and Minorities in Science and Engineering, among other journals.

BPC research is also informed by research that attempts to identify effective practices that enhance achievement for minorities and women in STEM. This research is found in the Journal of Negro Education, the Journal of Vocational Behavior, School Science and Mathematics, the College Mathematics Journal, the Review of Educational Research, the Journal of Higher Education, and Educational Studies in Mathematics, among other journals.


The Communications of the ACM (CACM) has published articles on the need to broaden participation in computing. The ACM Transactions on Computing Education (TOCE) has published articles on broadening participation in computing education and has published special issues on BPC.

The ACM SIG on Information Technology Education (SIGITE) publishes a peer-reviewed electronic publication called Research in IT with a focus on the theories and practices of information technology, including theory and practice of programming, networking, information management, web systems and user-centered design. SIGITE also publishes the Proceedings of the SIGITE Conference on Information Technology Education, with a focus on teaching and learning (pedagogy) of IT.

The ACM Special Interest Group on Computer Science Education (SIGCSE) publishes Inroads, a quarterly magazine, as well as proceedings from their annual Technical Symposium on Computer Science Education and annual International Innovations and Technology in Computer Science Education (ITiCSE) conference. SIGCSE publications focus on computer science teaching and education and sometimes include publications on educational practices for broadening participation in education.

Research books on broadening participation in computing have begun to appear, such as Women and Information Technology: Research on Under-Representation (MIT Press, 2005); Unlocking the Clubhouse: Women in Computing (MIT Press, 2002); and Stuck in the Shallow End: Education, Race, and Computing (MIT Press, 2008). Reports on broadening participation in STEM often referenced by the research literature are published by the National Science Foundation, the Computing Research Association, the Computer Science Teachers Association, the National Action Council for Minorities in Engineering, and the College Board.
Although the periodicals mentioned above inform BPC research and sometimes include papers or special issues on BPC research, none serves as a primary reference for broadening participation in computing for people of all ages with consideration given to factors such as curriculum, community programs, social psychology, ethnicity concepts, media messages, public policy, and the workplace environment.

3.2 Professional Groups for Women and Minorities

Several professional organizations exist to support various underrepresented groups, targeting different pipeline junctures and focusing on computing or more broadly on science and engineering. Some examples are described here and listed in Table 1 (Appendix B).

The ACM’s Committee on Women in Computing (ACM-W) has a mission “to celebrate, inform and support women in computing, and work with the ACM-W community of computer scientists, educators, employers and policy makers to improve working and learning environments for women.” ACM-W sponsors events for students, faculty and practitioners to promote mentoring and role modeling; collect data to monitor the status of women in industrial and academic computing; provide historical information about women’s accomplishments and roles in CS; and serve as a repository of information about programs, documents and policies of concern to women in CS. ACM-W offers awards and scholarships and helps people host regional ACM-W conferences or start regional ACM-W chapters, among other things. Many computer science departments have ACM-W student chapters.

The Computing Research Association (CRA) sponsors the A. Nico Habermann award to recognize outstanding contributions towards increasing the numbers or successes of underrepresented groups in computing research. The CRA’s Committee on the Status of Women in Computing Research (CRA-W) is dedicated to increasing the number of women participating in Computer Science and Engineering research and education at all levels. The CRA-W sponsors events for faculty and undergraduate and graduate students, including career-mentoring workshops, awards, distinguished lecture series, and disseminates best practices. The CRA-W funds research experiences for undergraduates (REU) through the Distributed REU project (DREU) both in the US and in Canada (through the Canadian DREU Project).

The ACM, CRA and the Institute of Electrical and Electronic Engineers (IEEE) co-sponsor the Coalition to Diversify Computing (CDC). The CDC seeks to develop a diverse community of computing professionals, with a current emphasis on recruitment and retention of minority undergraduates into graduate school programs and ultimate placement into academia and industry. CDC’s diverse membership includes students and professionals within academia, industry and federal labs. The CDC sponsors the Tapia Celebration of Diversity in Computing conference, a venue that provides underrepresented college students role models and networking with professionals in industry, government, and academia. The CDC also supports research experiences for undergraduates, career mentoring workshops, student mentors, and sending students to technical conferences. The CRA-W and CDC offer the Collaborative REU (CREU) program as a complement to DREU.

The Black Data Processor Association (BDPA) supports minorities in middle and upper management in the IT sector and undertakes K-12 outreach to build the educational pipeline.

The Natural Sciences and Engineering Research Council of Canada (NSERC) has five regional NSERC Chairs for Women in Science and Engineering that lead initiatives to engage
underrepresented groups in computing, particularly women and the Aboriginal Canadian population.

None of these organizations specifically addresses the collective needs of broadening participation for people of all ages, in various settings, as described earlier. None of these organizations serves as the central voice for BPC or serves as a primary reference for BPC research, education, and practice.

3.3 The NSF BPC Alliances

The National Science Foundation (NSF) Broadening Participation in Computing program funded 13 statewide or national alliances and over 100 demonstration projects on broadening participation in computing, as listed in Table 3 (Appendix B) and described in the AAAS report “Telling the Stories of the BPC Alliances: How One NSF Program is Changing the Face of computing.” The alliances include partnerships among academia, K-12, industry and community groups to increase the participation of women and under-represented minorities in computing through a variety of approaches:

- **Georgia Computes!** and the **Commonwealth Alliance for Information Technology Information Education (CAITE)** focus on statewide reform of K-20 computing education in Georgia and Massachusetts, respectively.
- **Into the Loop** focuses on K-12 computing education in Los Angeles.
- The **Alliance for the Advancement of African-American Researchers in Computing (A4RC)** and the **Advancing Robotics Technology for Societal Impact (ARTSI) Alliance** focus on increasing the participation of African-Americans in computing through research experiences (A4RC) and an engaging robotics undergraduate curriculum (ARTSI).
- The **Students and Technology in Academia, Research, and Service (STARS) Alliance** advocates interweaving student-led regional engagement into the undergraduate experience; the **Computing Alliance for Hispanic Serving Institutions (CAHSI)** advocates peer-led team learning; and the **Caribbean Consortium for Computing Excellence (CCCE)** advocates research experiences for high school and undergraduate students--all three with the goals of increasing undergraduate student success and advancement into computing graduate programs, for underrepresented students.
- **AccessComputing** serves as a national network supporting research and activities focused on increasing the presence of persons with disabilities in computing; the **National Center for Women and Information Technology (NCWIT)** does the same for women; and the **Empowering Leadership (EL) Alliance** aims to provide connections among minority computing students who are in majority-serving institutions, nationwide.
- **Widening the Research Pipeline** is a collaboration between CRA and CDC (mentioned earlier) to broaden participation in computing research.
- Lastly, the **Grace Hopper Regional Consortium (GHRC)** supports regional conferences modeled after the national Grace Hopper Celebration of Women and Computing (described below).

Many of the alliances serve as national repositories for dissemination of best practices; offer opportunities, nationally, for students and teachers to participate in conferences, research, and other events; and contribute to BPC research. Since 2006, the NSF hosts an annual BPC...
Community meeting that attracts over 300 participants from various sectors to disseminate research and effective practices for broadening participation.

As for the organizations mentioned earlier, none of the NSF Alliances specifically addresses the collective needs of broadening participation for people of all ages, in various settings, and none serves as the central voice for BPC or as a primary reference for BPC research, education, and practice.

3.4 National Communities, Coalitions, and Nonprofit Organizations

In addition to the CDC, there are many other coalitions, communities and nonprofit organizations for broadening participation in computing. Some of these are listed in Table 2 (Appendix B) and described next.

The *Center for Minorities and People with Disabilities in Information Technology (CMD-IT)* serves as a national resource for broadening the participation of women and under-represented minorities in computing. CMD-IT has a mission “to ensure that under-represented groups are fully engaged in computing and information technologies, and to promote innovation that enriches, enhances, and enables these communities, such that more equitable and sustainable contributions are possible by all communities.” CMD-IT seeks to provide a united voice, information resources (such as a calendar of events), leadership initiatives, and support national-scale BPC projects for under-represented groups and people with disabilities.

Two national organizations serve as resources for BPC for women. The *Anita Borg Institute (ABI) for Women and Technology* was established in 1997 to develop tools and programs designed to help industry, academia, and government recruit, retain and develop women technology leaders. ABI sponsors events for women, such as the *Technical Executive Forum* and the *Savvy Geek Chix* initiative. ABI sponsors numerous awards for women (e.g., *Women of Vision Award, Anita Borg Award for Social Impact, Anita Borg Award for Technical Leadership, TechWomen Change Agent Awards*) as well the *Anita Borg Top Company for Technical Women Award*. The signature ABI event is the annual *Grace Hopper Celebration of Women and Computing (GHC)*. Recent GHC’s have attracted over 1500 women from industry, government, and academia, including students. ABI held its first GHC in India last year, and collaborates with the Grace Hopper Regional Consortium (mentioned above).

The *National Center for Women and Information Technology (NCWIT)*, one of the NSF BPC Alliances, is also a nonprofit organization focused on women. NCWIT builds national networks through its Academic Alliance, Workforce Alliance, Entrepreneurial Alliance, and K-12 Alliance. NCWIT provides a national repository of research-driven practices and outreach resources. The organization offers consulting services to organizations wanting to recruit and retain women, and offers consulting services to researchers through its Social Science Advisory Board. NCWIT sponsors awards, including the *NCWIT Award for Aspirations in Computing* (a national award for high school girls) and supports the offering of regional Aspirations award events.

Once again, none of these organizations or communities specifically addresses the collective needs of broadening participation for people of all ages, in various settings, and none serves as the central voice for BPC or as a primary reference for BPC research, education, and practice.

3.5 Education

The vast majority of the organizations listed in Tables 2-3 (Appendix B) are led by and have
heavy participation by computing faculty in colleges and universities, many in partnership with social science and education faculty, as well as K-12 teachers. For example, the NSF BPC Alliances, as well as the 100+ BPC demonstration projects funded by the BPC program are almost all led by college and university faculty. The Tapia Celebration of Diversity and Computing, the STARS Celebration Student Leadership Conference, and the Supercomputing Conference Broader Engagement Program primarily aim is to involve undergraduate students, with additional participation from faculty leaders and role models. Hundreds of students attend the annual Grace Hopper Celebration. The NCWIT’s Academic Alliance consists of over 400 people from computer science and IT departments of nearly 200 colleges and universities across the country, spanning research universities, community colleges, women’s colleges, and minority-serving institutions.

In the K-12 sector, the Computer Science Teachers Association (CSTA) promotes the teaching of computer science and other computing disciplines and includes an emphasis on attracting a more diverse group of students. Many K-12 educators in science and math participate in pipeline initiatives to prepare and motivate women and minority students for computing college majors. Many national non-profit and professional organizations also seek to increase and broaden participation in computing. The Girl Scouts, Citizen Schools, National Lab Day, and others have development programs, curriculums and activities to encompass computing education and broadening participation. NCWIT’s K-12 Alliance Members include 4-H, the American School Counselor Association, Boys & Girls Clubs of America, National Girls Collaborative Project, Girl Scouts, and National Coalition of Girls’ Schools, among others.

3.6 Workforce/Corporations

The business sector is acknowledging the need to broaden participation by sponsoring and participating in numerous initiatives to increase the number of women and under-represented minorities who enter the computing workforce and advance into senior positions. For example, Google, Hewlett Packard, Microsoft, CA Technologies, Cisco, facebook, First Republic Bank, IBM, Intel, Intuit, Lockheed Martin, NetApp, SAP, Symantec, Thomson Reuters, Wilson Sonsini Goodrich & Rosati, Amazon.com, Broadcom, Motorola, Raytheon, Salesforce, and Yahoo! partner with ABI.

Microsoft, Bank of America, Avaya, Pfizer, Merck, EMC², Google, Hewlett Packard, Intel, Motorola, Qualcomm, Kauffman Foundation, Boehringer Ingelheim, and ReturnPath are partners or financial supporters of NCWIT.

Citigroup, General Electric, IBM, JP Morgan Chase, Nortel, and Wachovia are some of the more than 30 corporate clients of INROADS, an organization dedicated to helping businesses gain greater access to diverse talent, including a high demand in the computing and technology sector.

AT&T, IBM, S.D. Bechtel Jr. Foundation, Intel, 3M, Agilent Technologies, Bechtel, Lockheed Martin, SanDisk, Texas instruments, and tyco are just some of the companies who partner with MentorNet, a nonprofit organization that matches professionals in engineering and science with underrepresented students in college for online mentoring, to promote student success.

These and numerous other companies of all sizes partner with K-12 schools, higher education and community organizations to strengthen the educational pipeline leading to the IT workforce. Many companies also undertake their own workplace initiatives to recruit, retain and advance women and minority technology workers. Workplace initiatives include programs for mentoring,
networking and leadership development.

The business sector also provides evidence that problems of broadening participation are not limited to the US market. For example, refer to a recent posting on scholarships offered by Accenture in South Africa, aimed at recruiting South African students to Computer Science, Information Science, Engineering, and related disciplines (http://bit.ly/pOFn5b). While there is an obvious business need (with Accenture being a multinational company, there is no doubt that the company wants to attract new professionals in a relatively underserved region to the field—and in the location where the company operates.

3.7 Government

Since 1982, the National Science Foundation (NSF) has published a congressionally mandated biennial report on the participation of women and minorities in science and engineering\(^8\). NSF has long sponsored programs that recruit people, particularly women, minorities and persons with disabilities for participation in science, technology, engineering, and math (STEM). Examples include Advancing female STEM faculty (ADVANCE), Research Experiences for Undergraduates (REU), Graduate K-12 Fellows (GK-12), Integrative Graduate Education and Research Traineeship (IGERT), Louis Stokes Alliances for Minority Participation (LSAMP), Historically Black Colleges and Universities – Undergraduate Program (HBCU-UP), Research on Gender in Science and Engineering (GSE), Tribal Colleges and Universities (TCUP) program, and many more. These programs aim to increase participation as well as advance research on effective practices - to solve what the National Science Board sees as a “troubling decline” in the number of U.S. citizens studying to become scientists and engineers.

In 2001, the NSF introduced the Information Technology Workforce (ITWF) program calling the “under-representation of women and minorities in computer science and engineering” a “serious national problem” and calling for “systematic research efforts” to address this problem. In 2005, the NSF established the Broadening Participation in Computing (BPC) program “to significantly increase the number of U.S. citizens and permanent residents receiving post secondary degrees in the computing disciplines, with an emphasis on students from communities with longstanding underrepresentation in computing.” The BPC program includes the funding of alliances with multiple stakeholders to “design and carry out comprehensive programs that address underrepresentation in the computing disciplines.” In 2011, NSF introduced the Computing Education for the 21\(^{st}\) Century (CE21) program to “Increase the number and diversity of K-12 students and teachers who develop and practice computational competencies in a variety of contexts; and Increase the number and diversity of early postsecondary students who are engaged and have the background in computing necessary to successfully pursue degrees in computing-related and computationally-intensive fields of study.”

Furthermore, the NSF requires that all proposed research projects include a “broader impacts” component that can include broadening participation. In 2010, the NSF Computing and Information Science and Engineering (CISE) directorate held the Broader Impacts for Research and Discovery Summit (BIRDS) to call upon computing researchers to strengthen the broader impact of NSF-funded projects, with an emphasis on broadening participation in computing.

The U.S. Department of Education has long held competitions for the Graduate Assistance in Areas of National Need (GAANN) to support a greater number of domestic students, particularly

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from underrepresented groups to pursue PhD degrees in STEM disciplines, particularly computing.

The National Security Agency (NSA) is an Anita Borg Institute partner. The Naval Research Laboratory is a MentorNet Sustaining Partner. The NSA, the National Institute of Health, the Department of Defense, the Department of Homeland Security, the U.S. Department of Education, the National Academy of Engineering, the National Aeronautics and Space Administration, and the national labs (e.g., Oak Ridge National Lab, and Lawrence Livermore National Lab) all sponsor programs with goals that include broadening participation in computing.

3.8 International Initiatives

Anne Condon from the University of British Columbia is on the SIGBP Formation Committee and has provided a support letter with this proposal outlining some of the BPC activities in Canada. As in the U.S., a number of Canadian efforts are aimed at increasing women’s participation in computing. In Canada, underrepresented minority groups (in computing) include Aboriginal populations. In her letter, Anne also points out “that while several European countries are similar to the U.S. and Canada with regard to low participation of women, others have much higher participation. Opportunities for dialogue across cultural and geographic boundaries would help us sharpen hypotheses on why participation of women and certain ethnic groups in computing is so low, and would strengthen efforts to address the underlying causes.”

Even in countries where there is high participation, SIGBP is important to ensure those countries remain healthy in terms of opportunities for underserved groups, especially as they enter the profession, which is increasingly a global workforce. I.e. an individual may be well served in one country and find herself in another country where conditions are different.

Our goal is that the SIGBP would have active international participation. If the SIGBP is awarded probationary status, we will actively solicit much greater international participation to fully inform the evolution of the SIGBP.

3.9 BPC Policy

There are emerging efforts to influence policy-makers as a means to increase the visibility of computer science and broaden the participation in computing. For example, the Computing in the Core initiative is a non-partisan advocacy coalition of associations, corporations, scientific societies, and other non-profits seeking to elevate the national profile of computer science education in K-12 within the U.S. and work toward ensuring that computer science is one of the core academic subjects in K-12 education. NCWIT has been working with ACM, CRA, and the Stern Group (an international advisory firm run by the Honorable Paula Stern), among others, to establish a platform in Washington D.C. that will keep policy-makers apprised of the issues surrounding diversity and innovation.

4. Proposed ACM Special Interest Group for Broadening Participation (SIGBP)

As outlined above, there are many organizations (companies, programs, and activities) aimed at broadening participation in computing. These organizations provide repositories to disseminate

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9 Computing in the Core Initiative - computinginthecore.org
effective practices, host events for networking and recruitment, offer professional development and networking, advocate policy change, provide recognition with awards, fund research and programs, and contribute to research related to BPC. These many activities illustrate the existence of BPC communities, but these communities are largely disparate – many with separate pipeline focus (e.g., K-12, higher education, or industry focused), demographic focus (e.g., women, minorities, persons with disabilities), and/or disciplinary focus (e.g., computing, engineering, education, social sciences). Broadening participation in computing requires multiple levels of collaboration, across disciplines, pipeline junctures, and stakeholders.

While there are pockets of central resources, there is currently no single place, especially in a professional sense, where one can find out about all ongoing activities, the opportunities offered, or the outcomes from these activities. For example, many BPC initiatives offer opportunities for student engagement and undertake grass-roots efforts to reach targeted students - while many of these students remain unaware of the plethora of opportunities available to them.

Furthermore, the BPC literature is scattered among journals and conferences within computing, engineering, science, education, and the social sciences. The past decade has brought about an increase in BPC-related research that is led by computing researchers, calling for a publications venue that is more visible to the computing research community.

What is needed is an overarching BPC community to support and highlight the many existing BPC initiatives and a computing research publications venue to provide referencing to best practices and research outcomes. It is our view that the ACM SIGs are a well-recognized model for fostering communities around computing related areas. We propose to create an ACM SIGBP as an international community to support and strengthen the diverse array of initiatives for Broadening Participation in Computing.

**4.1 Scope of the Proposed ACM SIGBP**

The scope of the proposed SIGBP is to provide an overarching international community to highlight, support, connect, and strengthen the diverse array of existing BPC communities, activities, and research. The mission, members and goals of the SIGBP are articulated below, with details in the following sections.

The **SIGBP Mission** is to advance innovation and discovery by increasing and broadening participation in computing. The SIG will promote research, technologies, practices and policies for increasing the participation of women, under-represented minorities and persons with disabilities in computing.

The **SIGBP Members** are researchers, practitioners, educators and policy-makers from academia, industry, government, K-12 schools, and the non-profit sector within a variety of interests, including computing, psychology, sociology, ethnic and gender studies, education, and human resources.

The **SIGBP Goals** are to foster collaboration, dissemination, and support among organizations, programs and people seeking to broaden participation in computing, including efforts to advance research on the factors behind lack of participation; evaluate and promulgate effective practices for increasing participation; advocate beneficial institutional or government policies; and advance the academic and career development of students and professionals in computing.
The SIGBP will collaborate with other related ACM SIGS, including SIGACCESS, SIGCSE, and SIGITE. The SIGBP will serve as an umbrella organization to support the many existing efforts to broaden participation. These include the efforts of the ACM-W, CRA-W, CDC, NCWIT, ABI, GHC, and the NSF BPC Alliances.

4.2 Primary Focus of the SIGBP

The primary focus of the ACM SIGBP is fourfold, as follows:

(1) To advance research on the factors behind lack of participation in computing

The SIGBP will organize peer review of papers related to BPC research for at least one annual SIGBP symposium to be co-located with an existing conference or workshop, such as the Richard Tapia Celebration of Diversity and Computing. Accepted papers will appear in Symposium Proceedings. Extended versions of the best papers will be published in an ACM journal, such as CACM.

As conveyed by the examples in section 3.1 above, BPC research requires multi-disciplinary expertise, including social science research methods, along with a deep understanding of the computing discipline and, often, access to academic or workplace settings for testing of effective practices. Because of this, BPC research is often conducted by interdisciplinary research teams that include (and are often led by) computing researchers. For example, this is the case for all of the 13 NSF BPC Alliances.

An ACM SIGBP will help advance BPC research by providing greater opportunity for computing researchers to publish in a computing venue. This will provide a referencing mechanism to 1) research with an explicit focus on BPC, 2) research on broadening participation in science and engineering that is relevant for computing, and 3) publications in the many disciplines that inform BPC research, such as education, psychology, gender studies, ethnic studies, educational technologies, student services, and human resources. Lastly, ACM SIGBP peer-reviewed publications will make the outcomes of BPC research more visible to computing researchers and practitioners who are not already connected to BPC activities.

(2) To disseminate effective practices for broadening participation in computing

The SIGBP will provide a central community to find information about organizations, activities, publications, awards, other communities and portals with a BPC mission, such as those reviewed in section 3 above. Examples of BPC practices to be disseminated include models, frameworks and strategies for recruiting and advancing people along the pipeline from K-12 to college to the workforce, including:

- Curricular, extra-curricular, and after-school programs to enhance student achievement in math and science and increase interest in computing college majors and careers
- Programs for Teacher and Guidance Counselor training to enhance the capacity of K-12 schools to broaden participation
- Outreach programs to create positive engagement of students at all levels in the computing disciplines
- Programs that smooth academic transition – from high school to college, from 2- to 4-year postsecondary programs, from undergraduate to graduate education, and from graduate school to the professoriate
- Programs for student participation in enriched research and internships
• Systemic mentoring and mentor training programs for students and professionals
• Social networks and peer support programs for students and professionals
• Innovative methods for career counseling, career placement, and career advancement

SIGBP dissemination will be achieved through a newsletter, an online portal, a digital repository, and by hosting BPC events. The SIGBP newsletter will report on recent activities, advertise future events, and highlight interesting new results, articles, and organizations. The SIGBP portal will provide comprehensive links to BPC organizations, activities, awards, portals and communities, such as those reviewed in section 3. The SIGBP will provide a digital repository of BPC practices that references and augments existing portals, such as the Engineering Pathway portals created for the NSF BPC Alliances (BPCPortal.org), for the NCWIT resources collection (ncwit.org/resources.library.html) and for the STARS practices collection (under development at starsalliance.org).

The SIGBP will host conferences and events that focus on BPC or that have a broader engagement component. This could include the conferences and events reviewed in section 3. The SIGBP could also partner with other ACM SIGs to enhance and promote their broader engagement initiatives.

(3) To inform the computing community about policies that may impact BPC

The SIGBP will seek to inform the computing community about policy issues with potential impact on broadening participation in computing by providing an index to such activities. For example, refer to the discussion above on the Computing in the Core initiative and NCWIT’s advocacy and outreach efforts.

(4) To advance the academic and career development of students and professionals

The SIGBP will advance the academic and career development of students and professionals in computing by providing an index to the many opportunities to participate in programs with goals to broaden participation. As outlined in section 3, there are numerous opportunities within industry, government, academia, K-12 or community organizations to participate in programs that particularly emphasize broadening participation. Some examples include:

• Research experiences for undergraduates, high school students, and high school teachers - offered by colleges and universities, industry, and government labs
• Student or faculty internship opportunities offered by industry and government labs
• Travel scholarships to attend conferences
• Opportunities to participate in student poster competitions or student conferences
• Opportunities to participate in career mentoring programs (face-to-face and online) or networking programs
• Opportunities to participate in professional development workshops
• Opportunities to join professional organizations
• Opportunities to have role-model speakers visit your organization or to serve as a role-model speaker or mentor

4.3 Primary Audience and Primary Need to Be Served

SIGBP Members will be researchers, professionals, educators and students from academia, industry, government, K-12 schools, and the non-profit sector within a variety of interests, including computing, psychology, sociology, ethnic and gender studies, education, student
services, and human resources. We classify these members into four categories based upon the stakeholder’s interest in BPC, as follows:

(1) Researchers adding to the knowledge of effective practices for BPC

Researchers who conduct research on BPC and in areas related to BPC will benefit from having BPC peer-reviewed periodicals that provide a reference to the BPC literature. As previously stated (sections 3.1 and 4.2, above), research that informs BPC is found in journals and conference proceedings within engineering, science, computing, education, psychology, sociology, and gender and ethnic studies. Increasingly, BPC research is led by computing researchers. Although CACM, TOCE, SIGCSE and SIGITE have published articles related to BPC, none focuses on being a primary reference to the BPC research literature. Particularly missing is a focus on broadening participation in the workforce, raising interest in computing for people of all ages, and research that attempts to answer questions related to the reasons for the lack of participation.

The attached support letter from SIGCSE Chair Renee McCauley articulates the need for SIGBP to support a community of BPC researchers:

“Although we feel very connected and committed to broadening participation in education, there are important communities that we do not serve and issues that we do not consider. There are issues of broadening participation in the workforce, for example, changing cultures to make it more appealing for people of all backgrounds to work and stay in computing fields. Raising interest in computing for people of all ages, from children to retirees, is not just a computing education effort. Researching methods for broadening participation in computing requires an understanding of a broader base of social science and computing research that overlaps with computing education research but has a different focus. Related to these issues, we believe that there will be great benefit in creating a community of computing researchers that can advance the field of broadening participation through research. There is a need to establish rigor in this research area. There is a need for a community within which those interested in broadening participation can collaborate.”

We repeat our conclusion from section 4.2 above: ACM SIGBP members will benefit from BPC-focused peer-reviewed publications to provide a referencing mechanism to 1) research with an explicit focus on BPC, 2) research on broadening participation in science and engineering that is relevant for computing, and 3) publications in the many disciplines that inform BPC research, such as education, psychology, gender studies, ethnic studies, educational technologies, student services, and human resources. Furthermore, ACM SIGBP peer-reviewed publications will make the outcomes of BPC research more visible to computing researchers and practitioners who are typically connected to BPC activities.

(2) Service Providers who implement programs to broaden participation

In section 3, we listed examples of the large number of organizations involved in broadening participation in computing. For example, these include the numerous professional groups that provide support for women and minorities (section 3.2); the NSF BPC Alliances (section 3.3); national communities, coalitions, and nonprofit organizations (section 3.4); People in K-12 education and higher education (section 3.5); companies that employ computing professionals (section 3.6); government agencies wanting to produce a larger, more diverse computing workforce (section 3.7); international organizations interested in broadening participation in
computing globally (section 3.8); and people seeking to influence policy that could lead to broader participation (section 3.9). These organizations act as BPC “service providers” by offering programs in schools, in communities, and in the workplace intended to recruit, retain and advance a broader segment of people in computing. The examples given in section 3 include some large, well-publicized conferences, such as the Grace Hopper Celebration of Women and Computing, as well as many smaller, lesser-known efforts such as the 100+ demonstration projects funded by the NSF BPC program.

People in organizations that seek to broaden participation would benefit from the SIGBP as an overarching BPC community to support, highlight, and reference the efforts within the many separate organizations and reference the BPC research literature. The SIGBP would enable BPC service providers to reach a wider audience to advertise opportunities for students, share effective practices, and find collaborators. The SIGBP would be particularly beneficial to the many smaller BPC service providers who do not have the resources to build national recognition of their work. The SIGBP could reduce duplicate efforts, by enabling people to plug into existing efforts before initiating new ones. Finally, the SIGBP could raise the visibility and impact of BPC efforts by providing a unified voice for an international BPC community.

(3) Professionals who seek to enroll students or employ professionals in computing

People in organizations that seek to enroll students in academic programs or hire, retain, and advance employees in the computing workforce will benefit from the SIGBP reference to the many BPC service providers, effective practices, and research outcomes. For example, employers and schools have many opportunities to recruit students by attending and sponsoring BPC conferences and events. Also, employers and schools wishing to implement their own BPC programs, such as mentoring programs, will find proven practices by leveraging the SIGBP reference to the many disparate dissemination repositories.

(4) Consumers who are eligible to participate in BPC programs

Students and professionals who are eligible to participate in BPC programs (i.e., BPC consumers) will benefit from the SIGBP as a central reference to the many opportunities being offered by BPC service providers. For example, in section 4.2 we listed examples of the many opportunities offered to students and professionals (such as REUs, travel scholarships, and professional development workshops). These opportunities are advertised among many disparate websites and using various email lists. As such, many students and professionals remain unaware of the opportunities available to them.

In general, the SIGBP will foster connections within and among the groups of people who conduct research related to BPC, people who implement BPC programs, people who seek to enroll or employ under-represented groups, and people who are part of the under-represented groups who seek to engage in the opportunities provided.

4.4 Initial activity to be undertaken by the SIGBP

The initial SIGBP Activities will include:

- Host at least one annual SIGBP symposium, co-located with an existing conference or workshop, such as the Tapia Celebration of Diversity and Computing or the STARS Celebration. Submitted papers will be carefully reviewed, and accepted papers will
appear in the Symposium Proceedings. Extended versions of the best papers will be offered for consideration to an ACM journal, such as CACM.

- Publish a Newsletter that reports on recent activities, advertises future events, highlights interesting and exciting new results and articles, and includes descriptions of member organizations
- Partner with other ACM SIGs to enhance and promote their broader engagement initiatives
- Provide a digital library of BPC best practices (enhancing the library at bpcportal.org) to inform organizations seeking ideas and collaborators for BPC activities.
- Advertise opportunities for students offered within industry, government, academia, K-12 or community organizations seeking to broaden participation (e.g., summer experiences, mentoring, conferences, scholarships)
- Provide a central portal to organizations, activities, publications, awards and other portals with a BPC mission

4.5 Overlap issues with other ACM SIGs:

A close examination of the ACM SIGs shows that the proposed ACM SIGBP is related primarily to just three of the twenty-seven currently recognized ACM SIGs. These include SIGCSE, SIGITE – each of which targets educators - and SIGACCESS. The scope of the proposed SIGBP as it is envisioned extends significantly beyond the realm of each of them and is intended to be complementary and to allow for powerful synergies and encourage collaborations. The plan for our annual conference is to co-locate with a variety of existing conferences, such as these three groups, Grace Hopper, Richard Tapia, and SACNAS.

As the web site reflects, “SIGCSE, the ACM Special Interest Group on Computer Science Education, provides a forum for educators to discuss the problems concerned with the development, implementation, and/or evaluation of computing programs, curricula, and courses, as well as syllabi, laboratories, and other elements of teaching and pedagogy.” The SIGCSE focus, points out Mark Guzdial, a former SIGCSE Chair, in his Georgia Computes! Alliance support letter for SIGBP is limited to the education arena and therefore more narrow in scope than is the proposed SIGBP. “There is a lot of broadening participation research associated with education, and a good bit of it is published at the SIGCSE Symposium and its associated, smaller forums. However, the broadening participation research that gets published at the SIGCSE Symposium informs introductory computing. Broadening participation research associated with other areas often doesn’t get into the SIGCSE Symposium, and thus, might not get published at all.”

Along similar lines, SIGITE’s mission is similar to SIGCSE but with a special focus on IT education. According to the website, the purpose of SIGITE is to provide a forum for the interaction of practitioners, educators, and others in the field of Information Technology Education in order to exchange ideas and engage in activities that advance the knowledge of its members, the curriculum and teaching on Information Technology Curriculum, and the development and transfer of innovative concepts and applications in technology and pedagogy. SIGITE currently has a focused effort on the development of a model curriculum and guidelines for accreditation. Educators from two- and four-year universities and colleges as well as high school teachers are welcome and would benefit from SIGITE’s activities. As is true with SIGCSE, the level of community engagement is more narrowly focused than is our intent.

ACM’s Special Interest Group on Accessible Computing, SIGACCESS, promotes the interests of professionals working on research and development of computing and information technology
to help persons with disabilities. They are interested in “the design, development, evaluation, and scientific investigations of technologies to support individuals with disabilities. This includes researchers, clinicians and teachers charged with assessing disabilities, rehabilitation personnel who administer assistive technologies, and policy makers concerned with equitable access to information technologies for people with disabilities. The SIG membership (from both academia and industry) focuses on the application of technologies to serve the needs of persons with, but not limited to vision, motor, hearing, and speech impairments; cognitive limitations, including learning disabilities; and issues of ageing.” Certainly, this focus is on Broadening Participation, but again, the proposed SIGBP extends way beyond the scope and communities served by SIGACCESS, and we look forward to exploring possible synergies with this interest group.

5. Community Support for Creating an SIGBP

5.1 SIGBP Formation Committee

The formation committee to create an ACM Special Interest Group for Broadening Participation in Computing (SIGBP) was formed in September of 2009, and is shown below.

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>BPC Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tony Baylis</td>
<td>Lawrence Livermore National Lab</td>
<td>A4RC</td>
</tr>
<tr>
<td>Maureen Biggers</td>
<td>Indiana University</td>
<td>A4RC/NCWIT/STARS</td>
</tr>
<tr>
<td>Lori Clarke</td>
<td>University of Massachusetts</td>
<td>CRA-W</td>
</tr>
<tr>
<td>Ann Condon</td>
<td>University of British Columbia</td>
<td>NSERC</td>
</tr>
<tr>
<td>Jan Cuny</td>
<td>NSF CISE Directorate</td>
<td>BPC-A/CE21 Program Director</td>
</tr>
<tr>
<td>Teresa Dahlberg</td>
<td>University of North Carolina Charlotte</td>
<td>STARS (Founder)</td>
</tr>
<tr>
<td>Kathleen Fisher</td>
<td>Tufts University, formerly AT&amp;T Labs</td>
<td>CRA-W</td>
</tr>
<tr>
<td>Ann Gates</td>
<td>University of Texas El Paso</td>
<td>CAHSI (Founder)</td>
</tr>
<tr>
<td>Juan Gilbert</td>
<td>Clemson University</td>
<td>A4RC/EL Alliance</td>
</tr>
<tr>
<td>Deanna Kosaraju</td>
<td>Anita Borg Institute (ABI)</td>
<td>Grace Hopper Celebration</td>
</tr>
<tr>
<td>Richard Ladner</td>
<td>University of Washington</td>
<td>AccessComputing (Founder)</td>
</tr>
<tr>
<td>Manuel Pérez-Quiñones</td>
<td>Virginia Institute of Technology</td>
<td>CDC</td>
</tr>
<tr>
<td>Lucinda Sanders</td>
<td>National Center for Women in IT</td>
<td>NCWIT (CEO)</td>
</tr>
<tr>
<td>Bobby Schnabel</td>
<td>Indiana University</td>
<td>NCWIT/A4RC/Anita Borg Institute</td>
</tr>
<tr>
<td>Amy Sharma</td>
<td>Georgia Tech Research Institute</td>
<td>Former AAAS Fellow</td>
</tr>
<tr>
<td>George K. Thiruvathukal</td>
<td>Loyola University Chicago</td>
<td>STARS</td>
</tr>
<tr>
<td>Gloria Townsend</td>
<td>DePauw University</td>
<td>CRA-W, STARS, ABI</td>
</tr>
<tr>
<td>Elaine Weyuker</td>
<td>AT&amp;T Research</td>
<td>ACM-W</td>
</tr>
<tr>
<td>Telle Whitney</td>
<td>Anita Borg Institute</td>
<td>ABI (CEO), Grace Hopper Cel.</td>
</tr>
<tr>
<td>Bryant York</td>
<td>Portland State University</td>
<td>A4RC/CDC</td>
</tr>
</tbody>
</table>

Committee members include leaders of the ACM-W (Elaine Weyuker); the Computing Research Association and the CRA-W (Kathleen Fisher and Lori Clark); the Anita Borg Institute for Women and Technology and the Grace Hopper Celebration (CEO Telle Whitney and Deanna Kosaraju); the Coalition to Diversify Computing (Manuel Pérez-Quiñones, Bryant York; Valerie Taylor is not on the committee but has contributed to the planning); the Richard Tapia Celebration of Diversity and Computing (Bryant York, Juan Gilbert; Richard Tapia has also contributed to the planning), and the National Science Foundation (Jan Cuny, formerly Amy Sharma, formerly Teresa Dahlberg). Leaders of the NSF Broadening Participation in Computing (BPC) Alliances are also involved in the formation committee, including the STARS Alliance (Teresa Dahlberg), the Computing Alliance for Hispanic Serving Institutions CAHSI (Ann Gates), AccessComputing (Richard Ladner), the Alliance for African American Researchers in Computing (A4RC) (Maureen Biggers), and the National Center for Women and Information Technology (NCWIT) (CEO Lucy Sanders, Founder Bobby Schnabel).
5.2 Endorsement from BPC Organizations

From 2009-2010, the SIGBP Formation Committee held two open forums during NSF Broadening Participation in Computing (BPC) Community meetings. These forums included people involved in numerous organizations and activities related to BPC. The committee drafted the vision, mission, goals, and activities for the SIGBP, based on feedback from these forums and has since continued discussions with key stakeholders. In Fall of 2010, NSF awarded a grant to Teresa Dahlberg and George Thiravathukal to provide two years of support to complete and submit the SIGBP proposal to the ACM and to startup the activities of the SIG, should it be approved by the ACM.

In December 2010, NSF held a meeting of all 13 BPC Alliances (listed in Table 3, Appendix B). During that meeting, the 13 BPC Alliances agreed to support the SIGBP. Please note that these alliance leaders are people involved in many BP related initiatives, beyond the NSF-supported alliances. The BPC Alliances collectively represent national efforts to broaden the participation of women, minorities, and persons with disabilities through effective practices in K-12, higher education, research, corporations, and in collaboration with people in education and the social sciences.

Letters of endorsement for the SIGBP were collected when requesting NSF funding for the SIG and additional letters of endorsement were collected prior to this submission. At the time of this submission to ACM, 16 endorsement letters have been received from leaders of the following organizations. Letters are included at Appendix C.

- ACM SIGCSE
- ACM SIGITE
- AccessComputing
- Alliance for the Advancement of African-American Researchers in computing (A4RC)
- Anita Borg Institute for Women and Information Technology (ABI)
- Advancing Robotics Technology for Societal impact (ARTSI)
- Coalition to Diversify Computing (CDC)
- Commonwealth Alliance for information Technology Education (CAITE)
- Computing Research Association Committee on the Status of Women (CRA-W)
- Empowering Leaders (EL) Alliance and Richard Tapia
- Georgia Computes!
- Grace Hopper Regional Consortium
- Into the Loop
- National Center for Women and Information Technology (NCWIT)
- Natural Sciences and Engineering Research Council of Canada (NSERC)

The ACM SIGCSE leadership strongly supports the creation of the SIGBP and has posted a letter of endorsement on their website. The excerpts posted herein (in Section 4.3 part (1), above) provide a sound rationale of support that is written by the SIGCSE leadership.

The ACM SIGITE leadership similarly supports the creation of the SIGBP.

“*The mission of this burgeoning organization is important work and will provide a forum to create strategies for increasing the choice of computing as a career for individuals…SIGITE itself has explored these issues but recognize that an entity whose sole focus exists in this space will do a better job…*"
Likewise, CRA-W’s letter of endorsement makes it clear that their Committee strongly supports the proposal for the formation of a SIG that is focused on broadening participation in computing.

“We, the Committee strongly support the proposal for the formation of a SIG that is focused on broadening participation in computing. The CRA-W (and CRA) enjoy a strong partnership with ACM (and ACM-W) and participate in ACM activities. This SIG would give the Committee additional opportunities to collaborate with ACM such as co-locating CRA-W workshops at SIG BP conferences and symposiums, increasing the pool of potential program participants by sharing advertising channels, creating a central location for information and best practices for various program interventions and activities (such as mentoring, research programs, and data collection).”

Richard Ladner, Boeing Professor in Computer Science and Engineering, leader of the AccessComputing Alliance, and SIGACT Chair from 2005-2009 cites three important points that indicate “evidence of the demand for the SIGBP” particularly to support BPC scholarship, as follows:

“First, for the past year I have been co-editing a special issue on broadening participation of the ACM Transactions on Computing Education. The purpose of the special issue is to publish high quality scholarly papers that explore the problem of underrepresentation from an education point of view….we expected perhaps 15 proposals for papers. In the end we received 45 proposals...In my view there was a pent-up demand for people to expose their work in broadening participation to a wider audience. There is a significant group of scholars in computer science and the social sciences who are interested in educational interventions to improve the number of student from underrepresented groups in computing fields.

Second, last year I was asked by the Editorial Board of CACM to create a Viewpoints column on Broadening Participation. Since then there have been three Viewpoints articles by some of the most prominent people working on the problem, including Richard Tapia and Valerie Taylor. These three articles have a combined 1,250+ downloads to date. There is considerable interest in broadening participation beyond those active in the area.

Third, for a number of years the major organizations in computing, ACM, IEEE Computer Society, and the Computing Research Association (CRA) have placed a high priority on improving diversity within the computing fields. They established organizations such as ACM-W and CRA-W for women and the coalition to diversify Computing (CDC) for minorities. Technically, these are not membership organizations, but are more working groups with specific, mostly non-scholarly, activities. On the other hand, there is a growing group of computer and information scientists and some social scientists who are interested in the ‘science of broadening participation.’ This group of people creates and evaluates interventions that may or may not improve the participation of women, minorities, and people with disabilities in computing and other fields. There sorely needs to be a membership organization within ACM to sponsor conferences and publication nevus for people active in this area.”

While all letters of support are presented in full in Appendix C, below are a few selected and representative excerpts from the organizational letters that are worthy of note:

Coalition to Diversify Computing (CDC): “The CDC sees the SIGBP as an excellent complement to our activities. We organize the ACM-sponsored Richard Tapia Celebration of Diversity in Computing Conference, where contributions of the diverse members of the computing field are disseminated and celebrated. We expect that SIGBP will join CDC to continue to build the Tapia conference as the premier conference celebrating Diversity in
We also believe the contributions and results realized from our activities might be published through the archives provided by a SIGBP.

Advancing Robotics Technology for Societal Impact (ARTSI): “We are eager to have the ACM SIGBP. With their wide-ranging interests (computing, psychology, sociology, ethnic and gender studies, education, and human resources), ARTSI members will be able to seek out collaborators matching their interests, find useful resources via the ACM SIGBP portal (bpcportal.org), and to publish their broadening participation on one central place.”

Richard Tapia and the EL Alliance: “An organization that will enable colleagues engaged in this work to learn from others’ experiences, share our successes, and move forward on a national agenda to positively impact minority scholars is an extremely important undertaking. We look forward to being part of an overarching supportive SIGBP community that will strengthen efforts to broaden participation in computing (BPC). We anticipate productive collaboration with other existing BPC organizations, and understand the need for our community to come together as one voice in order to more effectively drive the BPC agenda at a national and international level.”

Jane Margolis – Into the Loop: “Issues of underrepresentation will not go away by themselves. As the interest in the field is reportedly growing, it is ever more important that intense focus and proactive action be taken to assure representation of all groups in computer science. These issues require skillful strategies to address them. They require interdisciplinary partnerships and investigations. Without this concentrated focus the issue will too likely get pushed to the side, largely because it is so difficult.

To assure that this does not happen, I strongly endorse the formation of a SIGBP, which can serve as an umbrella community organization to provide a centralized venue for communication, publication and support for the many existing efforts to broaden participation. The SIGBP is needed to provide a venue to assure that research on underrepresentation continues, that it learns from research in other fields, that best practices are gathered, evaluated, articulated, and disseminated.”

5.3 Endorsement from 300+ Prospective SIGBP Members

We created an online petition at http://bit.ly/sig-bp-form to support the formation of SIGBP. As of 22 August 2011, this petition has been signed by 309 distinct individuals. We asked respondents to check (or not check) one or more of the following boxes:

- I support formation of an ACM SIGBP (309/309)
- An ACM SIGBP would support my work (309/309)
- I would be willing to join the ACM SIGBP (309/309)
- I may volunteer to serve on the SIGBP organizing committee (136/309)

As shown in the parentheses above, all of the 309 individuals indicated agreement that they support formation of the SIGBP; that the SIGBP would support their work; and that they would be willing to join the SIGBP. 136 of these 309 individuals further indicated that they may volunteer to serve on the SIGBP organization committee.
These numbers point to significant interest in the ACM SIGBP. Our response rate was about 62% on the various mailing lists we targeted (i.e., the 309 people that signed the petition represented 62% of the people who opened up the petition link). We find this convincing evidence of a sustainable community for the SIGBP.

Furthermore, it is significant to point out that more than 100 of these endorsers sent comments about the potential value of SIGBP. Below are a few selections from these responses:

<table>
<thead>
<tr>
<th>Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>A much-needed networking opportunity for people who are passionate about broadening participation - to replace the NSF BP community meetings that are no longer held. Also a publication venue for BP initiatives and results.</td>
</tr>
<tr>
<td>Broadening the participation in Computing is one of the top priorities of the CS department at Cal Poly.</td>
</tr>
<tr>
<td>I have done a lot of work on promoting the participation of women in computing. This SIG would provide ACM support for that work. A symposium would give a venue for future research. The newsletter would provide a way to get the word out.</td>
</tr>
<tr>
<td>SIGBP could help to share ideas to help attract a student population to computing more reflective of the state demographics.</td>
</tr>
<tr>
<td>As a first generation college student and technical woman, this new SIG could provide the information necessary to recruit people from similar underrepresented backgrounds.</td>
</tr>
<tr>
<td>It would be nice to have a consolidated community focused around broadening participation. Right now, publications and people are spread across various other conferences and it's difficult to find and share work relevant to BP.</td>
</tr>
<tr>
<td>I'm the chair of a CS department, and my goal is to recruit and retain CS majors from underrepresented groups. The computing community needs SIGBP as an umbrella organization for all of the BPC initiatives sponsored by various organizations, institutions and funding agencies.</td>
</tr>
<tr>
<td>This group would offer an even more focused community than SIGCSE for the sharing and refinement of strategies that will broaden the cohort of computer scientists. The inevitable bubble/bust cycle of CS enrollments is at it again, but this SIG addresses the far more persistent problem of attracting people from all walks of life to professions involving computational creativity.</td>
</tr>
<tr>
<td>I am very involved in efforts to increase the participation of women and underrepresented minorities in computing throughout the education and workforce pipeline, and SIGBP would be a great asset to such efforts.</td>
</tr>
<tr>
<td>I've participated in a number of broadening participation project for several years, and plan to continue to do so... having a sig for the community will be a big help in sharing ideas and practices. I do work in assistive technology and associated research to broaden participation in computing. Having a SIG to support this would be great.</td>
</tr>
<tr>
<td>I have done a lot of work in the area and there is not really a vehicle to share best practices, ideas etc. we also need a more widespread effort to really make a difference.</td>
</tr>
<tr>
<td>As the PI on a NSF CISE BPC Alliance, this is a great forum for interacting with others with similar goals. It would give me a place to describe the outreach work I'm doing and get other CS and STEM faculty involved.</td>
</tr>
<tr>
<td>We are actively involved in numerous BPC projects and would welcome an opportunity to network with other like-minded organizations and individuals, and also to share our evaluation findings in a venue such as this.</td>
</tr>
<tr>
<td>Broadening participation is a goal of mine and that of all organizations that I belong to. A SIG focused on this would provide a forum for researchers in this area, assuming that a conference or magazine or journal is a product of this SIG.</td>
</tr>
<tr>
<td>I imagine that a SIGBP mailing list would benefit me in much the same way as I use the SIGCSE.</td>
</tr>
</tbody>
</table>
The following people have agreed to serve on the SIGBP organizing people if the SIGBP is provided provisional status. With the exception of Brian Blake, each of the following SIGBP Leadership Team members was an active member of the Formation Committee. This group collectively represents a wide range of broadening participation organizations including CDC, STARS, A4RC, ARTSI, NCWIT, ABI, CAHSI, and AccessComputing.

**Teresa Dahlberg**, UNC Charlotte, and STARS Alliance PI  
**Monica Anderson**, University of Alabama, ARTSI  
**Maureen Biggers**, Indiana University, A4RC PI, and NCWIT Academic Alliance Co-Chair  
**Brian Blake**, Notre Dame, and Chair, Coalition to Diversify Computing  
**Ann Condon**, University of British Columbia  
**Juan Gilbert**, Clemson, EL Alliance, AARC, and A4RC PI  
**Richard Ladner**, University of Washington and AccessComputing PI  
**Bobby Schnabel**, Dean Indiana University, NCWIT Leadership Team, A4RC  
**George K. Thiruvathukal**, Loyola University Chicago, STARS  
**Manuel Perez Quinones**, Virginia Tech, CAHSI, CDC

Of those 300+ people who electronically endorsed the formation of this SIGBP, seventy-five of them also indicated interest in serving on the organizing committee at some point in time. The names of these 75 people are listed in Appendix D. (The complete list of 309 names will be provided upon request.)
Appendix A
Figures

Figure 1. From CRA Taulbee Report: CS Enrollments, New Majors Up For Second Straight Year
http://www.cra.org/govaffairs/blog/2010/03/cra-taulbee-report-cs-enrollments-new-majors-up-for-2nd-straight-year/

Figure 2. From Computer Science Research Association (CSTA) College Board Data
http://csta.acm.org/
### Appendix A to Proposal to Create a Special Interest Group on Broadening Participation in Computing (SIGBP)

**Figure 3.** From the Computing Research Association (CRA) Taulbee Survey, 2007-2008
http://cra.org/

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Women</th>
<th>American Indian / Alaska Native</th>
<th>Asian</th>
<th>Black</th>
<th>White</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>10%</td>
<td>0%</td>
<td>10%</td>
<td>0%</td>
<td>70%</td>
<td>5%</td>
</tr>
</tbody>
</table>

**Figure 4.** From the Commission on Professionals in Science and Technology
http://www.cpst.org/

### Percent Women by Field and Degree Level

#### 2007 Degree Conferrals
- Associate’s
- Bachelor’s
- Master’s
- Doctorate’s

<table>
<thead>
<tr>
<th>Field</th>
<th>0%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
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<td>Social Sciences</td>
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**Parity Line: 50%**
Figure 5. From the National Center for Education Statistics, Digest of Education Statistics
http://nces.ed.gov/Programs/digest/

Additional data and graphs are found here: http://logos.cs.uic.edu/recruit/CSStatistics.htm
Appendix B
Tables

Table 1: Example Professional Groups for Women and Minorities

| Association of Computing Machinery Women (ACM-W) | http://women.acm.org |
| American Indian Higher Education Consortium | http://www.aihec.org |
| Association of Computer and Information Science Engineering Departments at Minority Institutions (ADMI) | http://admisusa.org/ |
| Black Data Processors Association | http://www.bdpa.org/ |
| Computing Research Association Women (CRA-W) in U.S. and Canada | http://www.cra-w.org/ |
| Information Technology Senior Management Forum | http://www.itsmfonline.org/ |
| Latinas in Computing | http://anitaborg.org/initiatives/systers/lic/ |
| National Action Council for Minorities in Engineering (NACME) | http://nacme.org/ |
| National Sciences and Engineering Research Council of Canada (NSERC) | http://www.nserc-crsng.gc.ca/ |
| National Society of Black Engineers | http://national.nsbe.org/ |
| Society Advancing Hispanics/Chicanos & Native Americans in Science | http://sacnas.org |
| Society of Hispanic Professional Engineers | http://oneshpe.shpe.org/wps/portal/national |
| Society of Women Engineers | http://societyofwomenengineers.swe.org/ |
| Systers | http://anitaborg.org/initiatives/systers/ |
| Women in Technology International | http://www.witi.com/ |
| Women in Technology, UK | http://www.womenintechnology.co.uk/ |
| Women of Color in Technology | http://www.womenofcolor.net/ |
### Table 2: Example National Communities, Coalitions, Nonprofits, and Initiatives

<table>
<thead>
<tr>
<th>National Community, Coalition, Nonprofit, or Initiative</th>
<th>Website</th>
</tr>
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<tbody>
<tr>
<td>Anita Borg Institute for Women and Technology - nonprofit</td>
<td><a href="http://anitaborg.org/">http://anitaborg.org/</a></td>
</tr>
<tr>
<td>Center for Minorities and People with Disabilities in Information Technology (CMD-IT)</td>
<td><a href="http://www.cmd-it.org/">http://www.cmd-it.org/</a></td>
</tr>
<tr>
<td>Coalition to Diversify Computing (CDC)</td>
<td><a href="http://www.cdc-computing.org/">http://www.cdc-computing.org/</a></td>
</tr>
<tr>
<td>Computer Science Teachers Association (CSTA)</td>
<td><a href="http://csta.acm.org/">http://csta.acm.org/</a></td>
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<td>dot diva</td>
<td><a href="http://www.dotdiva.org/">http://www.dotdiva.org/</a></td>
</tr>
<tr>
<td>Grace Hopper Celebration of Women and Computing</td>
<td><a href="http://gracehopper.org">http://gracehopper.org</a></td>
</tr>
<tr>
<td>Great Minds in STEM (formerly HENAAC) - nonprofit</td>
<td><a href="http://www.greatmindsinstem.org/">http://www.greatmindsinstem.org/</a></td>
</tr>
<tr>
<td>INROADS</td>
<td><a href="http://www.inroads.org/">http://www.inroads.org/</a></td>
</tr>
<tr>
<td>MentorNet – e-Mentoring for diversity in engineering and science</td>
<td><a href="http://mentornet.net/">http://mentornet.net/</a></td>
</tr>
<tr>
<td>National Action Council for Minorities in Engineering (NACME)</td>
<td><a href="http://www.nacme.org/">http://www.nacme.org/</a></td>
</tr>
<tr>
<td>National Consortium for Graduate Degrees for Minorities in Engineering and Science (GEM)</td>
<td><a href="http://www.gemfellowship.org">http://www.gemfellowship.org</a></td>
</tr>
<tr>
<td>National Girls Collaborative Project – Advancing the Agenda in Gender Equity for STEM - nonprofit</td>
<td><a href="http://www.ngcproject.org">http://www.ngcproject.org</a></td>
</tr>
<tr>
<td>National Lab Network</td>
<td><a href="http://www.nationallabnetwork.org/">http://www.nationallabnetwork.org/</a></td>
</tr>
<tr>
<td>NSF Broader Impacts for Research and Discovery Summit (BIRDS)</td>
<td><a href="http://www.nsfbirds.org">http://www.nsfbirds.org</a></td>
</tr>
<tr>
<td>Richard Tapia Celebration of Diversity and Computing</td>
<td><a href="http://tapiaconference.org">http://tapiaconference.org</a></td>
</tr>
<tr>
<td>STARS Celebration Student Leadership Conference</td>
<td><a href="http://starsalliance.org/starscelebration/">http://starsalliance.org/starscelebration/</a></td>
</tr>
<tr>
<td>Supercomputing Conference Broader Engagement Program</td>
<td><a href="http://sc10.supercomputing.org/">http://sc10.supercomputing.org/</a></td>
</tr>
<tr>
<td>Technology Student Association – for middle and high school students</td>
<td><a href="http://www.tsaweb.org/">http://www.tsaweb.org/</a></td>
</tr>
</tbody>
</table>

### Table 3: The National Science Foundation BPC Alliance

<table>
<thead>
<tr>
<th>National Community, Coalition, or Initiative</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access Computing – for persons with disabilities</td>
<td><a href="http://www.washington.edu/accesscomputing">www.washington.edu/accesscomputing</a></td>
</tr>
<tr>
<td>Advancing Robotics Technology for Societal Impact (ARTSI)</td>
<td><a href="http://www.artsialliance.org">www.artsialliance.org</a></td>
</tr>
<tr>
<td>Alliance for the Advancement of African-American Researchers in Computing (A4RC)</td>
<td><a href="http://www.a4rc.org">www.a4rc.org</a></td>
</tr>
<tr>
<td>Caribbean computing Center for Excellence (CCCE)</td>
<td><a href="http://ccce.suagm.edu/">http://ccce.suagm.edu/</a></td>
</tr>
<tr>
<td>Commonwealth Alliance for Information Technology Education (CAITE)</td>
<td><a href="http://caite.cs.umass.edu">http://caite.cs.umass.edu</a></td>
</tr>
<tr>
<td>Computing Alliance for Hispanic Serving Institutions (CAHSI)</td>
<td><a href="http://cahsi.fiu.edu">http://cahsi.fiu.edu</a></td>
</tr>
<tr>
<td>Empowering Leadership Alliance (EL Alliance)</td>
<td><a href="http://empoweringleadership.org">http://empoweringleadership.org</a></td>
</tr>
<tr>
<td>Georgia Computes!</td>
<td><a href="http://www.georgiocomputes.org">www.georgiocomputes.org</a></td>
</tr>
<tr>
<td>Grace Hopper Regional Consortium</td>
<td><a href="http://anitaborg.org/initiatives/grace-hopper-regional-consortium/">http://anitaborg.org/initiatives/grace-hopper-regional-consortium/</a></td>
</tr>
<tr>
<td>Into the Loop</td>
<td><a href="http://intotheloop.gseis.ucla.edu">http://intotheloop.gseis.ucla.edu</a></td>
</tr>
<tr>
<td>National Center for Women and Information Technology (NCWIT) – nonprofit</td>
<td><a href="http://www.ncwit.org">http://www.ncwit.org</a></td>
</tr>
<tr>
<td>Students &amp; Technology in Academia, Research and Service (STARS) Alliance</td>
<td><a href="http://www.starsalliance.org">www.starsalliance.org</a></td>
</tr>
<tr>
<td>Widening the Research Pipeline (CRA and CDC)</td>
<td><a href="http://www.cdc-computing.org">www.cdc-computing.org</a></td>
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Table 4: Examples of Publications that Inform BPC Research

<table>
<thead>
<tr>
<th>Publication</th>
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<tbody>
<tr>
<td>ACM Proceedings of the ACM Technical Symposium on Computer Science Education (SIGCSE)</td>
</tr>
<tr>
<td>ACM Proceedings of the International Innovations and Technology in Computer Science Education Conference (ITiCSE)</td>
</tr>
<tr>
<td>ACM Transactions on Computing Education</td>
</tr>
<tr>
<td>American Behavioral Scientist</td>
</tr>
<tr>
<td>American Educational Research Journal</td>
</tr>
<tr>
<td>American Journal of Community Psychology</td>
</tr>
<tr>
<td>American Sociological Review</td>
</tr>
<tr>
<td>Annual Review of Psychology</td>
</tr>
<tr>
<td>Computers &amp; Education</td>
</tr>
<tr>
<td>Computer Science Education</td>
</tr>
<tr>
<td>Contemporary Sociology</td>
</tr>
<tr>
<td>Education Policy Analysis Archives</td>
</tr>
<tr>
<td>Educational Studies in Mathematics</td>
</tr>
<tr>
<td>IEEE Proceedings of the Frontiers in Education Conference</td>
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<tr>
<td>IEEE Transactions on Engineering Education</td>
</tr>
<tr>
<td>Industrial and Labor Relations Review</td>
</tr>
<tr>
<td>Journal of Black Psychology</td>
</tr>
<tr>
<td>Journal of Computing in Small Colleges</td>
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<tr>
<td>Journal of Computing Sciences in Colleges</td>
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<tr>
<td>Journal of Educational Computing Research</td>
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<tr>
<td>Journal of Engineering Education</td>
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<tr>
<td>Journal of Health and Social Behaviors</td>
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<tr>
<td>Journal of Higher Education</td>
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<tr>
<td>Journal of Language and Communication</td>
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<tr>
<td>Journal of Negro Education</td>
</tr>
<tr>
<td>Journal of Personality and Social Psychology</td>
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<tr>
<td>Journal of Research in Science Teaching</td>
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<tr>
<td>Journal of Women and Minorities in Science and Engineering</td>
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<tr>
<td>Learning Communities Journal</td>
</tr>
<tr>
<td>Organizational Behavior and Human Decision Processes</td>
</tr>
<tr>
<td>School Science and Mathematics</td>
</tr>
<tr>
<td>Sex Roles: A Journal of Research</td>
</tr>
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Appendix C
Endorsement Letters

Letters of support for the ACM SIGBP are included from the following individuals.

1. Renee McCauley, ACM SIGCSE Chair 2010-2013
2. Mark Guzdial, former AMC SIGCSE Chair, Georgia Computes! Principal Investigator (PI)
3. Mark Stockman, ACM SIGITE Chair
4. Richard Ladner, former ACM SIGACT chair; Editor for ACM TOCE Special Issue on Broadening Participation; and AccessComputing PI
5. Brian Blake, Chair, Coalition to Diversify Computing (CDC)
6. Carla Brodley and Kathleen Fisher, CRA-W Co-Chairs
7. Anne Condon, University of British Columbia, and Julita Vasseliva, Cameco NSERC Chair for Women and Science and Engineering
8. Teresa Dahlberg, STARS Alliance PI
9. Chutima Boonthum-Denecke, David Touretzky, Elva Jones, Monica Anderson, and Clement Allen, ARTSI Executive Committee and PIs
10. W. Richards Adrion, CAITE PI
12. Gloria Townsend, Grace Hopper Regional Consortium PI
13. Lucinda Sanders, CEO and co-founder of NCWIT
14. Telle Whitney, President and CEO Anita Borg Institute for Women and Technology
15. Amy Sharma, former AAAS Fellow assigned to NSF BPC program
16. Maureen Biggers, A4RC program manager, NCWIT Leadership Team,…
17. Juan Gilbert, several BPC organizations
18. Jane Margolis, Into the Loop Alliance PI, author of BPC books (Unlocking the Clubhouse and Stuck in the Shallow End)
Date: February 11, 2011

To: ACM SIGBP Formation Committee

The Executive Board of the ACM Special Interest Group on Computer Science Education (SIGCSE) supports the formation of a new ACM Special Interest Group on Broadening Participation (SIGBP).

SIGCSE provides a forum for educators to discuss issues related to the development, implementation, and/or evaluation of computing programs, curricula, and courses, as well as syllabi, laboratories, and other elements of teaching and pedagogy. SIGCSE is the premier organization for computing education. It serves computer science teaching and education research faculty at all levels, and several of its activities focus on making introductory computing effective. SIGCSE collaborates with the Computer Science Teachers Association (CSTA) and with other teaching-oriented organizations in working to shape and improve computing education at all levels worldwide.

SIGCSE is interested in extending the reach and influence of computing and promoting computing education. SIGCSE leaders serve on various ACM Education committees. SIGCSE collaborates with CSTA, and has worked with CSTA on an NSF grant. SIGCSE has held a conference (ITiCSE) outside of the US annually since 1996. Our ICER workshop is held outside of the US every other year; in 2010 it was held in Denmark; in 2012 it will be held in New Zealand. SIGCSE grants in-cooperation status to numerous conferences, including the CCSC conferences, Koli Calling, and AAAI. Broadening participation efforts are in line with our goals of promoting and improving computing education broadly.

We are happy to write this letter to support the formation of the ACM SIGBP. As an organization of computing educators, we realize that there is need for a broad population engaged and educated in computing. Our conferences, including the SIGCSE Symposium, ITiCSE, and ICER, often include papers on broadening participation in computing. Our members hold leadership roles in NCWIT, NSF BPC and CPATH projects.

Although we feel very connected and committed to broadening participation in education, there are important communities that we do not serve and issues that we do not consider. There are issues of broadening participation in the workforce, for example, changing cultures to make it more appealing for people of all backgrounds to work and stay in computing fields. Raising interest in computing for people of all ages, from children to retirees, is not just a computing education effort. Researching methods for broadening participation in computing requires an understanding of a broader base of social science and computing research that overlaps with computing education research but has a different focus.
Related to these issues, we believe that there will be great benefit in creating a community of computing researchers that can advance the field of broadening participation through research. There is a need to establish rigor in this research area. There is a need for a community within which those interested in broadening participation can collaborate. The existence of SIGBP will bring respect to this research area and encourage others to pursue this area of study. Its existence will add credibility to the field.

We support the formation of an ACM SIGBP and look forward to working together in the future.

Sincerely yours,

[Signature]

Renée McCauley, on behalf of the SIGCSE Board
SIGCSE Chair, 2010-2013
Professor of Computer Science
College of Charleston
mccauleyr@cofc.edu
July 7, 2011

Maureen Biggers  
Assistant Dean for Diversity and Education  
IU School of Informatics and Computing  
919 E. 10th Street  
Bloomington, IN 47408

Dear Maureen:

I am writing in support of the creation of an ACM Special Interest Group for Broadening Participation, SIGBP. I serve on the board of SIGCSE (Computer Science Education), so I am well familiar with ACM SIG’s, but I write this letter myself, not as a SIGCSE board member. SIGBP is important to establish to provide a venue and focus for work in Broadening Participation.

Broadening participation is an important area of research associated with a variety of disciplines. There is a lot of broadening participation research associated with education, and a good bit of it is published at the SIGCSE Symposium (and its associated, smaller forums). However, the broadening participation research that gets published at the SIGCSE Symposium informs introductory computing. Broadening participation research associated with other areas often doesn’t get into the SIGCSE Symposium, and thus, might not get published at all.

I am the Director of an NSF BPC funded alliance, “Georgia Computes!” In our work, we study issues like middle school student attitudes about computing, and how high school teachers recruit students into their classes. Both of these topics are important for understanding how to broaden participation in computing, but are unlikely to appear at the SIGCSE Symposium or similar conferences. Broadening participation needs its own forum to give a home to important work in this area that might not appear in any other ACM forum.

I encourage the ACM SIG Board to approve the establishment of SIGBP. It’s important for fur-
thering the goals of broadening participation in computing.

Best regards,

Dr. Mark Guzdial
Professor
School of Interactive Computing
College of Computing
Georgia Institute of Technology
August 24, 2011

Maureen Biggers  
Assistant Dean for Diversity and Education  
IU School of Informatics and Computing  
919 E. 10th Street  
Bloomington, IN 47408

Dr. Biggers:

Accept this letter as support for the creation of a Special Interest Group for Broadening Participation from the Executive Committee of the ACM Special Interest Group for Information Technology (SIGITE). The mission of this burgeoning organization is important work and will provide a forum to create strategies for increasing the choice of computing as a career for individuals, particularly amongst groups who historically are not well represented in the industry. SIGITE itself has explored these issues but recognize that an entity whose sole focus exists in this space will do a better job at tackling the problem.

SIGITE has a track record of publishing research on the pedagogy of IT education. Our members strive to create relevant curricula and formulate best practices for teaching students so they can become competent life-long learners in the applied computing field of IT. The investigation of the stated efforts of the Broadening Participation group will assist in our own efforts of not only getting involvement from under-represented populations but also in the retention of them towards the advancement of the discipline.

For any questions about this support, please feel free to contact me (mark.stockman@acm.org/513.556.4227).

Mark Stockman  
Chair, ACM-SIGITE
November 10, 2010

Dr. Teresa Dahlberg  
University of North Carolina Charlotte  
College of Computing and Informatics  
9201 University City Blvd.  
Charlotte, NC 28223

Dear Teresa,

I am pleased to learn about your efforts to create an ACM Special Interest Group on Broadening Participation (SIGBP). I am a strong supporter of this concept and would be pleased to be a member, and if time permits, an officer. For four years I was SIGACT chair from 2005-2009, so I am familiar with what SIGS do and how they are created and evaluated. I would like to give you some evidence of the demand for the SIGBP to strengthen your case for its creation.

First, for the past year I have been co-editing a special issue on broadening participation of the ACM Transactions on Computing Education. The purpose of the special issue is to publish high quality scholarly papers that explore the problem of underrepresentation from an education point of view. We expected papers to be expository helping readers understand the causes of underrepresentation or descriptive giving educational practices that have improved the participation and success of underrepresented groups. When we announced the special issue in summer 2009 we expected perhaps 15 proposals for papers. In the end we received 45 proposals. In the end, we invited 15 papers to be submitted and the final special issue will appear in two volumes of 13 papers total. In my view there was a pent-up demand for people to expose their work in broadening participation to a wider audience. There is a significant group of scholars in computer science and the social sciences who are interested in educational interventions to improve the number of student from underrepresented groups in computing fields.

Second, last year I was asked by the Editorial Board of CACM to create a Viewpoints column on Broadening Participation. Since then there have three Viewpoints article by some of the most prominent people working on the problem, including Richard Tapia and Valerie Taylor. These three articles have a combined 1,250+ downloads to date. There is considerable interest in broadening participation beyond those active in the area.

Richard E. Ladner, Boeing Professor in Computer Science and Engineering  
Paul G. Allen Center for Computer Science & Engineering  
Box 352350  Seattle, WA 98195-2350  
Tel 206.543.9347  fax 206.543.2969  ladner@cs.washington.edu
Third, for a number of years the major organizations in computing, ACM, IEEE Computer Society, and the Computing Research Association (CRA) have placed a high priority on improving diversity within the computing fields. They established organizations such as ACM-W and CRA-W for women and the Coalition to Diversify Computing (CDC) for minorities. Technically, these are not membership organizations, but are more working groups with specific, mostly non-scholarly, activities. On the other hand, there is a growing group of computer and information scientists and some social scientists who interested in the “science of broadening participation.” This group of people creates and evaluates interventions that may or may not improve the participation of women, minorities, and people with disabilities in computing and other field. There sorely needs to be a membership organization within ACM to sponsor conferences and publication venues people active in this area.

As with every new SIG, its creation will be provisional until it is on its feet. I trust your leadership to make it happen and I will help in anyway I can. I have been to many SIG Governing Board meetings that helps set policy for the SIG activities of ACM. Generally, most people at these meetings are sympathetic to broadening participation, but there is no representative of the people who are actively engaged in broadening participation activities. Having such a person will help all ACM SIG with their individual efforts to broaden their memberships to underrepresented groups.

Sincerely,

Richard E. Ladner
Boeing Professor in Computer Science and Engineering
To: ACM SIGBP Formation Committee

As chair of the Coalition to Diversify Computing (CDC), I write this letter in support of the formation of a SIGBP. As a joint organization of the ACM, CRA and IEEE-CS, the CDC develops projects towards:

- Recruitment of minority undergraduates to MS/PhD. programs
- Retention of minority graduate students enrolled in MS/PhD. programs
- Transition of minority MS/PhD. graduates into academia and industry

The CDC has a 10-member executive committee with a general membership of over 45 members from academic, corporate, and nonprofit organizations. The CDC sees the SIGBP as an excellent complement to our activities. We organize the ACM-sponsored Richard Tapia Celebration of Diversity in Computing Conference, where contributions of the diverse members of the computing field are disseminated and celebrated. We expect that SIGBP will join CDC to continue to build the Tapia conference as the premier conference celebrating Diversity in Computing. In addition, we have over a dozen other diversity programs and initiatives that might help to add content to the information that the SIGBP will disseminate. We also believe the contributions and results realized from our activities might be published through the archives provided by a SIGBP. Ultimately, we hope that the SIGBP will continue to raise the profile of diversity activities across the computing community such that all diversity-related organizations will continue to flourish.

I personally plan to contribute to the leadership of the SIGBP and, to the extent they have the personal bandwidth, will encourage CDC members to contribute. Please do not hesitate to contact me for additional information.

M. Brian Blake
Chair, Coalition to Diversify Computing
Professor of Computer Science and Engineering
Associate Dean of Engineering, Research
University of Notre Dame
June 15, 2011

ACM SIGBP Formation Committee
c/o Maureen Biggers
IU School of Informatics and Computing
919 E. 10th Street.
Bloomington, IN 47408

Re: Proposed ACM SIGBP

Dear Dr. Biggers:

Please accept this letter of support for the proposed ACM SIGBP on behalf of the Computing Research Association’s Committee on the Status of Women in Computing Research (CRA-W). CRA-W was established in 1991 with the goal of taking positive action to increase the number and success of women in the Computer Science and Engineering research pipeline. CRA-W is an action-based committee made up of prominent, dedicated, senior women. CRA-W members are volunteers who give of their time and energy to design and implement projects and to secure funding needed to sustain those projects. CRA-W programs have had a direct impact on over 4200 women and over 240 minorities, and indirectly influenced thousands of others.

Because of CRA-W’s commitment to the advancement of underrepresented groups through the computing research pipeline, the Committee strongly supports the proposal for the formation of a SIG that is focused on broadening participation in computing. The CRA-W (and CRA) enjoy a strong partnership with ACM (and ACM-W) and participate in ACM activities. This SIG would give the Committee additional opportunities to collaborate with ACM such as co-locating CRA-W workshops at SIG BP conferences and symposiums, increasing the pool of potential program participants by sharing advertising channels, creating a central location for information and best practices for various program interventions and activities (such as mentoring, research programs, and data collection).

The CRA-W is pleased to support the creation of this new SIG and will encourage CRA-W participants to also consider joining this effort.

Sincerely,

Carla Brodley, CRA-W Co-Chair
Kathleen Fisher, CRA-W Co-Chair
To the ACM SIGBP Formation Committee:

It is a pleasure to support the formation of ACM SIGBP, a special interest group with a focus on broadening participation in computing. The proposed goals of SIGBP are synergistic with the goals of ACM and aim to advance the field of computing by enabling our community to attract talented people with diverse perspectives.

As Canadians, we see many benefits of an organization that can connect people worldwide who are engaged in work to broaden participation in computing. To provide some context, we describe some of the initiatives in Canada with which we are most familiar. In Canada, five regional NSERC Chairs for Women in Science and Engineering lead much of the work on supporting women and other underrepresented groups in these fields. As the current Cameco NSERC Chair for the Prairie region, one of us, Julita Vassileva, is developing several programs to engage underrepresented groups in computing, including an aboriginal outreach program. Similar programs can be found in other parts of Canada. As the previous NSERC/General Motors Canada Chair for BC and the Yukon, one of us, Anne Condon, supported the CRA Canadian Distributed Mentor Program, which provided research experiences for undergraduate women in computer science and computer engineering. UBC’s Computer Science Department has made significant progress in developing programs and curricula that encourage broad participation in computing, such as its BCS program that enables mature students and recent university graduates to make a career transition into information technology. Over 40% of the students who have participated in the program have been women. Overall, 22% of students in UBC CS’s programs are women, double the average at North American PhD-granting institutions.

We note that while several European countries are similar to the U.S. and Canada with regard to low participation of women, others have much higher participation. Opportunities for dialogue across cultural and geographic boundaries would help us sharpen hypotheses on why participation of women and certain ethnic groups in computing is so low, and would strengthen efforts to address the underlying causes.

SIGBP would provide valuable forums for information sharing and community building, such as a symposium with refereed papers that are archived in ACM’s Digital Library, a
repository of best practices, and a list of enrichment and mentoring experiences for students. In Canada, the proposed SIGBP symposium could be co-located with the bi-annual conference of the Canadian Coalition of Women in Engineering, Science, Trades and Technologies. Both of us have published papers on our work at this conference.

ACM has already demonstrated its commitment to fostering dialogue and action on broadening participation, for example through the work of ACM-W, sponsorship of the Tapia conference, and the broadening participation column in CACM. SIGBP would greatly strengthen and focus ACM’s efforts to date. For those of us outside of the U.S., SIGBP would provide valuable access to ideas, people, and resources on broadening participation. The opportunity to participate and present at a SIGBP symposium would also lend weight to the work that we are doing, enhancing its value to our departments. We look forward to participating in SIGBP activities in the near future.

Sincerely,

Anne Condon
Professor, Department of Computer Science, UBC

Julita Vasseliva
Professor,
Cameco NSERC Chair for Women in Science and Engineering
August 26, 2011

To the ACM Board Considering the Proposal to Create an ACM SIGBP:

The Students and Technology in Academia, Research, and Service (STARS) Alliance fully supports the formation of an ACM Special Interest Group on Broadening Participation in Computing (SIGBP).

The STARS Alliance was established in 2005 as a consortium of 10 Southeastern colleges and universities with a mission to broaden participation in computing through student-led regional engagement. The Alliance grew to 20 academic members in 2008, and now includes 31 colleges and universities nationwide. The Alliance has attracted $9 million to fund its expansion to at least 50 academic members by 2016, and will be sustained through the formation of a 501c3 nonprofit organization.

Each of the STARS academic members implements the STARS Leadership Corps, an academic program that engages computing college students in partnership with industry professionals, K-12 schools, and professional and community organizations to undertake community-based projects that aim to strengthen the K-20 pipeline to the computing workforce.

To date, over 1,000 computing college students, from majority and minority demographic groups, have participated in the STARS Leadership Corps from 40 colleges and universities. Student projects have involved over 30,000 K-12 students, teachers, and parents, as well as hundreds of business and community partners.

STARS academic members show enrollment and graduation trends that exceed the national averages for computing. For example, STARS institutions with PhD programs in computing that implemented the Corps for at least three years, experienced an increase of 32% in enrollments in their computing PhD programs during a timeframe when the Taulbee survey showed a national increase of only 2%.

The STARS Alliance would benefit from the formation of an ACM SIGBP. A key tenet of STARS is to encourage college students to become involved with their computing community – E.g., through service learning, research experiences for undergraduates, professional development opportunities, and computing conferences. The SIGBP would provide a visible reference to opportunities for student participation. Furthermore, STARS faculty comprise a rich team of computer scientists and social scientists contributing to the science of broadening participation in computing. We need a peer-reviewed publication focused on BPC research within the computing research community.
We have just held the sixth annual STARS Celebration – an annual student leadership conference hosted by the STARS Alliance. The conference draws over 300 faculty, student, and professional participants each year and has become a venue for developing students’ technical excellence, leadership, sense of being a part of a computing community, and sense of civic engagement related to computing (www.starsalliance.org/celebration). We would gladly support co-locating the ACM SIGBP annual meetings with the STARS Celebration.

Finally, the STARS Alliance faculty members and industry collaborators include highly accomplished computing researchers who are active supporters of BPC. As such, the STARS community will provide much needed support for growing a SIGBP into a healthy organization.

Sincerely,

Teresa A. Dahlberg
Dear The ACM SIGBP Formation Committee,

We, the ARTSI Alliance, are delighted to support the formation of an ACM Special Interest Group for Broadening Participation (SIGBP) to promote research, technologies, practices and policies for increasing the participation of women, under-represented minorities and persons with disabilities in computing. SIGBP activities aim to foster collaboration, dissemination, and support among organizations, programs and people seeking to broaden participation.

The ARTSI Alliance (Advancing Robotics Technology for Societal Impact), an NSF-funded BPC alliance, is a consortium of Historically Black Colleges and Universities (HBCUs) and Major Research Universities (R1s) working together to increase African American participation in computer science with a focus on robotics. HBCU institutions include Spelman College, Hampton University, Florida A&M University, the University of the District of Columbia, Morgan State University, Norfolk State University, Winston-Salem State University, the University of Arkansas-Pine Bluff, Tennessee State University, Elizabeth City State University, North Carolina A&T, Jackson State University, Howard University, Fort Valley State University, Virginia State University, University of Maryland Eastern Shore, and Bowie University. R1 members include Carnegie Mellon University, Georgia Institute of Technology, Brown University, Duke University, the University of Alabama, the University of Pittsburgh, Rice University, the University of Pennsylvania, and the University of Michigan.

Our mission is to provide education and research opportunities to engage undergraduate students from non-traditional backgrounds in the study of robotics in areas that are relevant to society. And our four goals are to:

1. Increase the number of underrepresented (primarily African American) students who pursue advanced training in computer science or robotics.
2. Increase the institutional capacity of HBCUs to offer educational experiences in robotics.
3. Build an active community of HBCU faculty and students who collaborate with each other and with R1 faculty on robotics teaching and research.
4. Conduct outreach activities for the broader public to increase awareness of and interest in African American achievement in robotics, and recruit new students to the pipeline.

ARTSI activities are nicely aligned with the SIGBP effort. For example, our robotics course curriculum and robotics competition has been shown to attract students, and by keeping them involved, these students remain in the computing program. The ARTSI REU program provides opportunities for HBCU students to work closely with Research I faculty and graduate students. The ARTSI annual conference is a way for our HBCU students to show off their success over the year through (i) presentation research projects (from their summer REU research at an R1 institution, or from a course project, or research done at their home institute); (ii) robotics
competition, and (iii) Computer Science Olympiad. The ARTSI conference and conference proceedings could certainly be co-sponsored by ACM SIGBP.

Our commitment in supporting ACM SIGBP, upon its formation, will be as follows (but not limited to):

- The ARTSI Alliance will provide materials or links to resources for robotics curriculum, best practices in outreach using robotics as a tool, and ARTSI robotics workshop-in-a-box.
- We will encourage our ARTSI faculty to join ACM SIGBP and support a selected group of ARTSI students to join ACM SIGBP.
- The ARTSI annual conference can be co-sponsored by ACM SIGBP.
- The upcoming ARTSI annual conference proceedings can be co-sponsored by ACM SIGBP.
- We will encourage our ARTSI faculty and students to participate in and benefit from ACM SIGBP-sponsored conference(s).

We are eager to have the ACM SIGBP. With their wide-ranging interests (computing, psychology, sociology, ethnic and gender studies, education, and human resources), ARTSI members will be able to seek out collaborators matching their interests, find useful resources via the ACM SIGBP portal (bpcportal.org), and to publish their broadening participation in computing work through ACM SIGBP-sponsored publications.

In addition to this letter, should there be anything the ARTSI Alliance can do or provide to support the formation of ACM SIGBP, please let us know.

Best Wishes,

ARTSI Executive Committee

The ARTSI Executive Committee Members:
Chutima Boonthum-Denecke (lead PI), Hampton University
David Touretzky (lead co-PI, R1), Carnegie Mellon University
Elva Jones (lead co-PI, HBCU), Winston-Salem State University
Monica Anderson (elected Executive Committee member, R1), the University of Alabama
Clement Allen (elected Executive Committee member, HBCU), Florida A&M University
June 29, 2011

ACM SIGBP Formation Committee

To all:

I am pleased to support your proposal to form an ACM Special Interest Group for Broadening Participation (SIGBP). Your goal to advance innovation and discovery in science, technology, engineering and math by increasing and broadening participation in computing is completely consistent with the goal of the Commonwealth Alliance for Information Technology Education (CAITE).

The NSF CISE BPC Commonwealth Alliance for Information Technology Education is designing and carrying out comprehensive programs that address under-representation in information technology (IT) education and the workforce. CAITE focuses on women and minorities in groups that are underrepresented in the Massachusetts innovation economy; that is, economically, academically, and socially disadvantaged residents. CAITE is one of a dozen CISE BPC alliances and the only one that directly addresses community college to 4-year college pathways. Community colleges serve as gateways for underserved regions and communities into IT and STEM careers by providing a local, affordable, flexible and supportive learning environment for students, many of whom are first-generation college students who must work and/or support families when beginning their education.

CAITE has 15 partners: the four University of Massachusetts non-medical campuses; Worcester and Bridgewater state universities; and Bristol, Bunker Hill, Cape Cod, Greenfield, Holyoke, Middlesex, Northern Essex, Springfield Technical, and Roxbury community colleges. CAITE works closely with most of the CISE BPC Alliances and particularly AccessComputing, CRA-W/CDC BP Pipeline, EL Alliance, Grace Hopper Regional Consortium, GA Computes! and NCWIT with whom we have had joint activities. Over the last 4 years, CAITE has reached more than 12,500 students and more than 700 educators at 200+ events and activities. CAITE partners have seen a growth in community college IT enrollment of 56%, 66% in transfer programs, and have observed an increase in URM enrollment (88% at community colleges and 60% overall).

While the community of people actively working to broaden participation is growing, we need an organization that can serve as a forum and focus for BP issues and that will continue to convene the community regularly. A SIGBP would benefit CAITE as it moves from a regional to a national activity focused on stronger pathways to computing education and careers. SIGBP will expand our reach, serve as an outlet for CAITE best practices, and enable more collaboration. We look forward to organizing joint CAITE/ACM SIGBP activities.

As Principal Investigator for CAITE I look forward to actively participating in SIGBP. Renee Fall, the CAITE Project Manager, and I will serve as points of contact.

Sincerely,

W. Richards Adrion
Professor of Computer Science, PI, CAITE
310 Computer Science Bldg., 140 Governor's Drive
University of Massachusetts Amherst
Amherst, MA 01003-4610
July 12, 2011

Dear Maureen,

It is with great enthusiasm that I offer my endorsement on behalf of the Empowering Leadership Alliance (ELA) for a new ACM special interest group for broadening participation (ACM SIGBP). ELA’s mission is to increase the number of students from groups with long-standing underrepresentation that receive undergraduate and graduate degrees in the computing disciplines. Our organization provides resources and opportunities that support students at research universities to flourish in the discipline through local, regional, and national efforts depending on the size of the university minority community. Our achievements include establishing strong student chapters at partner universities, hosting regional conferences in New England for the past three years, offering live webinars for our national community, and leveraging national conferences to connect our members with the larger computing community.

Many organizations across the country have similar missions and common goals as the ELA. An organization that will enable colleagues engaged in this work to learn from others’ experiences, share our successes, and move forward on a national agenda to positively impact minority scholars is an extremely important undertaking. We look forward to being part of an overarching supportive SIGBP community that will strengthen efforts to broaden participation in computing (BPC). We anticipate productive collaboration with other existing BPC organizations, and understand the need for our community to come together as one voice in order to more effectively drive the BPC agenda at a national and international level.

Again, I fully support the forming of a new ACM special interest group, SIGBP. Please let me know how I might support these efforts as we move forward.

Sincerely,

Richard Tapia
University Professor
Maxfield and Oshman Professor in Engineering
Director of Empowering Leadership Alliance
Rice University
To:       the ACM SIGBP Formation Committee

From:     Gloria Townsend (for the Grace Hopper Regional Consortium)

Re:       letter of support

Date:     October 19, 2010

The vision of the Grace Hopper Regional Consortium (GHRC) is to bring the positive impact of national platforms to diversity-rich local populations by creating self sustaining communities (e.g. regional conferences, ACM-W student chapters) that feed into the larger events, both building local momentum and creating a two way flow of information between regional and existing national infrastructures. Focusing on women (as well as regions) serves a population powerfully united by gender, yet diverse in experience, with personal stories varying by race, ethnicity, disability, and sexual orientation. The GHRC will build momentum toward a tipping point of cultural change in stereotypes about gender and computing. SIGBP goals include fostering collaboration and support for organizations that share objectives such as those that the preceding GHRC vision indicates.

By the close of 2012, the consortium will consist of sixteen regional areas, bolstered by sixteen biennial conferences (regional celebrations of women in computing). Approximately two thousand female students will attend the conferences, although individual students who attend the conferences will change, as many students will graduate and leave the area to attend graduate school or to seek employment in another state and new graduate and undergraduate students will matriculate at the member schools. A loyal core of local industry sponsors, conference coordinators, program committee members and additional faculty members attend the conferences year after year and support regional activities such as ACM-W chapters, during the months that surround the regional conferences. SIGBP could co-sponsor any of the sixteen conferences.

SIGBP could further benefit the GHRC by:
1) Aiding in locating avenues for dissemination, including the proposed BP digital library and symposium
2) Helping publicize our conferences, especially through the proposed BP newsletter
3) Establishing a speakers' pool for our conferences
4) Allowing the consortium to reach out to high school girls – a goal that proposed GHRC conferences will pursue but that has remained elusive to date
5) Raising the visibility of our conferences, to foster sustainability at the conclusion of our NSF grant
To: The ACM SIGBP Formation Committee

From: Lucy Sanders – CEO and Co-Founder, NCWIT

Re: Letter of Support

Date: November 6th, 2010

The National Center for Women & Information Technology (NCWIT – www.ncwit.org) is a multi-stakeholder coalition of almost 225 prominent corporations, academic institutions, government agencies, and non-profits working to increase girls’ and women’s participation in computing. We believe that inspiring more women to choose IT careers will create a larger and more competitive workforce, and will foster the design of technology that is as broad and innovative as the population it serves.

NCWIT is an organization of organizations, spanning the country and providing a unique infrastructure for program implementation. A learning organization, NCWIT member organizations address reform along the entire educational and career pipeline, with programs in K-12 education, college-level outreach and curriculum reform, corporate recruitment and retention, and entrepreneurial endeavors. Together, we can make a bigger difference than if each organization acted alone. ACM and ACM-W have been active in NCWIT since its inception and ACM CEO John White serves on the NCWIT Leadership Team.

NCWIT supports the formation of a SIGBP for many reasons, just a few of which are listed below:

• ACM SIGs have an international reach with the potential to unify efforts across the globe. A multi-national perspective is increasingly critical for our collective efforts to broaden participation in computing; this is missing in many of our programs today.
• Our community needs the ACM SIG Proceedings publication structure through which scholarly research concerning broadening participation in computing can be reviewed, published and archived.
• We need an annual gathering for all broadening participation efforts and the ACM SIG structure is an established and effective framework for accomplishing this goal.

Thank you for your consideration of this request.
Sincerely,

Lucinda M. Sanders
May 7, 2010

Teresa Dahlberg, Director, STARs Alliance

Dear Teresa:

This letter indicates the involvement and support of the Anita Borg Institute in the SIGBP effort.

The Anita Borg Institute for Women and Technology (ABI) is a non-profit organization. At ABI we believe in a world where women are equally represented throughout the pipeline, including undergraduate, graduate, and academic and industry professionals. One of the best known programs of ABI is the Grace Hopper Celebration of Women in Computing Conference (GHC). The conference has a demonstrated impact on the female students, both undergraduates and graduates that attend.

There are two members of the Anita Borg Institute staff that serve on the SIGBP planning committee. I am the CEO, and I have agreed to serve, and Deanna Kosaraju, who is our VP of Programs.

Deanna is responsible for all of ABI’s programs, including the Grace Hopper Celebration, as well as ABI’s involvement with the Grace Hopper Regional Consortium.

I believe that the work of the SIGBP is complementary and helpful to ABI’s mission.

Sincerely,

Telle Whitney, PhD, President & CEO
Anita Borg Institute for Women and Technology
www.anitaborg.org, tellew@anitaborg.org
May 5, 2010

Dr. Jan Cuny
Program Director, Broadening Participation in Computing
National Science Foundation
Washington, DC

Dear Dr Cuny,

I write to support Dr Teresa Dahlberg’s efforts to establish an ACM SIGBP. I have been serving on a committee to help establish this SIG since September 2009.

As the AAAS Fellow assigned to the BPC program last year, I spent a large amount of time working with Dr. Dahlberg on her numerous outreach activities. She brings an enthusiasm and tireless devotion to all her broadening participation efforts, which will carry over into this new SIG. An effort desperately needed by the BPC community. In order to be heard, the broadening participation community needs a body to speak as one voice on its behalf. BPC PIs need a repository to share and communicate ideas, research and best practices. Professors, volunteers, teachers, and anyone else who works on bringing a more diverse group of youth into computing need a place to go, form a community and benefit from the experiences of others. This SIG will speak for the community and allow quicker progress by preventing people from “reinventing the wheel.”

Sincerely,

Amy C Sharma, PhD
TO: Teresa Dahlberg
RE: BPC-LSA: ACM SIGBP

Because I wear several hats in the BPC arena I agreed to serve on the committee to establish an ACM SIGBP and am very supportive of having this group become formally recognized. My related leadership roles include: Co-PI and Program Manager for the Alliance for the Advancement of African-American Researchers in Computing (A4RC); NCWIT Leadership Team; Co-Chair for the NCWIT’s Academic Alliance; IU co-lead for NCWIT’s Pacesetter’s Program; Co-PI on IN-STARS planning grant to create a STARS-like alliance with universities across the state of Indiana; and Co-Chair for Indiana IN-WIC state-wide conference.

The opportunity to meet, share and collaborate with the community of colleagues who are engaged in BPC related efforts will be wonderful! It will provide a currently unmet need for large-scale and on-going communication about successes and challenges - and even failures - so we can learn from each other and be more broadly aware of initiatives and outcomes. An ACM-sponsored special interest group will also provide a publication venue for articles and research findings that relate to BPC and will thus increase significantly the program dissemination that is so vital to NSF-funded projects, programs and alliances.

I firmly believe this idea has tremendous potential to more effectively pull together collaborative initiatives that collectively will have a broader impact on broadening participation in the computing related disciplines.

Sincerely,

Maureen Biggers, PhD
Assistant Dean for Diversity and Education
IU School of Informatics and Computing
Bloomington, IN
IUPUI School of Informatics
Indianapolis, IN
biggersm@indiana.edu
April 28, 2010

Dear NSF Program Manager,

I am writing to express my support of the BPC-LSA: ACM SIGBP: Forming an ACM Special Interest Group to Scale the Impact of BPC Activities proposal. I am also writing to express my willingness to serve on the committee to establish the ACM SIGBP. I am currently a PI, CoPI or senior personnel on the following NSF BPC projects: NSF BPC-DP: AARCS (African-American Researchers in Computing Sciences), NSF BPC Empowering Leadership (EL) Alliance, the NSF BPC Alliance for the Advancement of African-American Researchers in Computing (A4RC) and the NSF BPC-DP: Incorporating Cultural Tools for Math and Computing Concepts into the Boys and Girls Clubs of America. I believe an ACM SIG on Broadening Participation (BP) will benefit all BPC efforts by bringing greater exposure and credibility to BP as a scientific research discipline. Studying computing, people and the participation of people in computing are all worthwhile research agendas. We have Human-Computer Interaction (ACM SIGCHI) to study computing and people. Broadening participation needs a SIG to study human participation in computing at all levels, e.g. K-16, graduate, faculty, research scientist, etc. I strongly support the creation of an ACM SIGBP.

Sincerely,

Juan E. Gilbert
Professor & Chair
Summer 2012

To Whom It May Concern:

As an educational researcher who has been long focused on issues of equity and underrepresentation in Computer Science, and as PI of the Into the Loop Alliance, supported by the National Science Foundation, I fully endorse the plan for a SIGCSE BP.

Issues of underrepresentation will not go away by themselves. As the interest in the field is reportedly growing, it is ever more important that intense focus and proactive action be taken to assure representation of all groups in computer science. These issues require skillful strategies to address them. They require interdisciplinary partnerships and investigations. Without this concentrated focus the issue will too likely get pushed to the side, largely because it is so difficult.

To assure that this does not happen, I strongly endorse the formation of a SIGBP, which can serve as an umbrella community organization to provide a centralized venue for communication, publication and support for the many existing efforts to broaden participation. The SIGBP is needed to provide a venue to assure that research on underrepresentation continues, that is learns from research in other fields, that best practices are gathered, evaluated, articulated, and disseminated.

I fully endorse the founding of a SIGBP will be an active participant.

Sincerely,

Jane Margolis, Ed. D.
Senior Researcher
UCLA Graduate School of Education and Information Studies
margolis@ucla.edu
Appendix D
75 of the 300+ petition signers

As of August 22, 2011, 309 people signed the online petition indicating 1) I support
formation of SIGBP, 2) the SIGBP would support my work, and 3) I would join the SIGBP.

This Table lists the 75 of these people who further indicated that they may volunteer to
serve on the SIGBP organizing committee

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