Welcome to the 2008 STARS Celebration!

Teresa A. Dahlberg, Ph.D.
Associate Professor, Computer Science
Director, Diversity in Information Technology Institute
UNC Charlotte

Dear STARS students and colleagues,

Welcome to the third annual STARS Celebration. We have much to celebrate this year. In just two years we have expanded the STARS Alliance to include 20 member universities and colleges, over 80 regional partners, and a STARS Leadership Corps that will exceed 200 college students, as well as engage K-12 teachers and students. Our corps outreach efforts now touch thousands of middle and high school students and their teachers, counselors and parents. This year we extend our focus on strengthening the pipeline through outreach to elementary school students and by supporting assistant professors who serve as role models for broadening participation in computing.

This past year over 130 students participated in the STARS Leadership Corps. We increased alliance adoption of Pair Programming and Culturally Situated Design Tools. We extended Mentoring into a Demonstration Project and have several schools integrating mentoring into their STARS Leadership Corps. Our evaluation team made excellent progress disseminating alliance outcomes through publications.

We welcome the EL Alliance to the Celebration this year and four teams of EL Alliance students who will implement the STARS Leadership Corps in the coming year. We also welcome the A4RC Alliance and thank them for organizing sessions on undergraduate research experiences, to be kicked of by keynote speaker Dr. Juan Gilbert.

The Celebration agenda includes a rich array of sessions on technical excellence, leadership in computing, developing a computing community, and service and civic engagement in computing. We also have several sessions on broadening participation in computing, including a panel on managing life with learning disabilities and a daylong workshop hosted by Virginia Tech on computing education. We will again host a public forum to showcase corps computing outreach and to continue our dialog about institutionalizing effective practices for broadening participation in computing.

I encourage you to attend a diverse array of sessions and workshops over the next few days. Please take time for thoughtful feedback through the many surveys that will be offered to you. Your feedback is crucial for continuous improvement of activities.

I wish to thank you for your service to the alliance. I especially thank Dr. Cheryl Seals, and the Auburn staff, for being gracious hosts of the Celebration. I thank Karen Bean and Marguerite Doman for their attention to every last detail of celebration planning.

It is my privilege to work with so many brilliant and enthusiastic people.

Teresa

Welcome to the Auburn University!

Cheryl D. Seals, Ph.D.,

Assistant Professor, Computer Science & Software Engineering
Auburn University, Samuel Ginn College of Engineering

Dear STARS students, colleagues and guests,

Welcome to the third annual STARS Celebration located at Auburn University. We are encouraged that everyone was excited to participate at annual STARS Leadership Conference and made a journey down to the Plains of Auburn. Auburn University is a comprehensive land, space and sea grant research institution blending arts and applied sciences with a tradition of excellence. The main campus had an enrollment during fall of 2007 of 24,137.

Auburn University is known not only for its academic excellence, but for its impact on our state. A recent study determined AU had nearly $ 4 billion economic impact on the state of Alabama, including a $ 1.5 billion impact on the economy and a $ 2.4 billion impact in "human capital" creating hundreds of jobs statewide. Auburn University has developed into one of the largest universities in the South that is in the educational forefront with its traditional blend of arts and applied science, and changing with the needs of today while living with a respect for the traditions and spirit of the Auburn Tigers.

The STARS Alliance has grown to over 20 universities and 80 regional partners and over 200 students. The AU STARS have worked with K-12 outreach providing Computer Club programs for area youth providing diverse role models in the community to broaden participation in computing.

Finally, I would like to thank EL, A4RC and CAHSI Alliances, STARS students and faculty for your participation and all the organizers that worked to make this event a success! This event is an opportunity for students from diverse groups to sharpen their leadership skills, form informal networks and find visionary mentors.

A warm welcome from Auburn University & STARS Alliance,

Cheryl

Welcome Fellow Alliances!

Empowering Leadership
Computing Scholars of Tomorrow
empoweringleadership.org

A4RC
Alliance for the Advancement of African American Researches in Computing

CAHSI
Computing Alliance of Hispanic-Serving Intuitions

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KEYNOTE SPEAKER: JUAN GILBERT

Innovation: Where Computing and Societal Problems Meet

Too often, computer and information science researchers are viewed as theoretical thinkers that discover new technologies that don't make contributions to society. As a result of this perception, computer and information science suffers from low participation from prospective researchers that have a strong social conscious or a desire to "give back". In this talk, Dr. Gilbert will describe how computing can address societal problems through innovation.

Dr. Juan E. Gilbert is the T-SYS Distinguished Associate Professor in the Computer Science and Software Engineering Department and a Fellow in the Center for Governmental Services Fellow at Auburn University where he directs the Human-Centered Computing (HCC) Lab, http://www.HumanCenteredComputing.org/. Dr. Gilbert has research projects in Advanced Learning Technologies, User Interfaces (Usability), Ethno-computing (Culturally Relevant Computing) and Databases. He has published more than 60 articles, given more than 100 talks and obtained more than $4 million dollars in research funding in his eight years at Auburn. Dr. Gilbert was named one of the nation's top African-American Scholars by Diverse Issues in Higher Education and he was the recipient of the Black Engineer of the Year Special Recognition Award. In that same year, Dr. Gilbert received the American Society for Engineering Education Minorities in Engineering Award. Recently, Dr. Gilbert was named a national role model by Minority Access Inc. At Auburn University, Dr. Gilbert has been honored with the Auburn University Alumni Engineering Council Junior Faculty Research Award, the Auburn University ACM Outstanding Faculty Member, Auburn University Alumni Outstanding Minority Achievement Award and the Auburn University Outstanding Minority Service Award. Recently, Dr. Gilbert was name the Pioneer of the Year by the National Society of Black Engineers. In 2006, Dr. Gilbert was honored with a mural painting in New York City by City Year New York, a non-profit organization that unites a diverse group of 17 to 24 year-old young people for a year of full-time, rigorous community service, leadership development, and civic engagement.

2008 STARS Celebration Leadership

General Chair
Teresa Dahlberg, University of North Carolina at Charlotte

Program Committee
Marguerite Doman, Chair, University of North Carolina at Charlotte
Tiffany Barnes, University of North Carolina at Charlotte
Maureen Biggers, Indiana University
Chutima Boonthum, Hampton University
Caroline Eastman, University of South Carolina
Ebrahim Randeree, Florida State University
Julie Strothman, Landmark College
Mladen Vouk, North Carolina State University

Poster Session Co-Chairs
Jason Black, Florida A & M University
Kristin Watkins, Meredith College

Registration and Local Arrangements Chair
Cheryl Seals, Auburn University

Finance Chair
Karen Bean, University of North Carolina at Charlotte

Workshop Organizers
Pair Programming Workshop Chair – Laurie Williams, North Carolina State University
CSDT Workshop Chair – Tiffany Barnes, University of North Carolina at Charlotte
Mentoring Workshop Chair – Nathan Thomas, University of South Florida Polytechnic

Publicity Chair
Anthony Chow, University of North Carolina at Greensboro

Pre-Conference Workshops
Schedule Overview

Saturday, August 9

6:30 PM – 9:00 PM

COMMUNITY	**Mentoring Workshop** *Presenter:* Nathan Thomas	Shelby 1103

Sunday, August

Breakfast 8:00 AM – 8:30AM
Shelby Grand Foyer

8:30 AM – 10:30 AM

COMMUNITY	**Mentoring Workshop** (continued) *Presenter:* Nathan Thomas	Shelby 1103
BROADENING PARTICIPATION	**Pair Programming Workshop** *Presenter:* Laurie Williams	Shelby 1126
SERVICE & CIVIC ENGAGEMENT	**Culturally Situated Design Tools** *Presenter:* Tiffany Barnes	Shelby 2210

Break 10:30 AM – 10:45 AM
Shelby Grand Foyer

10:45 AM – 12: 15 AM

COMMUNITY	**Mentoring Workshop** (continued) *Presenter:* Nathan Thomas	Shelby 1103
BROADENING PARTICIPATION	**Pair Programming Workshop** (continued) *Presenter:* Laurie Williams	Shelby 1126
SERVICE & CIVIC ENGAGEMENT	**Culturally Situated Design Tools** (continued) *Presenter:* Tiffany Barnes	Shelby 2210

Lunch 12:15 PM – 1:30 PM
Shelby Grand Foyer

1:30 PM – 3:00 PM

COMMUNITY	**Mentoring Workshop** (continued) *Presenter:* Nathan Thomas	Shelby 1103
BROADENING PARTICIPATION	**Pair Programming Workshop** (continued) *Presenter:* Laurie Williams	Shelby 1126
SERVICE & CIVIC ENGAGEMENT	**Culturally Situated Design Tools** (continued) *Presenter:* Tiffany Barnes	Shelby 2210

Break 3:00 PM – 3:15 PM
Shelby Grand Foyer

3:15 PM – 4:30 PM

COMMUNITY	**Mentoring Workshop** (continued) *Presenter:* Nathan Thomas	Shelby 1103
BROADENING PARTICIPATION	**Pair Programming Workshop** (continued) *Presenter:* Laurie Williams	Shelby 1126
SERVICE & CIVIC ENGAGEMENT	**Culturally Situated Design Tools** (continued) *Presenter:* Tiffany Barnes	Shelby 2210

Schedule Overview

Saturday, August 9

Registration 4:00 PM – 6:00 PM — Auburn University Conference Center (AUCC)

Sunday, August 10

Registration NOON – 4:30 PM — Auburn University Conference Center (AUCC)

STARS Student Surveys NOON – 4:30 PM — Shelby 1202

Student Posters Setup NOON – 4:30 PM — AUCC Ballroom B

COMMUNITY

Dinner 5:00 PM – 8:45 PM — AUCC Ballroom A

Opening Celebration Dinner

Welcome
Nathan Thomas

STARS Leadership Corps and Conference Overview
Presenter: Teresa Dahlberg

Living and Learning with Learning Disabilities / ADHD
Panelists: Katherine Culpepper, Ryan Ward, Andrew Kunz, and Patrick Trebisacci

Evaluation & Interviews
Presenter: Tiffany Barnes

Mis-Education of our Generations
Presenter: Nathan Thomas

Schedule Overview

Monday, August 11

Breakfast 8:30 AM – 9:00AM
Shelby Grand Foyer

8:45 to 9:00 AM

BROADENING PARTICIPATION
Roundtable Discussion with NSF — Shelby 1120
Moderator: Teresa Dahlberg
Panelists: Ty Znati, Harriet Taylor

9:00 AM – 10:30 AM

BROADENING PARTICIPATION
Computing Education for Under-Represented Groups — Shelby 1126
Presenter: Manuel Perez

COMMUNITY
Mentoring Workshop (continued) — Shelby 1103
Presenter: Nathan Thomas

LEADERSHIP
Developing Your Personal Marketing Sk*ills* — Shelby 1122
Building Your Resume
Presenter: Jay Skipworth
Networking . . . Now!
Presenter: Deanna Kosaraju

BROADENING PARTICIPATION
Developing Outreach Strategies — Shelby 1124
A Cookbook Approach for Great Outreach
Presenters: Cheryl Seals and Andrea Lawrence
Developing Partnerships
Presenter: Ramona Lindsey

Break 10:30 A.M. – 10:45 A.M.
Shelby Grand Foyer

10:45 AM – 12:15 PM

BROADENING PARTICIPATION
Computing Education for Under-Represented Groups (continued) — Shelby 1126
Presenter: Manuel Perez

COMMUNITY
Mentoring Workshop (continued) — Shelby 1103
Presenter: Nathan Thomas

LEADERSHIP
Campus Outreach — Shelby 1122
Technology Student Association (TSA): Get Involved!
Presenter: JenniferAnne Broido
Virginia Tech's AWC: Students helping Students
Presenter: Stacy Branham

BROADENING PARTICIPATION
Redefining the Image of Computing — Shelby 1124
Defining Computing Identities Among Non-Computing Students
Presenter: Kera Bell Watkins
iCompute Image Campaign
Presenters: Jill Ross, Anthony Chow, Eve Powell, Lane Harrison
EntryPoint! Internship Program for Students with Disabilities
Presenter: Betty Kain

TECHNICAL EXCELLENCE
Usability Engineering — Shelby 1120
Presenter: Julie Strothman

Monday, August 11

COMMUNITY

Lunch 12:15 PM – 1:30 PM
Shelby Grand Foyer

STARS 101: Starting Your STARS Leadership Corps - I
Moderator: Teresa Dahlberg
Participants: Schools who want to learn more about how to begin their STARS Leadership Corps and plan their team leadership projects are encouraged to attend this session. Faculty, staff and students should attend as a team.

SCHOOL:	LOCATION:
Host: University of North Carolina at Charlotte Georgia Tech Hampton University Johnson C Smith University North Carolina A&T State University University of New Orleans University of South Carolina University of Tennessee at Knoxville Virginia Tech EL Alliance STARS Teams **Any school is welcome to attend this session!**	Shelby 1103

Home Team Planning - I
Moderators: Academic liaisons
Participants: Schools who are prepared to plan their STARS Leadership Corps activities and projects will meet with faculty, staff and students from their own schools and, if applicable, with other schools in their region. Faculty, staff and students should attend as a team.

SCHOOL:	LOCATION:
Auburn University Spellman University Georgia Southern	Shelby 1124
Florida A & M University	Shelby 2210
Florida State University	Shelby 1126
Landmark College	Shelby 1202
Host: North Carolina State University St. Augustine's College Meredith College Shaw University	Shelby 1120
University of South Florida Polytechnic	Shelby 1122

A4RC Team Meeting **Shelby 3107**

Schedule Overview

Monday, August 11

1:30 PM – 3:00 PM

BROADENING PARTICIPATION	**Computing Education for Under-Represented Groups** (continued) *Presenter:* Manuel Perez	Shelby 1126
SERVICE & CIVIC ENGAGEMENT	**Culturally Situated Design Tools Overview** *Presenter:* Tiffany Barnes	Shelby 2210
LEADERSHIP	**Leveraging Team Personalities for Project Success** *Presenter:* Audrey Rorrer	Shelby 1122
SERVICE & CIVIC ENGAGEMENT	**Student Outreach Activities I** **Lessons and Ideas in Middle School Outreach** *Presenter:* Joseph Grafsgaard **Philosophy of High School Outreach** *Presenters:* Lane Harrison, Blake Bommelje **Outreach to Home Schooled Students** *Presenters:* Robert Lefebvre and Jordan Lefebvre	Shelby 1124
TECHNICAL EXCELLENCE	**Project Management and Requirements Engineering** *Presenter:* Julie Strothman	Shelby 1120
	Break 3:00 PM – 3:15 PM ***Shelby Grand Foyer***	

3:15 PM – 4:30 PM

BROADENING PARTICIPATION	**Computing Education for Under-Represented Groups** (continued) *Presenter:* Manuel Perez	Shelby 1126
ALLIANCE EXCHANGE	**Pair Programming Discussion** *Presenter:* David Straight	Shelby 1120
LEADERSHIP	**Getting Things Done: Personal Productivity** *Presenter:* Kristy Elizabeth Boyer	Shelby 1122
SERVICE & CIVIC ENGAGEMENT	**Student Outreach Activities II** **SPARCS LegoMindstorms** *Presenters:* Kristen Respers, Samuel Jean-Phillip **Implementation in NIMS Tech Club Initiative** *Presenters:* Vaisin Mouton, Tiffany McMillian, Danielle Davis **Partnering with Professional Organizations: BDPA High School Academy** *Presenter:* Virgil Simmons	Shelby 1124
EVENT TASK	**Evaluator Training** *Presenter:* Tiffany Barnes, Sarah Burke Berenson	Shelby 2210
LEADERSHIP	***Network and Poster Session 4:45 PM – 6:00 PM***	AUCC Ballroom A
BROADENING PARTICIPATION	***Dinner Meeting 6:00 PM – 8:30 PM*** ***Host*** Cheryl Seals ***Welcome*** Jay Gogue, Ph.D, President of Auburn University Nels Madsen, Ph.D., Associate Dean of Samuel Ginn College of Engineering ***Broadening Participation in Computing Research*** *Moderator:* Tiffany Barnes *Panelists:* Ty Znati, Gerry Dozier, Ann Redelfs, Ann Gates, Teresa Dahblerg ***Student Awards*** *Presenters*: Kristin Watkins and Jason Black	AUCC Ballroom A

Schedule Overview

Tuesday, August 12

Breakfast 8:30 AM – 9:00 AM
Auburn University Conference Center—Ballroom A

9:00 AM – 10:45 AM

TECHNICAL EXCELLENCE

Keynote Address — AUCC Ballroom A

Welcome
Dr. Kai Chang, Professor and Chair Department of Computer Science & Software Engineering, Auburn University
Dr. Shirley Scott-Harris, Director of Minority Engineering, Auburn University

Innovation: Where Computing and Societal Problems Meet
Presenter: Juan Gilbert

Three minute Madness
Moderated by Maureen Biggers

Break 10:45 AM – 11:00 AM
Auburn University Conference Center—Ballroom A

11:00 AM – 12:00 PM

ALLIANCE EXCHANGE

Evaluation Exchange for BPC Efforts — AUCC Meeting Room A
Presenters: Tiffany Barnes, Kim Buch, Anthony Chow, Nathan Thomas, Laurie Williams

LEADERSHIP

The Scope of Cybercrime and Methods for Internet Crime Detection — AUCC Meeting Room B
Presenter: Lynn Criddle

TECHNICAL EXCELLENCE

Research Sessions I: Faculty and REU Students — AUCC Ballroom B Left

Reading Technical Papers
Presenter: John Bowles

Avari
Presenter: Lauren Cairco

TECHNICAL EXCELLENCE

Lunch Meeting 12:15 PM – 1:30 PM
Auburn University Conference Center—Ballroom A

Welcome
Dr. Overtoun Jenda, Auburn University Associate Provost for Diversity and Multicultural Affairs

My Path is Research and Here's Why!
Moderator: Maureen Biggers

1:30 PM – 3:00 PM

BROADENING PARTICIPATION

Engaging Undergraduate Students in Research Using the Affinity Research Group Model — AUCC Meeting Room A
Presenters: Ann Gates, Steve Roach, Elsa Villa

TECHNICAL EXCELLENCE

Research Sessions II: Faculty and REU Students — AUCC Ballroom B Left

Creating adaptive support for learning using educational data mining
Presenter: Tiffany Barnes

Examining the Challenges of a Freshman Entering Computer Science
Presenter: Carl Arrington

E.M.R.E. Emergency Medical Reasoning Engine
Presenter: Adam Wong

Snackbot Project
Presenter Jessica Jones

Schedule Overview

Tuesday, August 12

1:30 PM – 3:00 PM

TECHNICAL EXCELLENCE

Applying Fuzzy Logic to the Design Process: A Tutorial Introduction to Fuzzy Logic — AUCC Ballroom B Left
Presenter John Bowles

Break 3:00 PM – 3:15 PM
Auburn University Conference Center—Ballroom A

3:15 PM – 4:30 PM

BROADENING PARTICIPATION

Engaging Undergraduate Students in Research Using the Affinity Research Group Model (continued) — AUCC Meeting Room A
Presenters: Ann Gates, Steve Roach, Elsa Villa

TECHNICAL EXCELLENCE

How to Design Safer Software and Services — AUCC Meeting Room B
Presenter: Linda Criddle

TECHNICAL EXCELLENCE

Research Sessions III: Faculty and REU Students — AUCC Ballroom B Left

Voting and Voting Machines
Presenter: Caroline Eastman

Location Sensing and Idenfication in an Ambient
Presenter: JeRone Gant

Castle Wu
Presenter: Michael Eagle

TECHNICAL EXCELLENCE

Game Design and Development (Ends at 4:00 PM) — AUCC Ballroom B Right
Presenter: Tiffany Barnes

4:00 PM – 4:30 PM

ALLIANCE EXCHANGE

Discussion with Evaluation Team — AUCC Ballroom B Right
Presenter: Tiffany Barnes

Break 4:30 PM – 4:45
Auburn University Conference Center—Ballroom A

4:45 PM – 6:00 PM

COMMUNITY

STARS 101: Starting Your STARS Leadership Corps - II
Moderator: Teresa Dahlberg and Academic Liaisons
Participants: Schools who participated in STARS 101 part-I will undertake more detailed planning of their own corps during this session. Schools will be able to plan independently or with guidance from the Charlotte STARS Leadership Corps, as needed.

SCHOOL:	LOCATION:
Host: University of North Carolina at Charlotte Georgia Tech Hampton University Johnson C Smith University North Carolina A&T State University University of New Orleans University of South Carolina University of Tennessee at Knoxville Virginia Tech EL Alliance STARS Teams **Any school is welcome to attend this session!**	AUCC Ballroom A

Tuesday, August 12

4:45 PM – 6:00 PM

Home Team Planning - II
Moderators: Academic liaisons
Participants: Faculty, staff and students from schools that held Home Team Planning meetings during part-I will continue their planning.

SCHOOL:	LOCATION:
Auburn University	AUCC Ballroom B Left
Florida A & M University	AUCC Meeting Room B
Florida State University	AUCC Meeting Room E
Georgia Southern	AUCC Ballroom B Left
Landmark College	AUCC Meeting Room D
Meredith College	AUCC Ballroom B Right
North Carolina State University	AUCC Ballroom B Right
St. Augustine's College	AUCC Ballroom B Right
Shaw University	AUCC Ballroom B Right
Spellman University	AUCC Ballroom B Left
University of South Florida Polytechnic	AUCC Meeting Room A

A4RC Meeting — AUCC Meeting Room TBD

Dinner 6:00 PM – 8:30 PM
Auburn University Conference Center—Ballroom A

Alliance Exchange

Steering Committee Dinner Meeting — AUCC Ballroom A
Steering committee only

Wednesday, August 13

Breakfast 8:30 AM – 9:45AM
Haley Center

8:30 AM – 9:45 AM

ALLIANCE EXCHANGE

Web Office Training Session — Haley Center 2312
Presenter: Tiffany Barnes, Audrey Rorrer
This session is mandatory for Academic Liasions and Evaluator Assistants.

8:45 AM – 9:45 AM

Home Team Planning Meetings, as needed — Haley Center 2370, 2312,2324, 2330,2332

This time is reserved to be used at the discretion of the academic liaisons. If needed, each STARS Leadership Corps team (including those who participated in STARS 101) will meet to complete preparation of their final presentations to be delivered during the during the August 13th closing lunchtime ceremony.

9:45 AM – 11:00 AM

ALLIANCE EXCHANGE

Collaboration of STARS Faculty — Haley Center 2312
Junior Faculty Roundtable
Presenter: Tiffany Barnes
STARS Faculty Collaborative Research
Presenter: Kera Bell-Watkins

BROADENING PARTICIPATION

Marketing Using the Web — Haley Center 2324
Age Appropriate Web Design, IA, and Usability
Presenters: Anthony Chow, Kathelene Smith, Katherin Sun
Using Web 2.0 to Reach Students
Presenter: Ebrahim Randeree
STARS Marketing: Creating Regional Impact Zones
Presenters: Anthony Chow, Kathelene Smith, Jennifer Thomas

LEADERSHIP

A4RCS Presentation — Haley Center 2370
Presenter: Cheryl Seals

COMMUNITY

Lunch Meeting / Closing Ceremony 11:15 PM – 1:30 PM — Haley Center 2370

This lunchtime ceremony will conclude the STARS Celebration 2008. Each school will deliver a student-led 5-minute presentation to overview their plans for their 2008-2009 corps.

Mentoring Workshop

Community: Computing Community
Saturday, August 9 through Monday, August 11
Presenter: Nathan Thomas

People in higher education conduct mentoring all over the world but no one has broken down the elements of mentoring so mentors can provide effective mentoring to mentees. The Thomas Principles do that. Mentors are taught six principles (Identity Development, Social Support, Psychological Support, Academic Support, Sense of Belonging, and Leadership Development) to support mentees college adjustment, retention, and academic success. To ensure mentees receive appropriate mentoring, mentors are trained through a 12 hour student development workshop and yearly mentor mentee activities. At the end of the workshop, students should leave with a strong sense of mentoring, leadership and high expectations that promote team work, a sense of family, self efficacy, academic and personal success, service, and social change among IT & Computing students.

Workshop on Conducting Middle and High School Outreach with Culturally Situated Design Tools

Service: Service & Civic Engagement
Sunday, August 10
Presenters: Tiffany Barnes

"Culturally Situated Design Tools" (CSDTs) are a suite of web applets based on ethno-mathematics: the mathematical knowledge embedded in cultural designs such as African American cornrow hairstyles, Native American beadwork, Latino percussion rhythms, urban graffiti, etc. (http://www.rpi.edu/~eglash/csdt.html). CSDTs allow students to use these underlying mathematical principles to simulate the original cultural designs, create new designs of their own invention, and engage in inquiry learning for math and computing education. The supporting materials for the CSDTs include lesson plans and evaluation instruments to ensure they are integrated into the curriculum through state and national standards. Preliminary evaluations indicate statistically significant increase in both math achievement and attitudes toward technology-based careers. Each SLC training session

Pair Programming Dissemination Project Workshop

BPC: Broadening Participation in Computing
Sunday, August 10
Presenter: Laurie Williams

One STARS dissemination project relates to transitioning to pair programming in the classroom. Pair programming refers to the practice whereby two programmers work together at one computer, collaborating on the same design, algorithm, code, or test. The pair is made up of a driver, who actively types at the computer or records a design; and a navigator, who watches the work of the driver and attentively identifies problems, asks clarifying questions, and makes suggestions. Both are also continuous brainstorming partners. Throughout the world, many universities are using pair programming in their computer science classes – and a number of high schools have begun using the practice as well. Generally, current-day students much prefer to collaborate than to work alone and find computer science more attractive if they are not forced to work alone the majority of the time. Between the two students, they can generally figure out most problems and can avoid pesky syntax and semantic errors that can cost many hours to debug. Perhaps during those multi-hour debugging sessions (that are greatly reduced with pair programming) some students vow to never take another computer science course! In this workshop, we will introduce pair programming, discuss research results and issues for adoption. We will work through plans for instituting pair programming at STARS institutions and for collecting data about these experiences.

WORKSHOPS AND PRESENTATIONS

Sunday, August 10

5:00 PM Dinner Meeting

Living & Learning with Learning Disabilities/ ADHD

Presenters: Katherine Culpepper, Ryan Ward, Andrew Kunz, Patrick Trebisacci

Panelists will describe some of their strengths and struggles as students with learning disabilities. They will also touch on the accommodations, assistive technology, and self-advocacy they find most helpful toward success in life and school. College experiences that have best supported their academic work, including stigmas and myths associated with learning disabilities will be addressed.

Mis-Education Of Our Generations

Presenter: Nathan Thomas

The Goals of the is program are to: 1) clarify one's own value system; 2) explore values held in common within a group; 3) study differences existing between groups; and 4) begin to remove stereotypes held by members of different groups.

Monday, August 11

8:45 to 9:00 AM

Roundtable Discussion with NSF

Moderator: Teresa Dahlberg

Panelists: Ty Znati, Harriet Taylor

This session is geared towards faculty, staff and students who are interested in gaining insight into National Science Foundation programs that support computing and education research. Dr. Znati, Division Director, Computer and Network Systems (CNS), Computer & Information Science & Engineering (CISE) and Dr. Taylor, Program Manager, CNS, will discuss NSF funding opportunities; the role of broadening participation in computing (BPC) in advancing computing research; the importance of BPC evaluation; and will give advice for establishing or growing an externally funded research program. Dr. Dahlberg will facilitate this interactive discussion.

9:00 AM to 4:30 PM

Computing Education for Under-represented Groups

Presenter: Manuel Perez

Computing Education is essential not only for Computer Science and its many sibling disciplines (Computer Engineering, Software Engineering, Information Systems, etc.) but also for practically all other academic disciplines. In a way, computing is becoming a requirement of most professional degrees. However, computing education (and consequently the professional discipline) has been facing a diversity crisis. We are struggling to attract a diverse group of students to enter the computing career. Much has been written about the changes needed to attract more women, but we need more attention to curricular revisions required to attract more African-Americans and Hispanics to computing careers.

The goal of this workshop is to help identify priorities, opportunities, difficulties, and resources needed to rethink computing education, with a emphasis on attracting more members of underrepresented groups. How can we present computing to underrepresented students in a way that conveys more than the mere computational aspects of the discipline? What must computing education do to describe the discipline as a way to study and build computational devices that support creativity and expression? How can we include social aspects of life that tend to be more valued by minorities into computing education.

WORKSHOPS AND PRESENTATIONS

Monday, August 11

9:00 to 10:30 AM

Developing Your Personal Marketing Skills
Leadership: Leadership and development
9:00 AM ***Building Your Resume***
Presenter: Jay Skipworth

The Auburn University Career Development Service office offers a multitude of programs that are available to support students academic growth. To provide a professional development opportunity for NSF STARS SLC Students the Career Development Center will provide a presentation on Building Your Resume including tips on resume creation.

10:00 AM ***Networking - NOW!***
Presenter: Deanna Kosaraju

Networking is making professional connections and using them wisely. This presentation will provide an overview of what networking does and does not do. Networking can get you a richer, fuller professional life. I will discuss what you should not do with a network (i.e. a substitute for high quality work), what types of individuals should network with and how to leverage the conference to aid in the expansion of an existing network for those who have begun and how to get started for those who have not.

Developing Outreach
BPC: Broadening Participation in Computing
9:00 AM ***A Cookbook Approach for Great Outreach***
Presenters: Cheryl Seals, Andrea Lawrence

The speakers will talk about the details of CARE Camp and other outreach activities at Spelman. Also the speakers will discuss details about AU STARS Computer Clubs. Both schools have made great use of Alice 3D, Lego Mindstorms, and other educational software in K-12 settings.

10:00 AM ***How Do I Open the Doors? Developing Partnerships***
Presenters: Lindsey Ramona

Are your knuckles numb from knocking on doors? Are you having difficulty finding schools who need IT and CS volunteers? This workshop will provide insight on how you can develop successful outreach projects like the Auburn City Schools/Auburn University After School Computer Clubs. Learn strategies that helped this STARS Alliance outreach project introduce nearly 100 fifth grade students to computer programming through Carneige Mellon's Alice.

10:45 AM to 12:15 PM

Developing Leadership Opportunities for Your Campus
Leadership: Leadership and development

10:45 AM ***Virginia Tech's AWC: Students Helping Students***
Presenter : Stacy Branham

Virginia Tech’s student-run Association for Woman and Computing has three flagship activities that it would like to share: Women in Computing Day, attendance of the Grace Hoper Conference, and our Leadership Scholarship program. This presentation discusses the successes of the programs, as well as finding ways of support through unique challenges. At the end of the presentation students from other universities can share their experiences and ask targeted questions.

Monday, August 11

10:45 AM to 12:15 PM (continued)

Developing Leadership Opportunities for Your Campus *(continued)*

Leadership: Leadership and development

11:30 AM ***Technology Student Association: Get Involved!***
Presenter Jenniferanne Broido

Thinking of starting up a technology club at your local school? Trying to target the students who are already interested in computing, but just don't know how to find them? Need help creating fun, technology-oriented activities? Don't re-invent the wheel! The Technology Student Association (TSA) is a non-profit organization that provides students the opportunity to apply and integrate science, technology, engineering and mathematics concepts through co-curricular activities, competitive events and related programs. TSA's 150,000 membership base is 40% female, 30% minority and over 75% are college bound.
TSA welcomes the STARS Alliance with open arms! This presentation with provide you with information about TSA and how you can get involved. We will also share successful activities and initiatives you can use in working with k -12 students. With the help of SLC, we can work to ensure we retain these bright-minded students into computing disciplines.

Broadening the Image of Computing
BPC: Broadening Participation in Computing
10:45 AM ***Defining Computing Identities Among Non-Computing Students to Help Increase Interest in Computing***
Presenter: Kera Bell-Watkins

A part of the problem with the low volume of students enrolled in computing disciplines may partially be attributed to limited perceptions of computing. Since computing has evolved to encompass many different areas among other disciplines, students may not be aware of computing aspects of those disciplines. Some existing graduates in non-computing fields may already be qualified to become computing professionals, but have not been informed of the possibilities.

It may be worthwhile to 1) identify computing identities that span across a number of non-computing disciplines, 2) show students how computing fuses with non-computing disciplines, and 3) incorporate concepts from the Thomas Principles to help students from non-computing disciplines adopt a computing identity. There may be a number of computing capabilities that help capable non-computing students consider computing. As a result, students may conduct computing-related research, consider a broader spectrum of careers that are related to computing, or they may simply take extra enrichment computing classes

11:15 AM ***iCompute Image Campaign***
Presenters: Jill K. Ross, Anthony Chow, Eve Powell, Lane Harrison

The image of computing held by our nation, and especially American youth, is one of the most significant barriers towards encouraging broader participation in computing and information technology. How did this happen? What are the main factors? And, what can be done about this? These are some of the questions this panel session will address head on, the result of months of research and discussions across the country. Part of this dialogue took place at UNC Charlotte and involved following two STARS SLC students both in their daily lives as well as a once in a life time trip to Seattle, WA to meet with Microsoft. Be one of the first to preview this new documentary and hear directly from the students about this amazing experience. The STARS marketing coordinator will also discuss how the results of this research has informed our overall strategy for recruiting new students into the field.

Monday, August 11

10:45 AM to 12:15 PM (continued)

Broadening the Image of Computing *(continued)*
BPC: Broadening Participation in Computing
11:45 AM ***EntryPoint! Internship Program for Students with Disabilities***
Presenter: Betty Kain

Entry Point! provides promising computing, science, engineering technology and math students with disabilities, competitive paid summer internships in top government and private institutions around the country. Current partnering organizations are NASA, Lockheed Martin, IBM, CVS, Merck, Pfizer, Google and the Naval Air Command (NAVAIR). Entry Point! matches the students' desire for competitive internships with an organization's need to attract the most talented workforce.

Usability Engineering to Improve product design Management & Requirements Engineering
Technical: Research & Technical Excellence
Presenter: Julie Strothman

People in computing and technology are often at the cutting edge of new products and systems, developing the "next big thing" and creating cool tools and applications. However, ensuring that these things are easy and enjoyable to use is a challenging task, and most people can identify with at least one or two technologies that are hard to use. This presentation introduces the concept of usability engineering, and presents several techniques that you can use to improve projects and make sure people find your designs usable and enjoyable. Some of the techniques to be covered include "blue sky" design, end-user observation, end-user interviewing, low-fidelity usability evaluation, and expert interface reviews, and cost-justification to calculate the dollar value of usability engineering.

12:15 to 1:30 PM

STARS 101: Starting Your STARS Leadership Corps - I
Community

The Charlotte STARS Leadership Corps will host this lunchtime session for faculty, staff and students who are starting a leadership corps for the first time or who want further guidance in coordinating their leadership corps for the 2008-2009 academic year. Schools that need to participate in multiple meetings during this time-slot are encouraged to send some of their corps leaders to this session. (Schools who are ready to organize their corps on their own will meet with their own groups. See "Home Team Planning – I.) Teresa Dahlberg will provide an overview of the STARS Leadership Corps Model. Karen Bean and Marguerite Doman will provide details and advice on the practical aspects of managing a leadership corps, including organizing students, selecting projects, project management for students, developing external partners, and integrating the corps into your department's educational mission. Their discussion will include lessons learned from two years of the Charlotte STARS corps. Tiffany Barnes will discuss the importance of evaluation of Corps activities. UNC Charlotte Students will describe specific examples of leadership projects by describing the projects within the four teams that comprise the Charlotte Leadership Corps. These are the GameCATS (Gamers alliance and Culturally Situated Design Tools), Team Hope (robotics for middle school outreach), High School Outreach (Roadshows and Marketing Kits for Guidance Counselors), and Research Experiences for Undergraduates (and broadening the impact of REUs).

Monday, August 11

12:15 to 1:30 PM (continued)

Home Team Planning—I
Community

Schools who are prepared to begin or continue their STARS Leadership Corps during 2008-2009 (and do not need the information from STARS 101, above) will hold their own Home Team Planning sessions. Planning sessions may be held by an individual school or by a group of regional schools who are coordinating their Corps activities. The purpose of this session is to provide Corps time to plan their 2008-2009 leadership projects and other corps activities. The organization of this session will be determined by the academic liaisons moderating each group. Each group is encouraged to consider the following for the 2008-2009 academic year: frequency, location and purpose of team meetings; offering of seminars related to STARS central values of Technical Excellence, Leadership, Community, and Service & Civic Engagement; partnership development; organizing your corps into sub-groups or teams; selecting and managing leadership projects, and integrating mentoring into your corps activities.

1:30 PM to 3:00 PM

Workshop on Conducting Middle and High School Outreach with Culturally Situated Design Tools
Service: Service & Civic Engagement
Presenters: Tiffany Barnes

"Culturally Situated Design Tools" (CSDTs) are a suite of web applets based on ethno-mathematics: the mathematical knowledge embedded in cultural designs such as African American cornrow hairstyles, Native American beadwork, Latino percussion rhythms, urban graffiti, etc. (http://www.rpi.edu/~eglash/csdt.html). CSDTs allow students to use these underlying mathematical principles to simulate the original cultural designs, create new designs of their own invention, and engage in inquiry learning for math and computing education. The supporting materials for the CSDTs include lesson plans and evaluation instruments to ensure they are integrated into the curriculum through state and national standards. Preliminary evaluations indicate statistically significant increase in both math achievement and attitudes toward technology-based careers. Each SLC training session.
NOTE: This is a stand-alone session and not part of the CSDT Workshop.

Leveraging Team Personalities for Project Success
Leadership: Leadership and development
Presenter: Audrey Rorrer

Get prepared to lead your projects successfully by learning how to manage conflicts and communication challenges through personality. Learn about your personality type and how to leverage your own style to better work with others. This workshop will enable you understand your Myers Briggs personality type. Participants will work in small groups to test drive scenarios that will help you lead your future SLC projects more confidently and smoothly by learning how to anticipate and manage conflict areas.

Project Management & Requirements Engineering
Technical: Research & Technical Excellence
Presenter: Julie Strothman

Nearly anyone who works in technology and computing will eventually play a role in developing complex products with a number of diverse team members. Whether you are a SLC student working on a team project, an employee at a hot new software company, or a consultant working with a major defense firm, you will find yourself working on a project with a number of complex features, requirements, and expectations from management. This presentation focuses on several project management and requirements engineering techniques that help to facilitate the process of developing projects, ensuring common buy-in and understanding, and dealing with changes to the project. Some of the techniques to be covered include task analysis, work breakdown structure, change management, feature-cost tradeoff, and prototyping.

Monday, August 11

1:30 PM to 3:00 PM (continued)

Student Outreach Activities I

Service: Service & Civic Engagement

1:30 PM ***SPARCS: Lessons and Ideas in Middle School Outreach Activities***

Presenter : Joseph Grafsgaard

The Raleigh STARS SLC chapter held a middle school outreach at Centennial Campus Middle School throughout the 2007-2008 academic year, called SPARCS (Students in Programming, Robotics, and Computer Science). It was our first time offering an outreach, so we went through all of the difficulties inherent in developing a new program. School outreach provides opportunities for mentoring, tutoring and education. Our outreach placed emphases on education about computer science and mentoring through positive role models. We held full-day sessions on selected Saturdays throughout the year, with activities such as programming using Alice, hands-on robotics using Lego Mindstorms, and gentle introductions to computer science theory.

This session will discuss the process of developing an educational outreach program, including: brainstorming, forming institutional partnerships, creating a realistic scope for the effort, producing a targeted curriculum for the outreach, evaluating different educational tools and software, and discussing the end goals (and results). Please attend this session if you are interested in holding your own outreach or want to learn from the experiences of others.

2:00 PM ***Philosophy of High School Outreach***

Presenters : Lane Harrison, Blake Bommelje

One of the most successful forms of outreach at UNC-Charlotte is outreach to high school students. To date we have presented to over 1,000 students in 7 local schools. The response from these presentations has been extremely positive. We have collected responses from both teachers and students through a variety of methods. Also, we have been able to use this feedback to improve our methods, leading to more positive results. One improvement in particular was the addition of curriculum-related projects during our visits. By administering a hands-on project, we were able to better engage all students during the visits.

In this panel, high school outreach teams from different schools are invited to come and discuss their approach to reaching high school students. We will discuss topics such as coordination of visits, presentation style and content, evaluation methods, and ways to use evaluation results to bring about improvement. The goal of this panel is to give students and professors who currently serve in or are interested in high school outreach a forum to discuss what works and what does not. We hope that participants leave with comprehensive knowledge of how to successfully implement outreach in their own locales.

2:45 PM ***Outreach to Home-Schooled Students***

Presenters : Robert Lefebvre and Jordan Lefebvre

At the University of Tennessee, we plan to do outreach to the Home Schooled students in our area. Robert and Jordan Lefebvre, both home-schooled, completed BS degrees in Computer Science at UTK, and entered our MS program in January 2008. With their background, Robert and Jordan can explain to parents and students what motivated them towards a Computer Science major, and what to expect in terms of work and life in college.

Home Schooled students have been a largely untapped resource, but the number of these students is quite substantial. Most home schools own computers. The flexible home school curriculum allows interested students to specialize in science and technology. There are networks of Home Schools who meet regularly. We plan to used this venue for presentations and do other outreach work to reach a larger number students. The Smokey Mountain Home Education Association, held locally to UT, has a Family Resource Fair June 27-28 this summer, a Science Fair in February each year, and other activities. We plan to interact with this established organization. There is also a national convention each summer and so ultimately outreach beyond our borders might be possible.

WORKSHOPS AND PRESENTATIONS

Monday, August 11

3:15 PM – 4:30PM

Pair Programming Discussion
Exchange: Alliance Exchange
Presenter: David Straight

CS 100 (introduction to computers and computing) is a literacy course for non-majors. It is offered each semester with 2 large lecture sections and required labs that hold 28 students.
The enrollment for spring, 2008, was over 190. we have merged with ECE, and we may have a significant cut-back in GTAs. Pairs programming presented us an opportunity to try to teach the labs with fewer GTAs: before, a lab of 28 students kept 3 GTAs busy the whole time: pairs programming has let us get by with 2 GTAs, and they are not busy the whole time. It has also helped make the lab environment a happier place, and we are getting better results from the students.

Getting Things Done: Personal Productivity for Computing Leaders of Today and Tomorrow
Leadership: Leadership and development
Presenter: Kristy Elizabeth Boyer

Do you feel like you have more tasks than time to spend? Have you delivered projects late or barely on time? Do you sometimes think about all the things you have to do and feel unable to begin because you are overwhelmed? Based on *Getting Things Done*, the national bestseller by David Allen, this workshop presents a personal productivity approach that has revolutionized the way people around the world address the productivity challenges in their lives. Intended to help "knowledge professionals" (which all students and faculty are) manage tasks, track many projects, and accomplish ongoing peace of mind and productivity, this workshop will cover practical aspects of personal productivity including specific tools to manage tasks and calendar entries, merging the multiple sources of "input" we all must attend to in our daily lives, and implementing a flexible prioritization scheme to help the decide which task to do when, even in the face of changing circumstances and complex decision factors. The ultimate power of this approach lies in getting things off your mind and into a trustworthy system that increases your productivity and decreases your stress.

Student Outreach Activities II
Service: Service & Civic Engagement
3:15 :PM ***SPARCS Lego Mindstorms Session***
Presenters: Kristen Respers, Samuel Jean-Phillip

Most of the students 13 students we mentor are 7th and 8th graders, who have an interest in computer technology. While some students have basic background knowledge of programming and web design, others may have little or no exposure to the field. Using Lego© Mindstorms, we worked to get the students excited about computer science. Through buildign and programming their own robots, the students learn the basic language of programming in a user friendly drag and drop interface. They also learn teamwork, problem solving, mathematical skills, and patience. Pre and post diagnostic assessments are done to determine if the students have benefited from the program.

3:35 :PM ***Implementation of the Nims Tech Club Iniiative***
Presenters : Vaisin Mouton, Tiffany McMillian, Danielle Davis

The background of the Digital Harmony Project, a Tallahassee-Leon County Initiative, is to introduce technology to underrepresented communities in Tallahassee and establish a strong mentoring relationship. As part of this project, Nims Middle School, a largely African-American School, was identified as a target location, and computers were distributed to 6th graders to take home, and a Technology Club was established. The FAMU SLC was responsible for developing and implementing a curriculum of instruction for these students, who met twice weekly and learned IT subjects. A discussion of the curriculum is presented, as well as implementation of the coursework and lessons learned.

Monday, August 11

3:15 PM – 4:30PM (continued)

Student Outreach Activities II *(Continued)*
Service: Service & Civic Engagement
3:55 :PM ***Outreach Through the BDPA High School Academy Program***
Presenters : Virgil Simmons

TEAM HOPE worked with the professional organization Black Data Processors of America (BDPA) in their existing outreach program. The BDPA is a national organization that, through local chapters, sponsors training programs in their communities. The High School Computer Competition (HSCC) is one of their programs and is designed to expose high school students to the concepts of computers and give them the expertise to develop web applications. This program culminates in national competition for the students at the National BDPA Conference. As an STARS Leadership Outreach, we assisted in the weekly training classes by mentoring, training, and lecturing the students. This session will discuss our involvement, as well as the benefits and challenges of working with an established outreach program sponsored by a professional organization.

Evaluation Assistant Training: Conducting Interview Research
Event Tasks
Presenter: Tiffany Barnes, Sarah Burke Berenson, Audrey Rorrer

Students and faculty who are interested in qualitative research training are welcome to attend this interactive learning workshop. Participants will learn the essentials of conducting qualitative interviews for investigative research. The STARS Alliance interview protocol will be distributed to participants who are interested in interviewing students about their computing career interests. This is an ideal SLC project!

6:30 PM – 7:45 PM

Broadening Participation in Computing Research
BPC: Broadening Participation in Computing
Moderator: Tiffany Barnes
Panelists: Ty Znati, Gerry Dozier, Ann Redelfs, Ann Gates, Teresa Dahlberg

Dr. Znati will introduce students to the National Science Foundation mission and programs and highlight recent trends in computing research. Leaders from four Broadening Participation in Computing Alliances, the A-Force Alliance, the Empowering Leadership (EL) Alliance, the Computing Alliance for Hispanic-Serving Institutions (CAHSI) Alliance and the Students & Technology in Academia, Research, and Service (STARS) Alliance, will provide an overview of the mission and activities within their alliances and will underscore the role of BPC for advancing computing research.

WORKSHOPS AND PRESENTATIONS

Tuesday, August 12

9:00 AM – 10:45 AM

Computer Science Researchers and the 3- Minute-Madness!!!
Research & Technical Excellence
Moderator: Maureen Biggers

Computer science researches will take 3 minutes (and only three minutes) each to provide participants with an overview of a variety of research projects with which they are involved. A gong will be provided and used if time runs over in this upbeat session!!

11:00 AM – 12:00 PM

Evaluation Exchange for BPC Efforts
Alliance Exchange
Presenter: Tiffany Barnes, Kim Buch, Anthony Chow, Nathan Thomas, Laurie Williams

The Alliance evaluation team will host a collaborative workshop for faculty SLC advisors and program academic liaisons. Workshop facilitators will showcase the ongoing research of SLC projects and discuss coordination of reporting and analysis efforts within the STARS. This forum will enable the SLC advisors and evaluation team members to communicate regarding data collection and reporting of the individual successes of each STAR's SLC project areas.

The Scope of Cybercrime and Methods for Internet Crime Detection
Leadership: Leadership development
Presenter: Lynn Criddle

Digital forensics is still a very young field of study hampered by constantly evolving challenges and few resources. In contrast, criminals have been able to capitalize on Internet technology and exploit the lack of detection and prosecution for these crimes. Criminals ranging from petty hackers and harassers to organized crime syndicates wield the Internet as a weapon for financial, physical and emotional exploitation. Though only a fraction of online fraud is reported, the documented losses to Americans exceeded $240 million in 2006. At the same time, Internet crime revenue has exploded into a tens-of-billions-of-dollars-a-year highly commercialized cash cow.

This presentation provides a detailed view into online crime, including how the underground economy works, how money transitions from virtual money to cash, and how 'legitimate' businesses are facilitating and profiting from online crimes. It will also look into the hurdles blocking the way to successful crime prevention and the steps needed to combat Internet crime.

Research Sessions: Faculty and REU Students I
Technical: Research & Technical Excellence
11:00 AM ***Reading Technical Papers***
Presenter: John Bowles

A great deal has been written about "writing technical papers" but relatively little about"reading technical papers". Yet papers are written only once and read many times. In order to get the most from your reading, you should be properly prepared. Find a quiet place to work where you will not be disturbed or distracted, have a pencil and note pad at hand, and bear in mind exactly what you expect to get from this paper. The approach described here for reading a scientific paper offers ideas about the process of reading a paper, how to decide what to read, how to build a broad framework by skimming, and how to challenge the paper to get depth of understanding. Finally, it will show you how to take notes so that the key points won't be lost as soon as you set the paper down. Since reading is the process of getting ideas from the author, you must focus on the author's thoughts, not just read the words on the paper.

Tuesday, August 12

11:00 AM – 12:00 PM (continued)

Research Sessions: Faculty and REU Students I *(Continued)*
Technical: Research & Technical Excellence
11:30 AM ***AVARI: Animated Virtual Human Retrieving Information***
Presenter: Lauren Cairco

Previous research shows that the use of virtual humans can be effective in many applications including social conversation, training, and provision of information. Currently, however, the use of virtual humans is limited, with most applications used only within the labs they are developed in. Studies of this kind of use provide us with little information about how people in general would interact with virtual humans, and how helpful they will be when people come to them without any expectations defined by previous experience.

To remedy this discrepancy, we present Avari (Animated Virtual Agent Retrieving Information), a virtual agent capable of interacting with anyone who approaches her and ready to be deployed in any location with sufficient lighting and a power outlet. Avari uses computer vision to detect when someone is standing in front of her, and then uses a speech interface to answer questions about the computer science faculty at the University of North Carolina at Charlotte. Avari gathers data on user interactions. We plan to place her outside of an undergraduate computer lab in the computer science building at University of North Carolina at Charlotte, and to analyze the data to find trends in how people interact with her.

12:45 PM – 1:15 PM

***My* Path is Research and Here's Why!**
Moderator: Maureen Biggers

Hear perspectives from faculty, grad student and undergrad panel members about why they chose research, what motivates them, benefits from their perspective and personal pieces of advice or words of wisdom. With Q&A time!

Engaging Undergraduate Students in Research Using the Affinity Research Group Model
BPC: Broadening Participation in Computing
Presenter: Ann Gates, Steve Roach, Elsa Villa

The Affinity Research Group is a comprehensive model for the creation and maintenance of dynamic, productive, and inclusive research groups in engineering and computing. The model is comprised of a set of fundamental principles and effective practices that emphasize the conscious development of students' domain knowledge as well as research and professional skills. This workshop introduces the model and engages the participants in exercises that illustrate the use of the model. Participants will use the ARG handbook (http://computer.org/arg) to review activities that focus on student development. The objectives of the workshop are to: understand the key components of an ARG, become aware of ARG practices, and engage and reflect on an ARG activity
The following will be covered:

- Introduction to ARG philosophy and goals.
- Discuss the components of a research plan, the importance of developing cooperative group skills, and the refinement of communication skills.
- Discuss the main component of an ARG: core ideology, student connectedness, and deliberate practices.
- The nuts of bolts of an ARG: orientation, getting started, troubleshooting, and continuous quality improvement.

Tuesday, August 12

1:30 PM – 3:00 PM

Research Sessions: Faculty and REU Students II
Technical: Research & Technical Excellence
1:30 PM ***Creating adaptive support for learning using educational data mining***
Presenter: Tiffany Barnes

Creating intelligent learning technologies from data has unique potential to transform the American educational system, by building a low cost way to adapt learning environments to individual students. Through scaffolding and intelligent, contextualized feedback adapted to individual learners, intelligent tutoring systems (ITS) can have significant effects on learning. However, these systems are expensive, requiring between 100-1000 hours of expert time to construct one hour of instruction, and much of this development time is spent on building models of student knowledge and behavior. Through the construction of example-based authoring tools such as Cognitive Tutor Authoring Tools (CTAT), researchers have recently been able to reduce this construction time to around 20-30 hours to construct one hour of instruction. On the other hand, there are considerable numbers of interactive learning environments (ILEs) that do not offer intelligent, adaptive support. We are developing methods to augment both ITSs and ILEs with intelligent student support derived from data, while informing research on learning. We will present our innovative methods for mapping past student behavior and automatically generating strategic hints for students who are solving logic proofs, and the results of experiments using our methods.

2:00 PM ***Examining the Challenges of a Freshman Entering Computer Science***
Presenter: Carl Arrington

The objective of this project is for the researcher, Carl Arrington, to conduct an independent research study on the difficulties of a freshman entering the computer science department and progressing through the computer science program. Currently, the student is a computer science major and has been a part of the program here at Hampton University for the last four years. He has had the opportunity to not only experience changes in the department and facilities, but also in the number of students entering, staying, and performing well in the major. The researchers have been made aware that the number of students in the department has decreased over the past four years and that fewer students are entering and even fewer are staying in the major. Many of the department faculty is unable to understand why this occurs. In an attempt to reach a conclusion, the researcher conducted a series of interviews with freshmen and sophomores in the computer science and computer information systems majors as well as faculty members who teach the general level (100 and 200 level courses) in order to assess the difficulties within the major. Along with the interviews, the researcher examined current literature to find out how Computer Science is faring as a field of study across the US. With all of the data collected from this independent study, the researcher hopes to find at least three causes for declines in participation in Computing Sciences.

2:30 PM ***E.M.R.E.Emergency Medical Reasoning Engine***
Presenter: Adam Wong

With today's increasing usage of Pocket PCs for medical and personal reasons, the development of software that will aid individuals in emergency situations for PDA's is relevant. For example, their is an individual at a pool and notice a child drowning, after removing the child the adult is unsure about the next steps to take. If the adult has this software, EMRE, available on her PDA, she can easily enter the child's status and a list of appropriate methods will be displayed. On the other hand, if the adult does not have access to this software, the chances for the child surviving will decrease because the adult will have to find someone who is knowledgeable of this situation. By having access to this application one's chances for survival can be greatly increased because it gives steps to be taken until medical attention is sought. Overall, the software presented here can be looked upon as an electronic first aid kit.

Tuesday, August 12

1:30 PM – 3:00 PM (continued)

Research Sessions: Faculty and REU Students II *(Continued)*
Technical: Research & Technical Excellence
3:00 PM ***Snackbot Project***
Presenter Jessica Jones
This research will be conducted as part of Snackbot project, at CMU in Summer 2008. Develop the plan of the behavior subsystem: where the robot will go and when, what the robot will do, what the robot will say, what sensors will be needed when, etc.

Applying Fuzzy Logic to the Design Process: A Tutorial Introduction to Fuzzy Logic
Technical: Research & Technical Excellence
Presenter John Bowles

Uncertainty is inherent in design: project requirements are often imprecise and specifications incomplete, customer needs may not be well understood, important information may be of a qualitative or subjective nature, data for meaningful statistical analyses may not be available, and its relevance and validity for a particular system questionable. By not forcing precision where it is not possible, fuzzy logic provides an effective tool for characterizing and analyzing systems in these circumstances.

This tutorial describes the basic concepts of fuzzy set theory, fuzzy arithmetic, fuzzy probabilities, linguistic variables, and fuzzy expert systems and shows how they can be applied to the types of analyses used in reliability engineering design. The focus is on the analysis of system structures, fault trees, event trees, degradable systems analysis, and the use of fuzzy expert systems in evaluating risk.

3:15 PM – 4:30 PM

How to Design Safer Software and Services
Technical: Research & Technical Excellence
Presenter: Lynn Criddle

Software and services are designed to provide great experiences to good people. However, this leaves companies, services, and users vulnerable to every kind of predatory exploit - financial, physical, or emotional. This presentation provides an overview of the landscape of risk, how to evaluate features for safety, design defensively, and implement cost saving abuse tracking and reporting mechanisms.
Areas of focus:
•Learn the principles of building safer software. Development teams are unwittingly designing products that place consumers, families & friends at risk; as well as their businesses.
•Expand the scope of thinking around building safer products. To date, providing consumers with 'safety' has essentially meant to 'block' or 'filter' content and services. This is a largely ineffective and unsatisfactory approach for both consumers and the industry. Learn to change that thinking to integrate safety elegantly within products and services.
•Outline safety best-practices. To provide a safer environment the industry has to build safer products. These practices guide designers and developers through key elements of writing safer software and how these become manifest throughout design, development, and deployment.
•Understand how to integrate safety practices with company policies, legal requirements, privacy considerations, and data and system security needs.

Tuesday, August 12

3:15 PM – 4:30 PM (continued)

Research Sessions: Faculty and REU Students III
Technical: Research & Technical Excellence
3:15 PM ***Voting and Voting Machines***
Presenter: Caroline Eastman

What responsibilities do computing professionals to use their experise to ensure fair and transparent elections?

Voting is a integral component of our civic society. In recent years there has been increased use of DREs, motivated in part by HAVA (Help America Vote Act). These machines have raised new technical issues and have been criticized by computing professionals and others for poor software engineering and security by obscurity. How do the issues presented by these machines differ from earlier technology? How does voting technology fit into the broader election process?

3:45 PM ***Location Sensing and Idenfication in an Ambient***
Presenter: JeRone Gant

Radio Frequency Identification Devices (RFID) are a method of remotely storing and retrieving data using devices called RFID tags/readers. Through the use of small RFID tags and readers, researchers are more equipped to track and identify objects and people. With the rapid reduction in cost, RFID will quickly become a part of the security of information and other objects in our daily lives. RFID tags are used to track objects in supply chains and other distribution centers, and are working their way into the pockets, belongings and even the bodies of consumers. This research will investigate the concept of RFID and examine their use in location awareness techniques, and will compare and contrast common approaches of location awareness using RFID. Furthermore, a discussion of the current state of this technology will be presented and recommendations for future research will be discussed.

4:05 ***Castle Wu***
Presenter: Michael Eagle

Game Design and Development *(*This session ends at 4:00 PM.)
Technical: Research & Technical Excellence
Presenter: Tiffany Barnes

The video games industry has exploded into a multi-billion dollar commercial enterprise that today employs hundreds of thousands of developers world wide, while at the same time leading in cutting edge advances in computer science. Not only are video games a staple of today's popular culture, but they have become a fundamental outlet for creativity, training tools for hazardous occupations, and scaffolding for invaluable research. As the industry continues to grow, so too does the demand for talented, multi-disciplined developers.

UNC Charlotte's game design & development program answers that call, providing tomorrow's game developers with real-world knowledge, training, and insight via a certificate program offered to both graduate and undergraduate students. UNC Charlotte also offers research opportunities in designing and developing games and game technologies. This session will: 1) discuss some of the skills and processes that go into game design & development, 2) discuss opportunities in games education and 3) discuss current UNC Charlotte research in games.

4:00 PM – 4:45 PM

Discussion with Evaluation Team
Exchange: Alliance Exchange
Presenter: Tiffany Barnes

The Evaluation Team hosts a collaborative session with Academic Liaisons to discuss data collection for the next year.

WORKSHOPS AND PRESENTATIONS

Tuesday, August 12

4:45 PM to 6:00 PM

STARS 101: Starting Your STARS Leadership Corps - II
Community

Schools who attended STARS 101 part-I will undertake will more detailed planning of their own corps during this session. Schools will be able to plan independently or with guidance from the Charlotte STARS Leadership Corps, as needed. Each group will be guided to consider the following for the 2008-2009 academic year: frequency, location and purpose of team meetings; offering of seminars related to STARS central values of Technical Excellence, Leadership, Community, and Service & Civic Engagement; partnership development; organizing your corps into sub -groups or teams; selecting and managing leadership projects, and integrating mentoring into your corps activities. Each school will also begin preparations for presentations to be made during the August 13th closing lunchtime ceremony. Each school will deliver a student-led 5-minute presentation to overview their plans for their 2008-2009 corps.

Home Team Planning - II
Community

Schools who are prepared to begin or continue their STARS Leadership Corps during 2008-2009 (and do not need the information from STARS 101, above) will hold their own Home Team Planning sessions. Planning sessions may be held by an individual school or by a group of regional schools who are coordinating their Corps activities. The purpose of this session is to provide Corps time to plan their 2008-2009 leadership projects and other corps activities. The organization of this session will be determined by the academic liaisons moderating each group. Each group is encouraged to consider the following for the 2008-2009 academic year: frequency, location and purpose of team meetings; offering of seminars related to STARS central values of Technical Excellence, Leadership, Community, and Service & Civic Engagement; partnership development; organizing your corps into sub-groups or teams; selecting and managing leadership projects, and integrating mentoring into your corps activities. Each school will also begin preparations for presentations to be made during the August 13th closing lunchtime ceremony. Each school will deliver a student-led 5-minute presentation to overview their plans for their 2008-2009 corps.

6:00 PM to 8:30 PM

STARS Alliance Annual Steering Committee Meeting
Alliance Exchange

This dinner meeting is the annual STARS Alliance Steering Committee meeting. Each member will be asked to give a brief update on the status of their STARS Leadership Corps and their participation in the Alliance Demonstration projects. We will also discuss the new goals and requirements for the STARS Extension project. These include the extension of our target population to include elementary school children; The addition of a new goal to support faculty development; New requirements for supporting STARS Demonstration Projects; New requirements for reporting and use of an institutional scorecard; Supporting startup of STARS New Members; Progress and challenges towards long-term sustainability and institutionalization of the STARS Alliance core values and activities.

WORKSHOPS AND PRESENTATIONS

Wednesday, August 13

8:30 AM – 9:45 AM

Web Office Training Session
Exchange: Alliance Exchange
Presenters: Tiffany Barnes, Audrey Rorrer
This session is mandatory for Academic Liaisons and Evaluator Assistants.

9:45 AM – 11:00 AM

Collaboration of STARS Faculty
Exchange: Alliance Exchange
9:45 AM ***Junior Faculty Roundtable***
Presenter: Tiffany Barnes

This session will provide computing junior faculty and PhD candidates near graduation an opportunity to network and discuss career and work-life balance issues of an academic career in computing. The format will be a moderated discussion where participants can share their insights to one another. Some issues that will be addressed include: building a research career, grant writing, networking and professional social interaction, tenure, time management, and teaching.

10:15 AM ***STARS Faculty Collaborative Research***
Presenter: Kera Bell-Watkins

The STARS program is designed to increase interest and retention in computing among K-12 and college students, especially those from under-represented groups. The program is led in part by college-level faculty members. One immediate concern is helping STARS faculty (especially junior faculty) meet the needs of their respective institutions, while ensuring student success. One strategy is to expand the goals of increasing and/or retaining the computing pipeline to include faculty to help ensure the success of both students and STARS faculty members (of course while still centering efforts on student success). Implementing the strategy includes collaborative research among STARS faculty members. Collaborations would be among the following: 1) junior faculty from 1-2 colleges or universities, 2) senior faculty, 3) STARS SLC students, and 4) corporate partners, when available.

AARCS Presentation
Leadership: Leadership and development
Presenter: Cheryl Seals

African-American Researchers in Computing Sciences (AARCS) aims to broaden the participation of African-Americans at the levels of tenure track faculty and research scientist in the computing sciences. African-Americans represent 5.2% of all university faculties in the United States of America. In Computer Science, African-Americans represent 1.1% of the faculty, 0.88% of tenure track faculty. The African-American Researchers in Computing Sciences (AARCS) program will address this significant representation gap in the computing sciences. This program is designed to broaden African-American participation at the tenure track faculty and research scientist levels of the education pipeline in the form of a demonstration project.

Wednesday, August 13

9:45 AM – 11:00 AM (continued)

BPC: Marketing Using the Web
BPC: Broadening Participation in Computing
9:45 AM ***Age Appropriate Web Design, IA, and Usability***
Presenters: Anthony Chow, Kathelene Smith, Katherin Sun

Working in partnership with students from several universities, our research and design team has been charged with designing and implementing the marketing and dissemination plan for a large multi-university, multi-year NSF grant focused on broadening minority participation in computing and information technology. The focal point for our Alliance's marketing efforts is on our Web portal and our research has been conducted as part of the application of sound design principles used to ensure strong alignment exists between project goals, marketing goals, and the general information architecture of this Web portal. Most importantly, as we are trying to reach out to students at middle school, high school, and university levels, it is critical that our Web content speaks to each group collectively and individually.

Our presentation will take a close look at what the literature and our own original research has to say about the specific differences between youth and adult information seekers and strategies for overcoming these differences and how they have been incorporate into the STARS Alliance Web site.

10:05 AM ***Using Web 2.0 to Reach Students***
Presenter: Ebrahim Randeree

Web 2.0 technologies are a new addition to the information milieu, with sites such as YouTube, MeetUp, LiveJournal, Blogger, Wikipedia, Friendster, Technorati, MySpace and Facebook all changing the way students interact with the web. Web 2.0 allows user contribution and user interaction – an improvement over the old web which delivered static messages to passive recipients. User-created content drives web site usage. This was reflected in 2006, when Time magazine selected "YOU" as their Person of the Year. With more young people from middle school through college gravitating to web 2.0 services, it seems natural to use this technology to market our efforts and to promote the Stars Alliance through the web. This presentation will discuss methods to use these technologies to broaden participation.

10:25 AM ***STARS Marketing: Creating Regional Impact Zones***
Presenters: Anthony Chow, Kathelene Smith, Jennifer Thomas

Creating a Regional Impact Zone is the primary tenet of the STARS Marketing plan. Most academic liaisons remain, however, unclear about what these are and how to go about creating these. In addition, evaluation of each institutions' efforts is pivotal in helping determine by what means the STARS Alliance is attempting to conduct target recruiting to college, high school and middle school students.

Our presentation will take a specific look at our process and how the marketing kits specifically are linked to creating these Regional Impact Zones. In addition, the accompanying evaluation process and instruments will also be discussed.

PRESENTERS

Carl Arrington
Carl Arrington is a Computer Science graduate student, in the department of Computer Science at Hampton University.

Tiffany Barnes
Dr. Barnes is an Assistant Professor of Computer Science at the University of North Carolina at Charlotte, who specializes in educational data mining and using games to improve learning. Dr. Barnes is co-PI on the NSF-BPC funded STARS Alliance grant that engages college students in outreach, research, and service, and the NSF-BPC funded Culturally Situated Design Tools grant that teaches math and computing through online tools for discovering and creating cultural artifacts. She received her PhD in Computer Science at North Carolina State University in 2003. She has been program Technical Director (1998-2006) for "Girls on Track," a summer program designed to increase girls' enthusiasm for and confidence in learning mathematics and using computer technology. Dr. Barnes is Director of the Game2Learn Research Lab at UNC Charlotte. The Game2Learn lab is currently developing and testing games to teach introductory programming, with the goal of broadening participation and increasing learning.

As native of North Carolina, she loves to bike, hike, and ballroom dance. Dr. Barnes's research interests include Artificial Intelligence, Advanced Learning Technologies, Game Design and Development, and Broadening Participation in Computing.

Karen Bean
Karen Bean is Program Coordinator for the Diversity in IT Institute (DITI) at UNC Charlotte. The STARS Alliance and STARS Leadership Corps are programs of the DITI. She worked as an IT Project Manager for Wachovia from 1996 to 2007 and is currently working on a Masters in Sociology.

Kera Bell-Watkins
Dr. Bell-Watkins is an Assistant Professor in the Computer Sciences Department of the College of Information Technology at Georgia Southern University in picturesque Statesboro, Georgia. She received her PhD in Computer Science from North Carolina State University in 2006, MS in Computer Science from Clark-Atlanta University in 1999, and BS in Mathematics from Spelman College in 1996.Kera is a product of previous generational efforts to increase and retain minority and women in the STEM disciplines. This has led to her research interests in utilizing elements of software engineering to enhance computing education at K-12 and

Sarah Burke Berenson
Dr. Berenson has dedicated nearly 20 years at North Carolina State University, building a nationally and internationally recognized mathematics education program. Known for her creative approaches to investigating educational problems, Dr. Berenson's work focuses on the preparation of teachers and the under-representation of women minorities in science, technology, engineering and mathematics careers. Her efforts have impacted university faculty members, K-12 teachers, and middle school and high school students. She has obtained more than 40 grants, published more than 85 research articles, delivered more than 60 presentations at national and international meetings, and supervised 15 doctoral and master's students. Berenson has received the NCSU Outstanding Outreach and Extension Award, the Alumni Outstanding Outreach and Extension Award, and the Alexander Quarles Holliday Medal of Excellence. She was elected chair of the North American Chapter of the Psychology of Education, served on the advisory board of the Robert B. Davis Institute (Rutgers University Graduate School of Education), was appointed research fellow in 2002 at Queensland University of Technology in Brisbane, Australia, and is a member of Sigma Xi. In August, she will assume the Yopp Distinguished Professorship at the University of North Carolina in Greensboro.

Blake Bommelje
Blake Bommelje is a fourth year Software and Information Systems / Political Science student. Blake is the lead editor / presenter for high school outreach at Charlotte's SLC.

John B. Bowles
John B. Bowles is an Associate Professor in the Computer Science and Engineering Department at the University of South Carolina where he teaches and does research in reliable system design. Previously he was employed by NCR Corporation and Bell Laboratories where he worked on several large system development projects. He holds a BS in Engineering Science from the University of Virginia, an MS in Applied Mathematics from the University of Michigan, and a PhD in Computer Science from Rutgers University. Dr. Bowles is a Senior Member of IEEE, and ASQ. He serves as editor of Reliability, Maintainability and Supportability in Systems Engineering, published by the RMS Partnership.

PRESENTERS

Kristy Elizabeth Boyer
Karen Elizabeth Boyer is the STARS Academic Liaison at NC State University. She holds a Master's Degree in Applied Statistics from Georgia Institute of Technology and is pursuing her Ph.D. in Computer Science at NC State with a research focus in artificial intelligence and education. Kristy's area of work involves applying natural language analysis techniques to corpora of tutorial dialogue to inform the design of intelligent systems that adapt to individual learners. Kristy's professional background includes work in the Operations Research department at Delta Air Lines and a position as Lecturer of Mathematics and Computer Science at Valdosta State University.

Stacy Branham
Stacy Branahm is currently a Computer Science Ph.D. student under D. Scott McCrickard at Virginia Tech. Her area of specialization is Human-Computer Interaction, where her interests lie in design methodologies that incorporate design knowledge reuse. She is serving her third term as the president of Virginia Tech's student-run women in computing organization, The Association for Women in Computing (AWC).

Jenniferanne Broido
Florida State University
Distance Learner, Graduate Student
College of Information
3-year STARS member
Florida Technology Student Association (TSA) State Board of Director Member
Florida TSA State Officer Advisor

Kim Buch
Kim Buch is an Industrial/Organizational Psychologist and an Associate Professor of Psychology at the University of North Carolina at Charlotte. She is the lead evaluator for the STARS Alliance. She is the author of numerous papers on the topic of individual learning and organizational change, has presented papers at ASEE and IJEE annual conferences, and has published articles in the Journal of Engineering Education and The International Journal of Engineering Education. Kim has been an evaluator for numerous grants, including the NSF Southeastern University and College Coalition for Engineering Education (SUCCEED). She is currently a co-PI on an NSF ADVANCE institutional transformation grant at the University of North Carolina at Charlotte.

Lauren Cairco
Lauren Cairco is a senior year computer science major at Winthrop University. She has done research involving virtual humans for two years in the Future Computing Lab at the University of North Carolina at Charlotte. She plans to continue her studies of virtual reality and virtual humans into graduate school. Lauren serves as the president of the student ACM chapter at Winthrop and is also in leadership in the KME math honors society chapter. When she is not doing research or schoolwork, Lauren enjoys playing piano, reading, and cooking.

Anthony Chow
Dr. Chow is on the faculty at UNC Greensboro's Department of Library and Information Studies. Born and raised in Tallahassee, FL, he earned a BS degree in developmental psychology from San Francisco State, MS in educational psychology from Florida State and received his doctorate from FSU's prestigious instructional systems program. He has three children with his wife Theresa. As coordinator of marketing and dissemination for the STARS Alliance, Anthony has been at the forefront of identifying ways to address the issue of broadening participation in computing and IT. In this capacity, he has also conducted original research with middle school, high school, and college students regarding these issues and has put together a comprehensive literature review on the research in this area. His goal is to utilize the existing research literature to inform the STARS Alliance marketing and dissemination efforts in support of the Alliance project goals. His team is also responsible for the oversight of the STARS Web portal, www.starsalliance.org.

Linda Criddle
Online Internet Safety and Technology expert Linda Criddle has her own consulting company, Look Both Ways Online Safety Consulting LLC. She provides expertise for companies, consumers, law enforcement agencies and governments. Prior to establishing her own company, Linda spent 13-years with Microsoft Corp. and covered Internet safety for adults and children on the Internet. She has co-developed more than 35 patents on online safety and emerging technologies. Criddle also lectures and advises on Internet safety risks and solutions around the world, speaking at conferences, universities, school districts, parent groups and to teens as well as law enforcement.

PRESENTERS

Katherine Culpepper
Katherine Culpepper joined the SLC in the Spring of 2008. She is interested in digital photography and digital video design, and has a great love for the arts and finding new ways to express herself. Katherine has always been interested in the social and political ramifications of the media and image makers in our society.

Teresa A. Dahlberg
Dr. Dahlberg is associate professor of computer science and founding Director of the Diversity in Information Technology Institute at UNC Charlotte. Teresa leads regional and national initiatives geared towards expanding and developing the pipeline to meet the national need for a larger, more diverse technology workforce. She leads the Students and Technology in Academia, Research and Service "STARS" Alliance: A Southeastern Partnership for Broadening Participation in Computing. The alliance hosts the STARS Leadership Corps of over 200 college students with a mission to develop and become the next generation of computing professionals. Teresa leads the Computing Research Experiences for Undergraduate Site: Visualization, Virtual Environments, Gaming, and Networking and the Computing Scholars Program, both geared towards motivating and supporting students' doctoral study. Teresa was a key leader in establishing the UNC Charlotte ADVANCE: Institutional Transformation for the Future of the Faculty, a program focused on systemic change for the advancement of women in science, technology, engineering and math disciplines. Teresa received a Bachelors of Science in Electrical Engineering from the University of Pittsburgh, worked 10 years as a development engineer for IBM, and received an M.S. and Ph.D. in Computer Engineering from North Carolina State University before joining UNC Charlotte.

Danielle Davis
Danielle Davis is a senior Computer and Information Sciences major at Florida A&M University, and will be graduating in Fall of 2008.

Marguerite Doman
Marguerite Doman is a PhD student at UNC Charlotte. Marguerite received a Bachelors of Science in Mathematics from Grove City College and an M.S. in Computer Science from UNC Charlotte. She worked as as System Programmer for IBM from 1978 - 1998. Her design and corporate work includes operating systems development in Data Management on the IBM mid-range systems. She has worked as a development liaison for compiler development in Toronto, Canada and in Vienna, Austria. She has been part of the IBM user group COMMON as speaker and as conference liaison. .Her research area is in Wireless Sensor Networks.

Caroline M. Eastman
Dr. Eastman is Professor and Director of Undergraduate Studies in the Department of Computer Science and Engineering at the University of South Carolina in Columbia, South Carolina. Her research specialities are in information retrieval, web searching, and human-computer interfaces. She regularly teaches courses in database management systems and professional issues in computing.

JeRone Kareem Gant
JeRone Kareem Gant was born in Jacksonville Florida June 20, 1984. He is currently a first year graduate student at Florida A&M University pursuing a degree M.S. Degree in Software Engineering. After graduation JeRone plans to pursue a doctorial degree in Computer Science or obtain a promising job. JeRone has participated in the Florida Georgia Louis Stokes Alliance for Minority Participation (FGAMP) since his sophomore year. He is also involved in departmental organizations such as S.T.A.R.S and ACM. JeRone is also apart of the Mobile Computing Research Group under his advisor Dr. Jason Black. He is currently doing research in location sensing and identification in ambient environments using Radio Frequency Identification devices (RFID).

Ann Quiroz Gates
Ann Quiroz Gates is a professor and chair of Computer Science at the University of Texas at El Paso. She serves on the Board of Governors of IEEE-Computer Society and leads the Computing Alliance for Hispanic-Serving Institutions (CAHSI) that is focused on the recruitment, retention, and advancement of Hispanics in computing. She received the university's 2003 Chancellor's Council Award for Outstanding Teaching and she was named to the Hispanic Business magazine's 2006 100 Influential Hispanics list for her work on the Affinity Research Group model, a comprehensive model for the creation and maintenance of dynamic, productive, and inclusive research groups.

Joseph Grafsgaard
Joseph Grafsgaard is a Ph.D. student in Computer Science at North Carolina State University.

PRESENTERS

Lane Harrison
Lane Harrison is a third year Computer Science Student. Lane is the lead coordinator for high school outreach at Charlotte's SLC.

Samuel Jean-Phillip
Samuel Jean-Phillip
Saint Augustine's College
Computer Information
Graduate

Jessica Jones
Jessica Jones was born and raised in Richmond, Virginia and is currently a sophomore at Hampton University in Hampton, Virginia where she is majoring in computer science and minoring in leadership studies. This summer at Carnegie Mellon University, as an intern in the People and Robot's program, Jessica has been working on code that will detect changes in sensors as well as building maps of various buildings using MobileRobots technology.

Elizabeth F. Kain
Betty joined the American Academy of Science as an Entry Point! Representative in late 2007. She has extensive business, technical and management experience with over 34 years at IBM in New York, New Jersey, Connecticut and Texas. Betty's primary role with Entry Point! is to recruit promising students with disabilities in the STEM disciplines.

Deanna Kosaraju
Deanna Kosaraju's role at the Anita Borg Institute for Women and Technology (ABI) is to direct and manage the program team. Programs are at the core of how we as a nonprofit meet our mission. For the past 2 years, she has been especially involved in the Grace Hopper Celebration. She arrived here in an unconventional way. After 12 years in the software industry, she decided to go back to school, graduating from U.C. Berkeley with a degree on Gender and Women's Studies. She has always been interested in women's issues and feels that she has the tools (both academic and technological) for creating a space for dialog about what it means to be a woman in the 21st century.

Stephanie Kreseen
Stephanie Kreseen is a staff member at the Landmark College Institute for Research and Training. Landmark College serves exclusively students with learning disabilities and/or ADHD, and utilizes assistive technology. Ms. Kreseen received her B.S. in Applied Experimental/Human Factors Psychology from Embry-Riddle Aeronautical University. She has worked as a Senior Consultant at Booz Allen Hamilton, Project Lead at East Indiana Workforce Investment Board, Human Factors Analyst at Northrop Grumman, and Sensory-Cognitive Clinician at Lindamood-Bell Learning Processes.

Andrew Kunz
Andrew Kunz is a student at Landmark College. He joined the SLC in Spring 2008. He is interested in database management and networking architecture. Andrew likes making things organized and arrange them so they flow and are more efficient.

Andrea Lawrence
Dr. Andrea Lawrence is an Associate Professor and Chair, Department of Computer Science at Spelman College. She received her graduate education from the following institutions: Spelman College, Purdue University, B.S.,Mathematics, Atlanta University, M.S.,Computer Science,Georgia Institute of Technology, Ph.D, Computer Science.

Robert Lefebvre
Robert Lefebvre was born in Grand Haven, Michigan. Moved to East Tennessee in 1995. Home schooled all 12 years of grade school. graduated high school in 2003. Obtained an Associates of Science in 2005 from Pellissippi State Technical Community College. Obtained a Bachelors of Science in Computer Science in 2007 from University of Tennessee, Knoxville. Currently pursuing a Masters of Computer Science at the University of Tennessee, Knoxville, and working at Oak Ridge National Laboratory, authoring a Nuclear Geometry Visualization tool as part of the SCALE package.

Chance Lewis
Chance Lewis is an Associate Professor, Department of Teaching, Learning and Culture, Texas A&M University

PRESENTERS

Ramona Lindsey
Ramona Linsey currently teaches 6th grade math at Drake Middle School in Auburn, Alabama. Prior to this she served as the Instructional Technology Coach and Technology Coordinator for Cary Woods Elementary School. Ms. Lindsey is a dedicated educator who seeks ways to connect the middle school curriculum with real world experiences. Drawing on Generation Next's passion for digital technology, she wanted to experiment with the possibilities of using computer programming to allow students to apply math and science skills. With the help and support of Auburn University's College of Computer Science and Software Engineering, Ms. Lindsey's students became actively engaged mathematical and scientific thinkers.

Tiffany McMillan
Tiffany McMillan is a junior Computer and Information Sciences major at Florida A&M University, and will be graduating in Fall of 2009.

Vaisin Mouton
Vaisin Mouton is a junior Computer and Information Sciences Major at Florida A&M University, and will graduating in Fall of 2009.

Evie Powell
STARS SLC Student
Ph.D. Student in Computer Science
UNC at Charlotte

Manuel A. Pérez-Quiñones
Dr. Manuel A. Pérez-Quiñones is an associate professor in the Department of Computer Science and a member of the Center for Human-Computer Interaction at Virginia Tech. His research interests include human-computer interaction, personal information management, multiplatform user interfaces, user interface software, and educational uses of computers. He received a DSc in computer science from The George Washington University. He is a member of the ACM, and IEEE-CS. Professionally, he serves as a member of the Coalition to Diversify Computing and as member of the editorial board for ACM JERIC. He is co-chair for Tapia 2009 and co-director of the Collaborative Research Experience for Undergraduates in Computer Science and Engineering (CREU). Dr. Pérez-Quiñones is Director of the Personal Information Management Research lab. The PIM lab studies how individuals use technology to organize and use their information to satisfy their day to day needs. The group studies how to best make use of our limited personal resources (time, money, energy, attention) to improve the quality of our lives. His research group has also explored the issue of culture and multi-language interfaces for communities that live within a different culture. He is also a member of the Digital Goverment Research group.

Ebrahim Randeree
Dr. Randeree is an Assistant Professor at the College of Information at Florida State University. He teaches emerging technologies and health informatics. His research focuses on health information exchanges, privacy and security, innovation/adoption of technologies, and information management. He is the Stars Alliance Liaison as well as the Faculty Advisor for the FSU Assocation of IT Professionals (AITP). He is an active member of many national organizations including the Academy of Health, Academy of Management, Association for Information Systems, and the Health Information Management Systems Society. He co-chairs the undergrad IT program at the College and also manages internships.

Kristen Respers
Kristen Respers is a Computer Science Major who graduated from Saint Augustine's College. She first noticed an interest in computer technology in high school. She was able to get her A++ certification before graduating from high school. She graduated with honors and continued with her education at Saint Augustine's College. While in college she performed as a leader in many organizations. She was Vice President of ACM, a Student Leader for the student body, a Big Sister, and also presented Research for MARC U star programs. Her future goals are to do more internship for skill and experience, continue with grad school and receive a Master’s in Artificial Intelligence and Gaming, and to ultimately gain a successful career in computer science.

PRESENTERS

Steve Roach
Steve Roach is associate professor of Computer Science at the University of Texas at El Paso. His areas of expertise are in formal approaches to software assurance and software engineering. His software development efforts include the theory compilation component of the Amphion deductive synthesis system, the Saturn Viewer and CASVU programs for NASA's Cassini mission to Saturn, and a variety of data acquisition, process control, and modeling programs. Roach is a member of the IEEE and the ACM.

Audrey Smith Rorrer
Audrey Smith Rorrer obtained her bachelors degree from Guilford College, with a double major in Psychology and Religious Studies. She obtained her masters degree from Appalachian State University in Student Development. Ms. Rorrer is currently pursuing her doctorate in Counselor Education from the University of North Carolina at Charlotte. Her research focus is multicultural education, including identity development and mentoring relationships. Ms. Rorrer is a Nationally Certified Counselor who has worked with college students for more than 8 years in career development and planning. She has designed and taught career exploration courses, freshman learning seminar courses, an online adult education course, and countless career development workshops. She served as the Assistant Director of Career Services at the University of Tennessee Knoxville, where she provided career counseling to the Colleges of Social Work and Education. Ms. Rorrer also provided career exploration workshops for the Tennessee School for the Deaf during her tenure in Tennessee. While the Associate Director of the University Career Center at the University of North Carolina at Charlotte, Ms. Rorrer served as the liaison to the College of Computing and Informatics, and the employer connections director. Ms. Rorrer currently serves as the Evaluation Graduate Assistant for the STARS Alliance, where she contributes to the research design and implementation for the STARS Leadership Corps program, and to the Research Experiences for Undergraduate program at UNC Charlotte. In her spare time, she enjoys backpacking, hiking, and cooking.

Jill K. Ross
Jill Ross is the Director of the Image of Computing Task Force, University of Colorado at Boulder Jill has been tasked by "… distinguished leaders from ACM, CRA, IEEE-CS, USENIX, SIAM, AAAI, NCWIT, and from Microsoft, Intel and HP, …to conceive and execute a national campaign to improve the public image of computing" (CRA Website retrieved on April 29, 2008). She recently included several current STARS SLC students in a video feature involving flying to Seattle, WA to meet with Microsoft's Director of Research.

Cheryl Seals
Dr. Seals is an assistant professor in Auburn University's Department of Computer Science and Software Engineering and a member of the Intelligent and Interactive Systems Group. Many of her studies are in the area of novice programmers utilizing visual programming techniques, user interface design projects to improve interaction design, and game design & development and the dimensions games can add to computer literacy. She has a vested interested in programs that are community centered and are targeted at helping today's youth strive for a better tomorrow. Seals continuously works with programs that are computer interventions in the elementary, middle and high schools in the local area.

Jay Skipworth
Auburn University; Counselor I; Career Development Services

Virgil Simmons
My name is Virgil Simmons, I am from Greensboro NC. I was born and raised on 200 acres of North Carolinas finest farm land. I am the youngest of eleven children. Throughout K-12 I maintained good grades, I participated in many clubs, and played many sports, I became a scholar athlete through high school. I lead my football team to a NC State Championship victory my senior year. I was a leader amongst my peers in school and outside of school. During my senior year I received many acceptance letters from colleges, some for sports and some for education, I ended up committing to UNC Charlotte, where I begun the new chapter of my life. AT UNC Charlotte I got involved with STARS Alliance, where I participated in Middle and High School outreach, showing students the importance in furthering their education and the abundant of opportunities available in a computer science career. This year I plan on staying involved with STARS and I plan on reaching as many students as possible.

Kathelene McCarty Smith
Kathelene McCarty Smith is currently a Master's student in Library and Information Studies at University of North Carolina Greensboro. Kathelene also holds a Master's degree in Art History from Louisiana State University. She works with the STARS Alliance as Information Architect, also participating in research and marketing and dissemination.

PRESENTERS

David Straight
PhD in computer science from texas at Austin, computer science faculty at UTK since 1975.
(CS merged with ece and is now in the college of engineering as EECS)

Julie Strothman
Julie Strothman is a web developer, user researcher, and project manager with the Landmark College Institute for Research and Training. Ms. Strothman brings over 10 years of project management experience to LCIRT grants and projects. She is the Academic Liaison for Landmark College's NSF BPC STARS Alliance activities. She earned a Master of Science degree in Technology Strategy Management at the Marlboro College Graduate Center where she focused on website user interaction design, accessibility issues, and the use of technology in education. Ms. Strothman has extensive experience conducting usability testing with students and educators, often using assistive technology.

Katherine Sun
Katherine Sun graduated in master degree of Library and Information Studies UNC at Greensboro, and she also holds a Master's degree in Computer Science from University of Northern Virginia. Katherine Sun is the STARS Web Developer.

Nathan Thomas
Dr. Thomas is the Campus Diversity Officer at the University of South Florida Polytechnic where he manages campus diversity among students, faculty, staff and with community organizations. He also teaches graduate courses in Counselor Education and undergraduate courses in Leadership Studies. Dr. Thomas earned his doctoral degree in Ecological – Community Psychology from Michigan State University and his Master's and Undergraduate degrees in Clinical/ Community Psychology from Norfolk State University. Over the last 18 years he has addressed the importance of student development in secondary and higher education. Currently he is conducting a longitudinal study with an identity-based mentoring program at Michigan State University where 90% of his participants have been retained over four years. He has also addressed desegregation in Rockford, Illinois and Pittsburgh, Pennsylvania public schools; the effectiveness of community collaborations in the state of Pennsylvania and Michigan, and their goals to remove the educational and economic inequities in several counties; and African American and Latino college adjustment, grade point average (GPA), retention, and graduation in Predominately White Institutions and Historically Black Colleges and Universities (Specifically: Norfolk State University, Penn State University and Michigan State University).

Patrick Trebisacci
Patrick Trevisacci is a student at Landmark College. He joined the SLC in Fall of 2007. He is interested in engineering and hopes to take away a better sense of what research and computer based fields are really like to be involved in, and also interested in experiencing teamwork in a research environment.

Elsa Villa
Elsa Villa is a lecturer in the Department of Teacher Education, Division of Mathematics, Science and Technology, at the University of Texas at El Paso (UTEP). She formerly served as the Director of the Engineering Programs Office at UTEP for eleven years where she worked closely with engineering faculty in designing and implementing instructional strategies to improve classroom learning. Ms. Villa is a doctoral student in Curriculum and Instruction at New Mexico State University, and her research interests include professional learning communities and teacher identity.

Ryan Ward
Ryan Ward is a student at Landmark College. He joined the SLC in the Fall of 2007. Ryan is interested in studying graphic design. He enjoys using computers for his design work. Through the SLC, Ryan has participated in a study of the usability of online math learning resources, helping to analyze data and develop usability guidelines for digital math resources.

Laurie Williams
Laurie Williams is an Associate Professor of Computer Science-Engineering at NCSU. Dr. Williams serves as the Lead Evaluator for Paired Programming for the Alliance.

New Way of Learning

Terrance Bell
Georgia Southern University

For spring semester 2008, four students were chosen to participate in Team Success in IT, which was funded in part by the BPC Demonstration Project. One of the goals was to help tenth grade students with their computer skills at a local charter school_using software tools geared towards different cultures such as pop culture and Native-American culture. The Culturally Situated Design Tools were used as a collective gateway for the students to learn critical computational skills while enjoying the software. This is a beneficial way for students to learn something new, however, it may not be accessible by all students. This is a relevant problem for computer literacy. One solution is to facilitate more use of computers in work places including schools. People will have better understanding if exposed to more technology. For example, if a nurse is required to replace old information from an outdated database to a new improved one he or she must know the necessary steps to solve the problem efficiently. Training and a development process will follow not just for this situation but for every computer related problem in the medical industry. Expansion from this into the job market will soon follow with highly trained computer knowledgeable adults. Everyone benefits from this including self-sufficient workers and a more productive economy. A proposal of a similar plan describing education for computer forensics in the work place was introduced by the Computer Science dept. at Florida State University. The problem with the application of science and education to computer-related crime forensics is it being largely limited to law enforcement agencies. They propose a workforce development program to support the fast pace expansion of computer forensics. This is similar to my idea of setting new precedence for technology in the work-place provided there is proper training. I seek to implement plan seek necessary improvements in original software applications or overhaul original concepts for more intuitive solutions; understand the necessary benefits and drawbacks of new idea including management costs and intangibles; introduce new concepts to work place through training and seek immediate feedback; tweak and improve the idea with multiple perspectives according to feedback. I will expect computer literacy to increase at least 10-20%_among kids in the community.

Alice Computer Club

Ravikant Agarwal, Jie Bao, Wanda Eugene, Christin Hamilton, Ramona Lindsey
Dwight McCants, Kenneth Rouse, Cheryl Seals, Andrea Williams
Auburn University

During the second semester of the project, we initiated Alice computer club and piloted it at Cary Woods School. Students in the computer club were introduced to ALICE 3D software and it was a great success. The fun and excitement of the students was catching and our team decided to expand the fun. This year we brought fun and learning not to just one elementary school but to FIVE schools. Again we used the ALICE 3D software and after some introductory lessons we turned their creative juices loose and let them create their own story using ALICE. For motivation we let them know that the top 3 student projects would be presented at Engineering Day at Auburn University by the student and Alice film festival in Birmingham. This poster will display the fun and excitement that expanding the learning brought to the students of five schools and our team.

An Exploration Into Fractal Image Encoding Methods

Keri Rehm
Meredith College

As the body of digital information is growing, it is important to maximize data storage and transfer rates. Image files, in particular, contain a great amount of data for what may seem to be a small picture. Many compression algorithms have been created to help minimize the amount of information needed to produce a digital image of a certain quality. One possible encoding method utilizes fractal-based iterated function systems (IFS's). This project involves the investigation of the most common methods of IFS image encoding and the creation of a Java computer program that applies a particular method to color images. Parameters of interest in the encoding and decoding process include encoding time, encoded file size, and decoded image quality, as all three are useful in determining the effectiveness – in image quality and program efficiency - of the encoding process. Implementing the program on test images resulted in encoding times and file sizes that may suggest that the specific processes used in the encoding method are not the best suited for this process; however, image quality is comparable to that of other lossy compression processes.

Automatic Tagging for Correctness of Student Actions in an Intelligent Tutoring System for Introductory Programming

Chales D'Andrea
North Carolina State University

Intelligent tutoring systems are a class of educational software that helps students learn by adapting to the needs of individual students. This class of educational software has been shown more effective than classroom instruction, and it is hoped that adding natural language dialogue capability to a tutoring system can further increase the effectiveness of these intelligent systems. The JavaTutor project investigates how an intelligent tutoring system that engages learners in natural language dialogue over the course of a programming task can promote learning and positive motivational outcomes. The domain of JavaTutor is introductory computer programming in Java, currently the specific topic of one-dimensional arrays and for loops. An important aspect of JavaTutor is the ability to computationally judge each problem solving action as likely correct or likely incorrect, as a human tutor would do during the tutoring session. This work presents a preliminary step in automatic tagging of student problem solving actions using a heuristic measure applied during post-processing to determine whether each student problem solving step survived until the end of the session, or was undone. The work completed as part of this undergraduate research project will be used in research analysis to investigate tutorial strategy in response to student problem-solving actions that occurred in a body of human-human tutorial dialogue data. In addition, the software tool produced will be extended for use in real-time judgment of action correctness.

Avari (Virtual Agent Retrieving Information)

Lauren Cairco, Tony Bloodworth, Louis Fletcher, Vicky Fowler
Larry Hodges, Morris LeBlanc, Amy Ulinski
UNC Charlotte

With Avari's character, we aimed to build a virtual agent that would be intuitive and accessible enough for anyone to approach and hold a conversation. We took a human-centered approach, using technologies such as voice recognition, vision, and realistic character display to make interacting with her more like talking with a person than typing into a computer. There were several software tools used to accomplish this task. Some of them are Haptek and SALT, the first one was used to give the agent a human like quality and the later was used in voice recognition. When not engaging in conversation, AVARI performs lifelike human behaviors such as singing, yawning, coughing, and telling jokes. With the use of a camera, AVARI is able to detect the user's presence, stop idle behavior, and begin interaction by introducing herself and requesting information from the user via a microphone. She is capable of understanding natural language as input, allowing users to feel as though they are engaged in a conversation with another human rather than a computer.

Breaking Through: Invisible Barriers to Successful Learning

Christopher Caldwell, Katherine Culpepper, Andrew Kunz, Michael Tranchina
Patrick Trebisacci , Ryan Ward
Landmark College

The Landmark College STARS Leadership Corps project in Spring 2008 involved the creation of a multi-media piece through the use of a variety of software applications: Adobe Photoshop and Flash, iMovie film editing, and Audacity audio editing. The SLC's goals were to learn some web programming techniques and to create an outreach piece encouraging younger students with learning disabilities to be confident about their potential for success in college. The poster will describe the process of creating the multi-media piece, including: value and difficulties of group work, project management, learning Flash, and working with video and audio. They will share their final piece, which includes sections on: LD Demystified, Daily Life with LD, and Academic Success, as well as interviews with Landmark College faculty and students.

CIS 40th Anniversary Alumni Celebration

John Brown, LeAndrew Davis
Florida A&M University

Our project is based on our Computer Science Department's 40th Anniversary Alumni Celebration. We collect all of our information from Ms. Black and create the banners and posters as instructed. We will also create handouts to advertise the speakers for the alumni lecture series and to motivate students to attend. Even though this is a CIS event, we are aiming to get as many students from FAMU to attend and learn about our program as we can. During this project we learned a lot not only about the motivational speakers, but about the growth and development of the Computer Science field. This is a great experience for the Computer Science Department and for the general public.

Computer Science: Spreading an Interest in High Schools

Jordana Hodges, Shelaya Lynch
UNC Charlotte

UNC Charlotte's High School Outreach group is on a mission to spread understanding about Computer Science to every high school student in the Charlotte area. We aim to erase false assumptions about this important career field and also plant a strong interest in computers and the endless creative possibilities surrounding computer technology. Spreading knowledge about Computer Science to high school students is vital. Several common misunderstandings about what a Computer Science student actually does have led to an overall decrease of students expressing a desire to enter into that field. Our High School Outreach group visits local high school classrooms and interacts with the students by discussing what they think Computer Science is versus what it really is; students have almost simultaneously agreed at the beginning that computing is a boring job that involves heavy programming and zero social interaction. We want students to know before they reach college about the limitless opportunities available to them in Computer Science, including plenty of social interaction and a high job market filled with interesting new trades in computing. High School Outreach has received promising results thus far from our trips, including an increased interest in Computer Science and plenty of excitement and encouragement from teachers. We have learned that keeping the students involved in the discussions and giving them hands-on projects helps us hold their attention. We have also learned that students are more interested in computer topics such as gaming, hacking, and virtual robotics, so we have adjusted our focus to help captivate our audience by using videos and sharing personal research experiences involving these sub-fields. Last, but most important, we are learning that students respond well to diversity in our group, both in gender and background, showing them first-hand that anyone can be a perfect fit for Computer Science.

Computing Careers Night

Twanisha Gordon, Emily Meyer, Christine Savvakis, Mike Sodders
Florida State University

What choices are available to high school students in computing? Students from the Florida State University STARS Alliance program planned, organized and managed the 2nd Annual Computing Careers Night in order to help students, parents, teachers and guidance counselors understand the various educational and career opportunities in computing. Following an informative and fun program, featuring keynote speakers Glenda Atkinson and Chet Hall (members of the TalTech Alliance - a consortium promoting IT and computing in the region), attendees toured the new IT Magnet Academy at Godby High School and talked with representatives from local universities and community colleges as well as private industry about educational and employment opportunities in computing. This event was designed to promote computing and impact a large audience. Students from the Godby IT Magnet Academy provided enthusiastic assistance to the FSU STARS Alliance. The event was held at the Godby IT Magnet Academy. The FSU STARS effort was coordinated with Godby High School, Tallahassee Community College, Florida A&M University and the TalTech Alliance (the local Technology Round-table for the Leon County Economic Development Board) into a broad pipeline for recruiting students into computing careers. The overall structure and coordinated effort gives students several computing career paths that start at the middle school level and extend into graduate school and employment.

Computing Careers Night "Lite"

Kristin Norena, Sabrina Fontaine , Peter Guhl, Emily Meyer, Jachima Taino
Florida State University

Students from the Florida State University STARS Alliance program planned, organized and managed the follow-up to the Annual Computing Careers Night project. They used the initial effort to set the tone for helping students, parents, teachers and guidance counselors understand the various educational and career opportunities in computing. After the success of our large single semester event, we decided to take the Career Night material "on the road." The large number of schools and the wide area we serve resulted in many students not being able to attend on a school night. We decided to increase our impact by dividing the STARS students into teams of three and then having them choose three schools to work with to present their material. The STARS students used the "lite" program for numerous benefits. The small team made for closer communication with school representatives as well as the formulation of a long-term ongoing relationship (as opposed to a one shot deal). The small team going to small classes allowed for more computing questions and more individualized mentoring on career choices. The program also helped to identify future STARS in the local community.

Computing in the Dorms

Emily Rosenthal, Christine Savvakis, Matthew Small, Mike Sodders
Jachima Taino, Delano Townsend
Florida State University

Previous projects have focused on outreach into the community outside the university. We were looking for opportunities to reach the university community particularly undergraduate students. We determined that the residence halls provide an excellent platform to teach and recruit. Most students living in residence halls are first or second year students and our hope is to build interest in computing careers by showing them the types of skills that computing students learn.

Computing is an integral part of campus life. Nearly every student owns and uses a computer for such things as homework, gaming, and just browsing the web. As computer threats such as viruses, spyware and hacking become ever more pervasive in computing environments, computer maintenance and security awareness are essential skills for modern students. Through educating students in these skills, we hope to inspire interest in computing by demonstrating more advanced computer skills as accessible and less intimidating. Working with resident advisors, we devised programs to teach students basic and intermediate skills such as: virus protection and security, maintenance, file compression software, file sharing, and training in various software applications. We believe that bringing this information to the students will result in a more positive response. Sharing our talents and resources in an informal setting allowing provides for engaging interaction and dialogue between students and project leaders. By approaching the students in their residence halls with these training seminars, we hope to not only provide students with useful computing skills to succeed in college, but also provide an opportunity to learn more about potential computing careers. We used this opportunity to recruit potential STARS members, as well as, foster interest in computing careers.

Effective Technological Systems for Reducing Environmental Costs through Training

Stephane Simeon
Florida A&M University

This research seeks to demonstrate effective technological tactics and techniques used by rapidly changing companies for adapting to the environment through training.

Fostering Affective Experiences in Interactive Learning Environments

Scott McQuiggan, Jennifer L. Robison
North Carolina State University

Affect has been the subject of increasing attention in applications of educational systems. Many intelligent tutoring systems now seek to adapt pedagogy to student affective and motivational process in an effort to increase the effectiveness of tutorial interaction and learning outcomes. Recent work has begun to investigate the emotions experienced during learning in a variety of environments. We have extended this line of research by investigating the affective transitions that occur throughout narrative-centered learning experiences. Further analysis differentiates the likelihood of affective transitions stemming from pedagogical agent empathetic responses to student affect. In order to further provide affective support, we have investigated means of modeling human empathetic expression within virtual agents. Humans continuously assess one another's situational context, modify their own affective state, and then respond based on these outcomes through empathetic expression. Individuals may choose to provide support via parallel or reactive empathy. Parallel empathy refers to mere replication of another's affective state, whereas reactive empathy exhibits greater cognitive awareness and may lead to incongruent emotional responses (i.e., emotions different from the recipient's and perhaps intended to alter negative affect). Because empathy is not yet sufficiently well understood, it is unclear as to which type of empathy is most effective in which social situations. Devising empirically informed models of empathy from observations of "empathy in action" may lead to virtual agents that can accurately respond in social situations. This research proposes a unified data-driven framework for modeling parallel and reactive empathy. Empathy models are used to drive runtime situation-appropriate empathetic behaviors by selecting suitable parallel or reactive empathetic expressions. The inductive approach has been empirically evaluated in an interactive learning environment showing that the induced empathy models are able to accurately assess social contexts and generate appropriate empathetic responses for virtual agent control.

GameCATS: Using Game Design to Improve Learning Experience
Michael Eagle, DJ Kirton, Eve Powell
UNC Charlotte

GameCATS intends to increase interest in computer science by presenting culturally significant tools and video games that teach computer science concepts. We presented the Culturally Situated Design Tools to middle school students in an attempt to stimulate an early interest in math, programming, and computer related studies. Students that participated in our activities also learned about the cultural relevance of the workshop activities. We encouraged college students to take interest in the Game Design Program at UNCC by showing them some of the projects created by GameCATS members. We have found successful methods of both recruiting students at the middle school and high school levels as well as motivate students at the college level through the user of video games.

Girls IT Club
Monika Achury, Twanisha Gordon, Peter Guhl, April M. Johnson, Kristin Norena
Florida State University

The STARS alliance partnered with GIRLS Get IT and WICS (Women in Computing Society) to start and mentor a girls IT club at a local High School. Girls get IT is focused on similar goals as the STARS program and a partnership will lead to a more effective solution. The Girls Get IT! Initiative works with middle and high schools across Florida to increase female student participation and graduation rates in science technology, engineering, math (STEM), and information technology (IT); inform their female students of career options in the STEM, computer science and the information technology fields; and ultimately, increase the number of women employed in the STEM and IT fields across the state of Florida and beyond. This supports the STARS goal of motivating students to enroll in computing disciplines, supporting extra-curricular training for students, and retaining students in computing.

Girl Scouts Internet Safety Patch
Lauren Cairco, Vicky Fowler, Joshua Soles
UNC Charlotte

The mission of the STARS Leadership Corps is to advance interest in computing through outreach programs, particularly in groups, which are not typically thought of as being technically savvy. One of these groups is females between the ages of eleven and seventeen. When the Girl Scouts of America sent out a request for patches to be developed in computing, the idea seemed perfect for our group. In response to the rising level of Internet evils and the ubiquity of computers in the modern home, the creation of a Girls Scouts Internet Safety patch soon took high priority among our group. The activities for this patch will cover subjects like: creating strong passwords and passwords; information permanence; information that should not be shared; illegal/legal downloading and its consequences; and online bullying. The patch lessons are supposed to be fun as well as informational. While the teachers will have standard lesson plans, the information will be presented to the girls in the form reminiscent of a magazine, with sections like Internet safety-themed quizzes.

High School Outreach: Managing the Logistics
Lane Harrison, Blake Bommelje
UNC Charlotte

One of the most essential and time-consuming aspects of running any outreach is the coordination of outreach events. When planning events for college students to visit high schools, there are many clandestine factors that can cause postponements and cancellations. In this poster, I plan to summarize my two years of experience in coordinating a successful high school outreach in order to expose some of these factors. I will discuss the necessary skills required to be an effective coordinator as well as skills that will be gained or strengthened by being a coordinator. Additionally, I will include direct input from teachers and administrators about what they look for in events. I will also discuss some of the most efficient methods of corresponding with them, and include tips regarding how to maintain relationships with schools to increase outreach opportunities and effectiveness. The goal of this poster is to give students and professors alike who are interested in delegating high school outreach events a few insights as to what they can expect, as well as guidelines for handling the unexpected.

Hope Junction
Raven Anderson, Tiffany Huggins, Virgil Simmons
UNC Charlotte

Our motto as the Hope Junction Team is "to learn while having fun." We use simple robotics to teach middle school students computing while entertaining them. We are working with Mr. Paul Okpokowurk of the Hope Junction, a local non-profit organization, who is committed to producing leaders of tomorrow. Using Lego™ Mindstorm for the materials, we teach the students to design, and build robots. The students learn how to identify the parts of the robots, and program the robots to perform simple task. They test the robots' durability and take part in other robotic exercises that explore how math functions relate to real life computing problems. Along with teaching robotics, our goals include enhancing math and science skills and instilling an interest in computer science. We want the students to take into consideration the use of computing throughout their everyday life. During this outreach we expect to teach the middle school students how to work together, ask questions, learn how to accomplish goals, and to learn that computing is fun.

Informing High School Students about Computing Careers
Blake Bommelje, Stephanie Chapin
UNC Charlotte

Under the belief that increased interaction with high school students will increase their desire to go to college and interest in Information Technology (IT), the High School Outreach team attempts to visit and interact with as many classrooms as possible to describe college and demonstrate possible options for IT in high school students' futures. Students were informed through presentations and discussion about different jobs in college and careers in computing. To make the career salary listings more relatable for students, they were converted to dollars per hour from the yearly rates. This was done so then students could see the difference of pay to any jobs they might have at that time. We also talk about some of the different places to work and how they can relate to other interests. The students learned how they can do more than just programming for a job. Overall, students seemed to be more interested in the career options present in IT field after listening to the presentation.

Kitchen Science Investigators: Developing Identity As Scientific Reasoners and Thinkers
Tamara Clegg
Georgia Tech

Science takes on a new meaning when one begins to see himself or herself as a scientist, applying it to the world around them. Indeed, this is what drives the passion many scientists have for their profession - the ability to apply it in pursuit of their own interests and goals. However, many learners never make it to this point, often becoming disconnected early in school science, developing identities as people who are not scientists, or scientifically inclined. In this research, we seek to address this issue by designing a learning environment to establish a community of learners that values scientific reasoning and uses it for exploring science in the context of real-world, everyday situations. In this proposed study, we are designing activities and software support for an after-school or summer camp program, Kitchen Science Investigators, where learners come together to learn science through cooking. In the design of our learning environment and software, we have taken into account what the literature has to say about learning and identity, as well as what we have learned in previous pilot studies. My hypothesis is that participating in a program designed based on this literature will help learners find their own personal connections to scientific reasoning and thinking as they learn the science behind cooking, that will help them to begin to see themselves as scientific reasoners and thinkers. I seek to find out what this identity formation looks like. How does it happen? What help do learners need? The study I am proposing will be carried out in a 9-month after-school program with 6-8th grade learners. The proposed research will allow me to inform the learning sciences community about designing activities and software for helping learners to recognize and develop their scientific reasoning skills, personal values, and goals that lead to a disposition to do scientific reasoning both in school and in everyday life.

Inspiring the Future: Middle School Workshops
Laurie J. Hunter, Amy Ingram, Keyotta Sanford
Meredith College

Over the course of the year, members of the Meredith College SLC developed 45 minute workshops that could be

presented to 8th grade girls at Sonia Kovalesky Day at Meredith. These workshops included an introduction to Scratch from MIT, making binary bracelets, and making kaleidoscopes. Through these workshops, the students in attendance were able to see the "fun" side of computer science and mathematics. They left with a knowledge of programming, binary numbers, and geometric shapes that could produce an interest in computer science or mathematics in the future. Throughout the planning process, the details of the workshops were documented so that they could be used at other events. Alternative activities were developed, also, so that the workshops could be applied to longer periods of time and students of different ages.

Mapping Your Knowledge

Andrew Bertino, Heather Franklin, Twanisha Gordon, Yaniv Levy, Emily B. Rosenthal
Florida State University

Previous attempts to complete projects lead to disparate efforts and projects that existed as independent entities. Schools and organizations (that would most benefit) were being missed and outreach efforts were less coordinated.
To help better reach the middle and high schools in our community, we have incorporated a Google application that maps the location of our target audience within the county. We data mined the school's web sites and we were able to capture all the necessary contact information, including hours, and IT resources that would enable us to launch programs at these schools. Our database was then "mashed" with Google Maps to create a visual representation. The Mapped database is linked to our STARS Alliance database so we can connect STARS students to the information they need for projects. The application will further be developed to include other community resources, computing companies, educational institutions, not-for-profits, county and state resources, etc. Another effort is to "tag" locations with URLs, summaries of events, and FLICKR pictures to create a visual history of STARS efforts. This allows for efficient and timely access to the information for current and future projects. The primary goals are to coordinate outreach efforts by finding geographically "local" resources for projects to benefit STARS students in become effective advocates in their local areas.

Marketing, Dissemination, and Evaluation

Kathelene Smith, Jennifer Thomas
UNC Greensboro

This poster will introduce the marketing, dissemination, and evaluation plan for the Stars Alliance. Marketing and dissemination will consist of distributing marketing kits, presentations to recruit students into computing and IT, efforts to create Regional Impact Zones, and our Stars Alliance website. The evaluation component of the project will outline the Stars Leadership Core (SLC), and the impact of our project on advisors and students. We will be collecting data via online and hard copy surveys, interviews, and performance analysis of enrollment data, and a review of analytics from our website. This is substantively the same poster we presented during the STARS Celebration 2007 but included will be updated statistics and comments from partners who have successfully disseminated marketing kits.

Math Summer Camp

Diane Boczcowski, Diane Davis, Jorge Torres, Amando Urbina
USFL

The math summer camp is an outreach program for underage middle school students. Students are taught math and science skills using Lego Mindstorms robots. They are taught leadership and mentoring skills by pairing older students with younger students. The STARS members role is to encourage middle school students to excel in school. The goals of this program is to help students relate math and science applications to their world.

Natural Interaction & Communication Environments (NICE)

Chantel Dianne Bowie , Clement Allen
Florida A&M University

Speech communication is one of the most commonly used methods of human-to-human interaction. Whether face to face, over phone lines, or even over internet connections, speech communications is a natural means for humans to transmit information. With the emergence of pervasive computing, communicating with intelligent objects must be natural as well. In an ambient intelligent environment, smart objects automate and assist with inhabitants' activities. Utilizing

speech in this type of environment provides the natural interaction people are used to when interacting with intelligent objects. This research investigates the concept of natural communication, via speech with intelligent objects in ambient environments. This framework includes three forms of speech interaction: command and control, dialogue, and interactive problem solving, which are introduced and discussed.

Outreach Ideas at University of Tennessee at Knoxville
David Straight
University of Tennessee at Knoxville

In addition to the usual kinds of outreach, mentoring, etc, we would like to do the following: work with the existing TLSAMP (Tennessee Louis Stokes Alliance for Minority Participation). This is an existing and successful program in the college of engineering at UTK; work with 35 new Myro robots which, unlike Lego Mindstorm, are programmed in high-level languages - Python and soon C++. These could be good outreach tools; to reach out to home-schooled students. We have several top-notch home-schooled students currently in our system, so with some of them we would like to build mechanisms for outreach to pre-college home-schooled students.

Scientific Discovery Using Lego Mindstorms
Delane Abight, Ravikant Agarwal, Vasavi Chilamantula, Derrick Mendez
Ken Rouse, Andrea Williams
Auburn University

After about a year and a half in outreach program and extreme success with our computer club at Cary Woods Elementary School, we decided to see how students response to a change. We introduced the LEGO® MINDSTORMS® NXT to the 4th and 5th graders to give them hands-on robotics experience. To our amazement, it did not take them anytime to get used to Lego Mindstorm and were programming their robots to compete with each other. We were very pleased with the performance of the students and hope to continue this program even further.

Sharing the College Application Process with High School Students
Jesse Bikman, Stephanie Chapin
UNC Charlotte

Our motivation is to help students succeed by easing the transition from high school to college. Because a great number of students experience information disconnect, we let students know our first-hand experiences and recommendations in terms of the process of applying to and attending different colleges. We have developed and delivered presentations for high school students that share the steps we've taken and provide students with a timeline of what they should do and how they ought to do them. As a result, students become more informed and are therefore capable of making more informed and better choices after high school.

STARS Computer Tips
Chantel Bowie
Florida A&M University

This project consisted of a Bi-weekly computer tips newsletter. The newsletter, distributed to CIS majors in the Department of Computer & Information Science at Florida A&M University sought to increase interest and awareness in computers. The tips covered the months of October to December of the Fall semester of 2007. At the close of the semester, students who participated in reading the bi-weekly tips surveyed the success of this project.

STARS Leadership Corps Community Outreach Project: Computer Science Geek Week
Chanelle Green, Ashley Johnson, Iris Young
Spelman College

In an effort to contribute to the STARS mission of broadening participation in the fields of Computer Science and Information Technology, the SLC students at Spelman College hosted an outreach and awareness event entitled Geek Week. The weeklong series of events consisted of a myriad of technically engaging activities, forums, and presentations. Each

night was focused on a different aspect of the Computer Science/IT field such as gaming, multimedia databases, robotics, etc. The various events targeted 4 main demographics: elementary to middle school aged students, high school students, college students, and the general community. The main objectives of the Geek Week were to dispel negative stereotypes, inform participants of various careers and opportunities, and foster interest in the field as a whole.

STARS Leadership Corps Marketing Kits
Jordana Hodges, Shelaya Lynch
UNC Charlotte

Our High School Outreach team has had amazing success with high school counselors through the use of the SLC Marketing Kits. We have found that the marketing kits disseminate information about computing opportunities to people who see many students. The kits also drive more traffic to the STARS Alliance website. Most importantly, the kits help us build more contacts. These new contacts bring us more outreach opportunities, help us gain more community support, and it creates potential for more support financially. Distributing the kits open up a line of communication between us and the counselors. We continue to keep close contact with these counselors through phone calls and e-mail. By doing so, we receive more opportunities to perform outreach at various schools. Performing outreach is crucial to SLC, as it creates more interest and possibly increases enrollment in the program. The feedback we receive from counselors, teachers, and students ultimately helps us better our group.

STARS Mentoring Tracking Log
Marco A. Aguilar, Armando Urbina
USF Polytechnic

The "STARS Mentor Log" website is a central location where mentors can log in and input mentoring information per week. The data are collected in a six step process. Information is hidden from other mentors and mentees. Only the administrator has full read access and only mentors can input data. Mentees are denied read and write access of mentoring data, except home page.

SPARCS Middle School Outreach
Christopher Assi, Samuel Jean-Phillip, Kristen Respers
St. Augustine's College
Joseph Grafsgaard, Amanda Macik, Jennifer Robison
North Carolina State University

The Raleigh STARS SLC chapter held a middle school outreach at Centennial Campus Middle School throughout the 2007-2008 academic year, called SPARCS (Students in Programming, Robotics, and Computer Science). It was our first time offering an outreach, so we went through all of the difficulties inherent in developing a new program. School outreach provides opportunities for mentoring, tutoring and education. Our outreach placed emphases on education about computer science and mentoring through positive role models. We held full-day sessions on selected Saturdays throughout the year, with activities such as programming using Alice, hands-on robotics using Lego Mindstorms, and gentle introductions to computer science theory. Our poster details our experiences in a concise format.

TSA: The Student Techie Community
Jenniferanne Broido
USFP

TSA is non-profit organization that allows students to compete in over 60 technology-related competitions at the district, state, and national level. Everything from web-design, research/report writing, robotics, leadership/speaking, to CADD are part of the events program. They are divided into levels, I & II for middle and high school respectively. We also have a level III for students who have disabilities. Sadly, TSA does not provide an emphasis in recruiting and motivating students to continue with further education in technology-related fields. Nor does TSA address the stereotypes or importance of the technology industry. The students I have worked with are smart and motivated, yet are not provided with a direction into the technology academia. TSA's national membership base is 40% female, 30% minority and over 75% are college-bound. My poster will identify how the USFL SLC collaborated with TSA to retain students within the organization and into the computing discipline.

Summer School Program
Dr. Nate Thomas, Armando Urbina
USFL

A look at our continuation of our summer school project.

Team Hope – With HSCC
Raven Anderson, Virgil Simmons
UNC Charlotte

The Highs School Computer Competition, sponsored by Black Data Processors Association (BDPA), introduces Middle School and High School Students to Information Technology and its various uses. Every Saturday students participate in 3 -hour training sessions, to learn in-depth topics such as Web Development, Application Development, Database Design, and Database Development. Team Hope provided assistance to the instructors by mentoring the students and providing support in programming HTML and Java; we also lectured on Database and Data Structures. We were able to share our college experience with the students, to inform them about the aspects of college. In response the students were very receptive and eager to learn. It was rewarding, giving high school students a dose of computer technology before they actually start college. Some students feared that college may not be for them, so we explain that college is necessary for success in computer technology. BDPA is an organization that shares the same vision as STARS, helping diversify the technology world with programs like the Saturday Academy. We hope by working with this program, we are helping increase the diversity and increase the potential numbers of students actually majoring in Computer Science and other related fields.

The Importance of Measuring Organizational Effectiveness and Fidelity in a Mentoring Demonstration Project for IT and Computing
Dr. Nate Thomas
USF Polytechnic

Many mentoring programs fail because they lack strong organizational accountability. Organizational leaders attend training programs to implement mentoring models, return to their jobs, and then find themselves bog down in daily work tasks that address their primary responsibilities. This scenario typically leads to poorly developed programs resulting in poor outcomes. To ensure mentoring programs have the possibility of being effective, trainers must guide organizational leaders and help them transfer training into tangible outcomes. This begins by helping organizational leaders understand the importance of attending meetings, developing procedures for their programs, and working together to provide standardized training for their mentors and mentees. From Train the Trainer to the STARS celebration, the effectiveness and fidelity of nine STARS schools were examined.

Tools for Affective Reasoning Research
Scott McQuiggan, Karl Nilsson, Jonathan Rowe
North Carolina State University

Narrative-centered learning environments are interactive, virtual environments that embed educational content into engaging narrative scenarios. Crystal Island is a narrative-centered learning environment developed by the IntelliMedia Center for Intelligent Systems at North Carolina State University. Researchers are using Crystal Island to build models for student affect recognition and equip the environment with emotionally-aware non player characters. We present completed work on two tools to support empirical affect recognition research. We have created a web-based, data collection instrument that simplifies the data collection process, and minimizes paper usage and data entry. We have also developed an application that allows researchers to annotate participant videos with tags denoting participants' emotional states, a common data processing step in affect recognition research. These tools help researchers to more efficiently collect and process data from human participant experiments, a major bottle neck in the research process. These tools are undergoing completion and will soon enter preliminary use by the IntelliMedia Center's researchers.

Unraveling a Paradox: Using Computing to Help

Jill P. Dimond
Georgia Institute of Technology

We interviewed twelve women at Georgia Tech who are not studying computing and found most had pro-social goals for their careers. When asked if participants thought people working in computing are helping people, they told us that they hadn't thought about it before. They thought computing helped people indirectly, but technology supported "business" aspects. We showed them pictures where technology helped people, such as sign language translation for the deaf. Most were really interested in these pictures and given the opportunity thought that they would be interested in participating - they just never thought of computing or technology as helping people.

Using Culturally Situated Design Tools to Teach Computer Science Concepts and Raise Interest and Awareness in the Field of Computing

Michael Eagle
UNC Charlotte

Goal: To use the Culturally Situated Design Tools to teach computer science concepts and raise interest and awareness in the field of computing. The Culturally Situated Design Tools (CSDT) project is a National Science Foundation (NSF) funded project headed by Dr. Ron Eglash; these tools leverage the fact that many cultural designs are based on mathematical principles and help students learn standards-based mathematics as they simulate the original artifacts, and apply their own creative ideas. The CSDTs have shown positive learning results when used in middle school outreach. The GameCATS group, as part of the Charlotte STARS Alliance, uses Game Maker, Scratch, and the CSDTs for our middle school outreach program. The gameCATS goal is to teach computer science concepts and raise interest and awareness in the field of computing. The gameCATS have used the existing CSDT tools in middle school outreach to teach not only mathematics, but also to teach computer science concepts.

This poster will display some of the techniques and lesson plans that we have used to teach computing concepts with the existing CSDT software. We used the Virtual Bead Loom tool, originally designed to teach Cartesian coordinates, to teach looping and arrays. We have also designed lesson plans for the Alaskan Basket Weaver and Navajo Rug Weaver, other tools that teach Cartesian coordinates. We have also used the Rhythm Wheels tool, designed to teach fractions and lowest common multiples, to teach loops. The tools and the altered lesson plans have been well accepted by students and teachers in our middle school outreach programs. We feel that the programs have had a positive impact on how students view the field of computing. We conclude that teaching computing concepts with the existing Culturally Situated Design Tools is promising and that further work can reveal some concrete results.

For future work we hope to alter some of the current CSDTs to better present computer science concepts; we also plan to develop lesson plans for the other existing CSDTs.

Using Gaming to Reach Students

Twanisha Gordon, Peter Guhl, April M. Johnson, Yaniv Levy
Matthew Small, Delano Townsend
Florida State University USF Polytechnic

Gaming is a popular past time for many college students, regardless of major. Gaming interests people of different cultures, backgrounds and careers. The FSU STARS program, in partnership with AITP (Association of IT professionals) and WICS (Women in Computing Society) used the gaming event to bring people into the College of Information to expose them to computing careers. "Game Day" will give students an opportunity to socialize with other students who share the same passion for gaming while creating awareness of the computing programs, computing services, and computing resources offered at the College. Industry partnerships with Apple and Dell will allow for showcasing and demonstration of new technology. A partnership with the University Computer Store also will include future events and internships for computing students. The computer store will be actively recruiting people to work at the store at this event. The partnership also extends the linkages within the university between the Department of Computer Science, the College of Information, and the College of Business.

Empowering Leadership: Computing Scholars of Tomorrow

EL ALLIANCE

Join the Empowering Leadership (EL) Alliance - Now!

Minority graduate and undergraduate students!

Would you like to:

- Meet leaders in your field from across the country?
- Connect with a diverse supportive community of computing peers and mentors?
- Attend conferences in your discipline where you can give presentations and meet colleagues?
- Participate in research programs with some of the most experienced and successful computing researchers in the country.
- Attend online seminars focused on issues such as attending graduate school, networking, career opportunities, and more?
- Intern at leading universities and laboratories?
- Learn about resources available to assist with your research and career interests?
- Engage in mentoring programs, including peer mentoring, mentoring from national leaders, and mentoring in which you provide insights to senior faculty and university administrators about how to improve their campus environments and programs?

Join the **Empowering Leadership (EL) Alliance,** and you will become part of a national network of individuals and 25 diverse partner institutions that will work with you to develop your potential and explore opportunities in the computing disciplines. The EL Alliance is open to underrepresented minority students at majority institutions and national leaders committed to the success of today's scholars.

A Committed Community of Energy, Support, and Resources

The Empowering Leadership Alliance is a community comprised of human, institutional, and programmatic resources to ensure the success of minority scholars at tier-one institutions.

Mentors, partners, and advisors participate by providing information, opportunities, and resources for EL Alliance students; meeting with students at their home institutions and at conferences; sharing success stories about minority scholars; and providing feedback on the overall goals and activities of the EL Alliance.

The list of partners continues to grow- the EL Alliance welcomes inquiries from anyone with an interest in our programs.

Leadership and Evaluation

Rice University (Lead Institution)
Boston University
University of California, Berkeley
University of Colorado, Boulder
University of Illinois
University of Texas, Austin

Partners

Professional Societies

American Association for the Advancement of Science
Association for Computing Machinery
Computing Research Association

Universities

Arizona State University
Auburn University
Binghamton University
Carnegie Mellon University
Cornell University
Duke University
Florida A&M University
Florida International University
Georgia Gwinnett College
Georgia Southern University
Harvey Mudd College
Oakland University
Portland State University
Princeton University
Purdue University
Rutgers University
University of California, Los Angeles
University of Maryland
University of Missouri - Columbia
University of Wisconsin, Madison
Utah State University
Virginia Tech

National Laboratories, Centers, and Organizations

Lawrence Berkeley National Laboratory
National Center for Atmospheric Research
National Center for Women & IT
Renaissance Computing Institute
Sandia National Laboratories
The Juxtaposé Group, Inc.

Corporations

AMD Corporation
HP
IBM Corporation
Intel Corporation
Microsoft Corporation
Texas Instruments

Support
The EL Alliance is supported through the National Science Foundation's Directorate for Computer and Information Science and Engineering's Broadening Participation in Computing (BPC) program, as well as its many partners and supporting institutions. For more information, see http://www.nsf.gov

Contact Us! http://www.empoweringleadership.org • info@empoweringleadership.org • 218.724.3216

CAHSI

The Computing Alliance for Hispanic-Serving Institutions (CA-HSI) is a consortium of universities that are committed to increasing the number of Hispanics who earn baccalaureate and advanced degrees in computing. By fostering a community that shares resources, establishes research and curricular collaborations, and disseminates best practices, CA-HSI is developing future Hispanic leaders while addressing the under-representation of Hispanics in computing. CA-HSI includes some of the leading producers of Hispanic science and engineering graduates: California State University Dominguez Hills, Florida International University, New Mexico State University, Texas A&M Corpus Christi, the University of Houston Downtown, the University of Puerto Rico Mayaguez, and the University of Texas at El Paso. In addition, CA-HSI is working with industry, private-sector partners, and faculty from research institutions who share its goals and support diversity initiatives. The belief is that, by working as a group, the efforts of the CA-HSI institutions and partners become more deliberate, focused, and effective.

CA-HSI project goals are:

(1) to increase the number of Hispanic students who enter the computing workforce with advanced degrees
(2) to support the retention and advancement of Hispanic faculty in computing
(3) to develop and sustain competitive education and research programs at HSIs

The strategies to meet these goals are three-fold: promote interventions, promote dialog, and promote social science research.

CA-HSI interventions include:

(1) a course designed to attract majors and bolster under-prepared students
(2) peer-facilitation in the gatekeeper courses to provide an active learning experience and create leadership roles for undergraduates
(3) undergraduate professional development and research experiences inside and outside the classroom
(4) workshops to develop cohorts of graduate students and faculty
(5) on-line resources for students and faculty in support of CA-HSI goals

Other efforts include mentoring and collaborations to strengthen education and research programs. The Alliance, thus, supports students at each of the three critical transitions in the academic pipeline: the transition from high school to college, from college to graduate school, and from graduate school to the professoriate. These practices are being shared and deployed across the academic, industry and private-sector partners and with other HSIs.

For more information about the project as it progresses, please visit the project website at www.cahsi.org. email: cahsi@utep.edu

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RECRUITING. RETAINING. ADVANCING.
HISPANICS IN COMPUTING

A4RC Alliance for the Advancement of African-American Researchers in Computing

An Alliance that fosters increased African American student awareness of and entry into computing research careers by promoting collaboration between Historically Black Colleges and Universities and R1 Universities .

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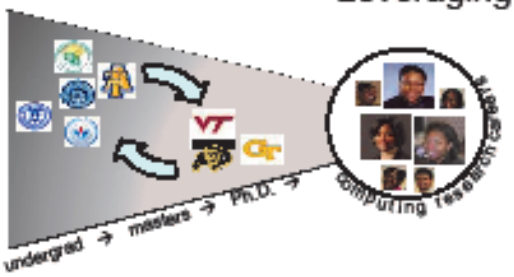
Leveraging the dual-feeder model



Students at many colleges—particularly those with few or no graduate programs—do not get a broad sense of the nature of research or of the opportunities that graduate degrees can avail to them. Our *dual-feeder model* supports resource and information exchange among HBCUs and research institutions—towards expanding undergraduate computing opportunities in both institutional settings.

Alliance Research Model: Research Pods

Students can gain great insight into the nature of research through hands-on experiences in research-intensive environments.

- Faculty and students in HBCU partnering institutions are paired with research faculty in the R1 partners for a year-round experience in collaborative research.
- To complement this research during the academic year, undergraduate and MS level students participate in a distance 3 credit Research Methods course that is then linked to their research projects.
- Students and faculty visit each other's campuses in the Spring.
- Undergrads in the pods are fully-funded for *summer residential research experiences* at the research institutions to continue the project.

Encouraging collaboration through researcher visits

Face-to-face interactions help foster collaborations among participating members. Four well-attended *mini-conferences* have brought together our alliance team—generally at a partner school and co-located with another relevant event. *Researcher visits* between faculty at HBCU schools and faculty at research institutions have highlighted the unique strengths of each. The visits help faculty understand how to best identify students who are well-suited for graduate work at partner institutions. Several papers and funding proposals are in the pipeline because of these events, with many more planned.

Designing a repository for course outreach materials

Hands-on experiences can excite students and faculty alike about the possibilities of a research career. Our alliance is assembling a *repository of projects, homeworks, and in-class activities* that highlight research-related resources at our research institutions—for example, the giga-pixel display and System X at Virginia Tech, and educational technology resources at Colorado. Items from this repository can be adopted for use in various classes at the partner HBCUs—providing a hands-on experience that can point students toward a research career.

Scaling and sustaining through evaluation of impact

Our program includes an integrated evaluation plan—led by Lecia Barker and the University of Colorado's Alliance for Technology, Learning, and Society (ATLAS) Institute—aimed at not only *improving implementation*, but also documenting and carefully describing results toward *identifying the most effective practices*. This careful documentation of processes and outcomes makes possible future adoption and adoption by a broader audience.

Visit www. http://home.cc.gatech.edu/DiversityLab/2 for more information about our alliance's activities.

STARS Alliance Leadership

Alliance Steering Committee

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Dr. Tiffany Barnes, University of North Carolina at Charlotte – STARS Alliance Evaluation Team Coordinator
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Dr. Joseph Austin, St. Augustine's College – Academic Liaison, St. Augustine's College STARS Leadership Corps
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Kristin Watkins, Meredith College – Academic Liaison, Meredith College STARS Leadership Corps

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Dr. Juan Gilbert, Auburn University – Demonstration Project Coordinator, African American Researchers in Computer Science (AARCS)
Dr. E. Nathan Thomas, III, University of South Florida Polytechnic – Demonstration Project Coordinator, Mentoring Model
Dr. Laurie Williams, North Carolina State University – Demonstration Project Coordinator, Pair Programming

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