

Curriculum Vitae

Tonya Smith-Jackson, PhD, CPE

**Professor, Department Chair (on Government Detail until February 2019)
Industrial and Systems Engineering
North Carolina Agricultural and Technical State University
Greensboro, NC 27411**

Current Position: The National Science Foundation

- ***Program Director (Rotator), Computer and Information Science and Engineering (CISE) Directorate***
- ***Cognizant Program Officer (Rotator), Cultivating Cultures for Ethical STEM (CCE-STEM), Social, Behavioral, and Economic Sciences (SBE) Director***

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RESUME

EDUCATION

PhD, Psychology/Ergonomics, North Carolina State University, Raleigh, NC

Co-Advisors: Katherine W. Klein, PhD., Sharolyn O. Converse, PhD

Dissertation Title: Irrelevant Speech, Verbal Task Performance, and Focused Attention: A Laboratory Examination of the Performance Dynamics of Open-plan Offices

MS, Psychology/Ergonomics, Interdisciplinary Industrial Engineering, North Carolina State University, Raleigh, NC

Advisor: Katherine W. Klein, PhD

Thesis Title: Effects of Body Consciousness on Perceptual Motor Task Performance

BA, Psychology, University of North Carolina - Chapel Hill, NC

Advisor: John H. Schopler, Ph.D., (Dept. of Psychology)

Senior Thesis Title: Using computer-based scenario presentation to determine effects of Machiavellianism and Authoritarianism on decision-making

Advanced Studies Diploma, North Carolina School of Science and Mathematics – Durham, NC

Certifications

- Certification in Professional Ergonomics (#1548) National Board for Certification in Professional Ergonomics (2009)
 - *OSHA 10-Hr Certification (29 CFR 1910, #14-701055425)* Virginia Tech Environmental, Health, and Safety (2011)
 - *Personnel Security and Suitability (2018), T25 Security Review, NSF*
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EXPERIENCE

2018 – Present

Program Director, Computer and Information Science and Engineering Directorate (CISE), Information and Intelligent Systems Division, Cyber-Human Systems Program; National Science Foundation (Intergovernmental Personnel Act (IPA)/Government Detail).

- *Serve as the program director for the Cyber-Human Systems Program.*
- *Establish, coordinate, and convene science and engineering experts to review proposals submitted to the IIS Division.*
- *Review and recommend funding for proposals demonstrating cutting edge interdisciplinary research in computing, information science, and engineering.*
- *Manage program and individual budgets to ensure a high-impact and diverse portfolio of projects.*
- *Work with investigators to ensure intellectual merit and broader impacts are achieved and disseminated.*
- *Attend and participate in outreach events to communicate the Foundation's needs and research priorities.*

2013 – Present

- *Participate on working groups to influence new and innovative directions for research in science, engineering, and education and broadening participation in CISE.*
- *Team leader for Dear Colleague Letter national release for Fairness, Ethics, Accountability and Transparency (FEAT) on computing, information science, and engineering research.*
- *Serve as the CISE cognizant program officer and budget manager for Cultivating Cultures in Ethical STEM (CCE STEM).*

Professor and Chair, Dept. of Industrial and Systems Engineering (On one-year detail from this position to serve the National Science Foundation)

North Carolina Agricultural and Technical State University, Greensboro, NC

- *Serving as Chief Academic Officer of the ISE Department (150 undergraduates, 54 graduate students, 11 tenure stream faculty, 3 adjunct faculty, three affiliate faculty, three SPHA staff), consisting of three academic programs: Bachelor's, Master's, and Doctoral.*
- *Leading collaborative processes to implement a shared department vision, a university-aligned department strategic plan and a research plan with measurable aspirational goals, inspiring visioning for inclusive excellence.*
- *Managing all aspects of position creation/modification for new hires for tenure-stream and non-tenure stream faculty and staff; shaping high-impact hiring plans and faculty/staff performance evaluations.*
- *Serving as lead officer to market and promote the department. Manage and strategically allocate budgets, facilities, and other resources.*
- *Co-leading (with Associate Dean) development of the cross-departmental systems engineering concentration. Co-led (with former Graduate Program Director) the development of the one-year master's curriculum.*
- *Leading and coordinating accreditation activities, assessments, reporting, and outcomes evaluation (ABET, SACS).*
- *Fostering partnerships with industry, community groups, state- and federal agencies to support research, student scholarships/fellowships, and infrastructure resources.*
- *Accomplishments to date include:*
 - *Increases in key performance metrics (e.g., extramural research expenditures, publications and proposal submissions per faculty member; cross-departmental collaborations.*
 - *Increases in retention and sufficient progress toward degree.*
 - *Implemented student success initiatives in research, academic expectations, and the teaching roundtable.*
 - *Strengthened relationships between external advisory board, alumni, and department, and communication organizations.*
 - *Increases in donations and participation in giving to the department.*
 - *Established reduced teaching load model for research-productive tenure-track faculty.*
 - *Increases in departmental professional development activities to improve cultural competence for inclusive excellence.*
 - *Developed and implemented ISE distance education courses.*
 - *Developed and implemented curriculum reform measures to reduce undergraduate and graduate credit hours for degree completion while ensuring appropriate rigor and competitiveness.*
 - *Established the ISE Ambassadors program for peer-to-peer outreach.*

- *Established the ISE Teaching Roundtable and the ISE Research Roundtable to provide faculty development.*
- *Managed and creatively utilized departmental budget of ~\$2.5-\$4M/fiscal year, including operating, personnel, gift/donations, and extramural budgets.*

2017 – 2018

Director, Center for Advanced Studies in Identity Sciences (CASIS), North Carolina Agricultural and Technical State University, Greensboro, NC.

Organizing and coordinating a university-level center comprising eight faculty in engineering, computer science, mathematics, social sciences, and forensics; coordinating research activities for twelve graduate students, seven undergraduate students, and two-three high school students across four laboratories focused on DoD research in identity science, forensics, cognitive and behavioral biometrics, and cyber-identity modeling. Research portfolio of \$890,000/year. Serving as lead administrator and Principal Investigator with the DoD and other stakeholders. Coordinating annual CIA Day and cybersecurity academic excellence events.

2017 – 2018

Graduate Program Director, Department of Industrial and Systems Engineering, North Carolina Agricultural and Technical State University

Serving as lead coordinator for the graduate program in Industrial and Systems Engineering (MS and Doctoral). Coordinating and executing collaborative review process for the Graduate Program Committee and all quality metrics and accreditation activities. Interfacing with key stakeholders. Accomplishments include increased number of applicants and enrollment to both programs; expansion and enhancement of academic standards; improvement of curriculum relevance; increased use of distance education pedagogies and offerings; alignment of accreditation (SACS) standards with department vision and strategic plan; application of inclusive excellence models among graduate students; improvement of progress toward degree; increase in number of fellowship applications and research assistantships in ISE.

2016 – Present

Founder and Co-Director, Cyber-Human Analytics Research for the Internet-of-Things (CHARIoT) Laboratory, North Carolina Agricultural and Technical State University, Greensboro, NC. Co-Directors: Mohd Anwar; Christopher Doss; Albert Esterline; Matthew McCullough.

Facilitating interdisciplinary faculty research activities and dissemination relevant to CHARIoT Lab research. Leading in diversification of the funding portfolio for cybersecurity and behavioral script research. Align lab goals with curriculum goals in industrial and systems engineering, bioengineering, computer science, computational systems engineering, and mathematics. Current budget is \$400K/year and funding agencies include DoD and NSF. Current personnel: five faculty, five graduate students and four undergraduate students.

2013 – Present

Founder and Director: Human Factors Analytics Laboratory, North Carolina Agricultural and Technical State University, Greensboro, NC.

Facilitating interdisciplinary faculty research activity and dissemination relevant to human factors analytics research. Leading in dissemination of knowledge products, supervising graduate and undergraduate research assistants, and securing extramural funding. Aligning lab goals with curriculum goals in industrial and systems engineering, bioengineering, computer science, computational systems engineering, and mathematics. Current budget is \$150K/year. Current personnel: two graduate students and four undergraduate students.

- 2013 – 2016 **Faculty Affiliate**, Virginia Tech, Grado Department of Industrial and Systems Engineering
Collaborated with research partners and center directors to increase joint efforts between VT and NC A&T State University. Continued to supervise students in former research laboratories.
- 2011 – 2013 **Professor, Industrial and Systems Engineering (Human Factors Engineering and Ergonomics)**; Grado Dept. of Industrial and Systems Engineering, Virginia Tech, Blacksburg, VA
Promoted and tenured at the rank of full professor based on contributions and performance excellence in teaching, research, and service. Supervised and advised student research assistants and postdoctoral researchers. Supervised teaching assistants. Sustained assessment activities for ABET and SACS. Chaired and served on graduate committees. Secured funding to support research enterprise consisting of two laboratories, and funded 36 graduate research assistants and over 25 undergraduate research assistants and capstone design team members.
- 2012 – 2013 **Principal Faculty**, Meyers-Lawson School of Construction, Virginia Tech, Blacksburg, VA
Cultivated interdisciplinary partnerships to support research and student preparation in construction safety and sociotechnical systems. Secured extramural funding for innovative research in construction safety.
- 2008 – 2009 **Scholar-in-Residence, Engineering Psychologist**, Human Factors Division, Engineering Sciences Directorate, U.S. Consumer Product Safety Commission Bethesda, MD
Expanded own knowledge of product safety engineering during sabbatical year. Designed and developed specifications for virtual reality and 3D modeling hazard analysis lab for the CPSC, improved processes for access to peer-reviewed research to support product safety and hazard analysis. Developed understanding of systems factors contributing to product use, injuries, and fatalities. Learned recall process and policy impacts on consumer safety.
- 2005 – 2011 **Associate Professor, Industrial and Systems Engineering (Human Factors Engineering and Ergonomics)**, Grado Dept. of Industrial and Systems Engineering Virginia Tech, Blacksburg, VA
Promoted and tenured at the rank of associate professor based on contributions and performance excellence in teaching, research, and service.
- 2005-2013 **Associate Director**, Center for Innovation in Construction Safety and Health Virginia Tech, Blacksburg, VA
Served as one of three lead administrators for the Center. Created and launched research translation model and Center assessment and evaluation procedures. Acquired resources to support faculty research activities.
- 2005 – 2013 **Affiliate Faculty**, Center for Human-Computer Interaction, Virginia Tech, Blacksburg, VA
Chief executive officer for HFEE Center. Launched administrative procedures and accelerated collaborative efforts in the Center. Allocated and organized resources, including facilities and personnel for the Center. Marketed and represented the Center at national and international levels.
- 2005 – 2009 **Director**, Human Factors Engineering and Ergonomics Center, Virginia Tech, Polytechnic Institute and State University, Blacksburg, VA
Chief executive officer for HFEE Center. Launched administrative procedures and accelerated collaborative efforts in the Center. Allocated and organized resources, including facilities and personnel for the Center. Marketed and represented the Center at national and international levels.

- 2005 – 2011 **Adjunct Associate Professor**, Dept. of Psychology, Virginia Tech, Blacksburg, VA
Collaborated with psychology faculty in teaching, research, and advising graduate students in applied psychology.
- 2006 – 2012 **Faculty Affiliate**, Meyers-Lawson School of Construction, Virginia Tech, Blacksburg, VA
- 2004 – 2013 **Faculty Affiliate**, Center for Human-Computer Interaction, Virginia Tech, Blacksburg, VA
- 2002 – 2013 **Faculty Affiliate**, Center for Gerontology, Virginia Tech, Blacksburg, VA
- 1999 – 2005 **Assistant Professor of Industrial and Systems Engineering (Human Factors Engineering and Ergonomics)**, Grado Dept. of Industrial and Systems Engineering Virginia Tech, Blacksburg, VA
- 1999 – 2013 **Founder and Director, Assessment and Cognitive Ergonomics (ACE) Laboratory**, Co-Director: **Safety Engineering Laboratory**; Co-Director: **Human-Computer Interaction Laboratory**, Grado Dept. of Industrial and Systems Engineering Virginia Tech, Blacksburg, VA
- 1999 – 2005 **Adjunct Assistant Professor of Psychology**
Dept. of Psychology, Virginia Tech, Blacksburg, VA
- 1999 – 2018 **Human Factors Forensics Consulting**
Civil Litigation re: product and process safety; product and information design; risk communications. Use expertise to assess hazards and provide expert opinions on systems factors associated with produce use, injuries, and fatalities. To date, have testified in nine depositions associated with product safety in consumer products, medical products, and transportation.
- 1999 **Adjunct Assistant Professor of Psychology**, Dept. of Psychology, North Carolina State University, Raleigh, NC
Taught applied cognition, sensation and perception courses.
- 1998 – 1999 **Adjunct Assistant Professor**, Dept. of Psychology, North Carolina Wesleyan College, Rocky Mount, NC
Taught statistics, social/personality/abnormal psychology, and research design, engaged students in lab modules. Applied teaching-learning pedagogies and assessments compatible with ecosystems of traditional and non-traditional students.
- 1998 – 1999 **Research Associate**, Ergonomics Laboratory, North Carolina State University, Raleigh, NC
Coordinated research lab and served as co-administrator of research activities. Devised effective laboratory use plans across multiple research faculty and graduate students.
- 1998 **Research Assistant**, Ergonomics Laboratory, North Carolina State University, Raleigh, NC
Conducted human factors and ergonomics research involving human subjects.
- 1997 – 1998 **Human Factors Specialist, Usability & Interface Design**, Ericsson, Inc., Research Triangle Park, NC
Led interface design and usability/UX evaluations for AMPS/DAMPS, GSM, and Satellite communications systems. Conducted conceptual design, mock-up and full prototype reviews for multiple mobile phone models. Coordinated multidisciplinary project team reviews. Created, wrote, verified, and launched specification reviews for software and hardware interfaces. Launched products from concept to market.
- 1994 – 1997 **Faculty**, College Transfer Department, Wake Technical Community College, Raleigh, NC

- 1993 *Taught several psychology and research courses in the college transfer department and the nursing department.*
Adjunct Faculty, Southside VA Community College, Emporia, VA
- 1992 – 1993 *Taught psychology courses in a maximum security correctional facility.*
Public Health Educator and Medical Case Manager, Halifax County Health Department, Halifax, NC
Served as lead operating officer and county medical case manager for the Ryan White HIV/AIDS Program. Coordinated program budgets, resources, social support logistics, home services and medical care for patients.
- 1992 – 1993 **Adjunct Faculty**, Halifax Community College, Roanoke Rapids, NC
Taught several psychology courses in the college transfer department and the nursing department.
- 1990 – 1992 **Manager, Army Community Services, Women’s Program Manager (EEO Office)**
 Goepfingen and Schwabisch Gmuend, Federal Republic of Germany
Executive officer for over 5000-person installation providing support functions for families of U.S. active duty Army personnel. Coordinated subsistence, crisis, and support services. Coordinated logistics for dependent family members returning to the USA prior to and during Operation Desert Storm. Supervised all installation shut-down procedures for community services during troop drawdowns.
- 1991 – 1992 **Adjunct Faculty**, City Colleges of Chicago – European Division, Federal Republic of Germany
Taught several psychology courses to active duty personnel.
- 1991 – 1992 **Adjunct Faculty**, University of Maryland – European Division, Federal Republic of Germany
Taught several psychology courses to active duty personnel.
- 1989 - 1990 **Faculty**, Jefferson Community College, Watertown, NY
Taught several psychology and ethnic relations courses to traditional and non-traditional students on main campus and in Watertown Correctional Facility (maximum security facility).
- 1989 **Human Factors Consultant**, Hester and Associates, Inc., North Chatham, Massachusetts
Provided organizational design, advising and assessment for community colleges and local businesses to support continuous improvement and strategic vision for faculty and staff.
- 1988 **Adjunct Faculty**, Johnston Community College, Smithfield, NC
Taught several courses in the social sciences to traditional and non-traditional students.
- 1987 – 1988 **Human Factors Specialist; Software Usability & Interface Design**, IBM, Research Triangle Park, NC
Executed interface design usability evaluations and specification testing for communications software, including software for information technologists using token ring and local area network communications. Verified usability and made recommendations for interface improvements. Conducted analyses and compiled usability evaluation methods for technician documentation products such as user guides and troubleshooting for network communications products.

PROFESSIONAL DEVELOPMENT

- 2018 Conflict of Interest Training, Defense Advanced Research Projects Agency (DARPA)

- 2018 National Science Foundation Merit Review I, Merit Review II, Merit Review III, IT Security, Ethics and Conflict of Interest Training, and NSF Program Management
- 2018 Executive Leadership Development Program (ELDP), NC A&T State University
- 2018 Leadership Fellow, Center for the Advancement of STEM Leadership (CASL), Association of American Colleges and University (AAC&U), (funded by the National Science Foundation, HBCU-UP)
- 2017 Higher Education Resources (HERS) Institute Fellow, Denver, CO, Residential, comprehensive leadership professional development program for women in higher education that included.
- 2017 Clare Boothe Luce Scholar, HERS Institute Leadership Development for Women in Higher Education, Denver, CO
- 2017 Administrative Exchange Program, Academic Affairs – Office of the Provost, Iowa State University
- 2016 NC A&T Office of Distance Education, Online Course Development and Quality Metrics
- 2015 Equal Opportunity Employment Training for Managers and Supervisors, NC A&T State University
- 2014 Engagement Essentials Training, Center for Creative Leadership
- 2013 Certification Training for Human Subjects Research, Responsible Conduct of Research, CITI Training via NCA&T State University
- 2013 Banner Finance and Budgeting, NCA&T State University
- 2012 Introduction to Diversity and Inclusion Awareness, Safezone Training, Diversity Development Institute
- 2011 Inclusive Pedagogy, Diversity Development Institute
- 2009 CSP Preparation Webinar, American Society of Safety Engineers
- 2007 Inside Higher Education: How to Recruit Gen X Faculty Members (audioconference), Skillpath, Inc. (Leadership Development for Women, Leadership and Team Building, Effective Supervision)
- 2007 Advanced Statistics and Experimental Design Using JMP Software
- 2006 AdvanceVT Institutional Transformation (Leadership and Career Planning, Conflict Resolution, Anatomy of Power Building, Communication and Negotiation Skills)
- 2004 Developing and Delivering Online Courses for Distance Learning, Faculty Development Institute, Certification Training for Human Subjects Research
- 2004 Analytical Methods for Usability Predictions, Human Factors and Ergonomics Society
- 2003 Developing and Manipulating ACCESS Databases, Faculty Development Institute
- 2003 Implementing Faculty Study Groups, Center for Excellence in Undergraduate Teaching
- 2002 MicroSaint Systems Simulation Training, MicroAnalysis and Design
- 2001 Intermediate Web Development, Faculty Development Institute
- 2000 Learning Communities for Student Success, Center for Excellence in Undergraduate Teaching

PROFESSIONAL SOCIETY MEMBERSHIPS

- American Society of Engineering Education (ASEE)
- Association of American Colleges & Universities (AAC&U)
- Association for Computing Machinery (ACM)
- Human Factors and Ergonomics Society (HFES; International and Carolina Chapter)
- Society for Industrial Engineering and Operations Management (IEOM)
- International Council on Systems Engineering (InCoSE)
- Institute of Industrial and Systems Engineers (IISE)

CURRENT AND PAST APPOINTMENTS AND AFFILIATIONS

- 2019-Present Academic Steering Committee, NC School of Science and Mathematics, Morganton

2018-Present Chair Elect, Fellows Selection Committee, Human Factors and Ergonomics Society

2018-Present Chair, Task Force on Diversity and Inclusion, Institute of Industrial and Systems Engineers

2017-2018 University Strategic Planning Work Group (Technology and Communications)

2017-2018 NC A&T State University, Diversity and Inclusion Committee

2017-2018 National Search Committee, Interim Executive Director; Association Management Corporation, Human Factors and Ergonomics Society

2016-Present Advisory Board, Virginia Tech, Grado Department of Industrial and Systems Engineering

2015-Present NC A&T State University Institutional Effectiveness Council

2015-Present NC A&T ADVANCE Institutional Transformation, Race and Gender in the Professoriate Advisory Board (Social and Behavioral Sciences Research Methods Internal Advisory Board)

2014-2016 NC A&T State University Graduate Council Representative, College of Engineering

2013-2016 NC A&T State University, Chair, Graduate Council Curriculum Committee

2013-Present NC A&T State University Representative to GE-Africa (General Electric) Learning Advisory Board for the Expansion of Engineering and Science Curricula in sub-Saharan African Universities (Focus areas: Healthcare/Biomedical Engineering, Oil and Gas)

2012-2013 Lead Researcher: Virginia Tech-University of Nottingham International Research Collaboration in Human Factors Engineering, College of Engineering

2012-2013 Co-chairperson, Mid-Atlantic Scholarship of Diversity and Inclusion Regional Conference, Host: Virginia Tech

2011-2012 At-Large Representative to the University Council; Commission on Equal Opportunity and Diversity, Virginia Tech

2011-2013 Co-chair, SCALE-UP Faculty Study Group, Virginia Tech

2010-2011 President, Black Caucus of Virginia Tech

2008-2013 College of Engineering Diversity Committee, Virginia Tech

2006-2013 ADVANCE VT (Co-PI), Leadership Team, Working Groups

2006-2013 Faculty Advisor, VT Chapter of the NAACP

2006-2008 Advance VT Executive Committee

2006-2007 Member, Task Force on Race and the Institution, Virginia Tech

2005-2011 Director, Human Factors Engineering and Ergonomics Center, Virginia Tech

2005-2012 Safety Committee, Industrial and Systems Engineering Department, Virginia Tech

2006-2010 Honors and Awards Committee, Industrial and Systems Engineering Department, Virginia Tech

2005-2013 Advisory Board, VT Child Development Center for Learning and Research

2003-2013 Affiliate Faculty, VT Center for Gerontology

2003-2013 Affiliate Faculty, VT Center for Human-Computer Interaction (Computer Science Dept.)

2003-2012 Member, Retention and Pipeline Work Groups: ADVANCE_VT Women in Engineering and Science; Co-PI and Executive Committee Member, AdvanceVT

2003-2005 Coordinator, Faculty Study Groups, ISE Representative to the College of Engineering

2003-2004 Secretary, Black Caucus of Virginia Tech

2002-2012 Faculty Advisor, American Society of Safety Engineers student chapter

2002-2012 Served on 12 search committees (Department, College, University)

2002-2003 Personnel Committee, Grado Department of Industrial and Systems Engineering, Virginia Tech

2000-2008 Chair, Future Professoriate Program Ad Hoc Committee
2000-2001 Undergraduate Curriculum Committee, ISE, Virginia Tech

HONORS AND AWARDS

2018 Best Track Paper Award for 2018 Industrial Engineering and Operations Management (IEOM) DC Conference, Global Engineering Education Track, *Empowering Undergraduate Student Researchers Through Inclusive Research Learning Systems*

2018 Distinguished Educator Award, Industrial Engineering and Operations Management (IEOM) Society International

2017 Fellow, Center for the Advancement of STEM Leadership

2017 HERS Leadership Institute for Women in Higher Education (HERS, Clare Boothe Luce Scholarship)

2016 Fellow, Human Factors and Ergonomics Society

2011 Dean's Award for Outreach Excellence, College of Engineering

2011 Success Stories Award, Center for Engineering Logistics and Distribution (NSF Center), For Development of an Integrated Training System for Commercial Delivery Drivers

2011 Best Paper Award, Organization Design and Management (ODAM 2011), Rhodes University, Grahamstown, South Africa, April 4 – 6, 2011. Citation: Smith-Jackson, T., Essuman-Johnson, A. (2011). Culturally-competent ergonomics: A preliminary research checklist. *Human Factors in Organizational Design and Management (X)*, pp. 1-387-1-392.

2009 Faculty Fellow, College of Engineering, Virginia Tech

2008 Dean's List for Teaching Excellence, College of Engineering (2001, 2002, 2007, 2008)

2008 Alexander C. Williams National Design Award, Human Factors and Ergonomics Society (UPS System Safety Training/UPS Integrad™)

2008 Advancing Women Award, University Women's Center and Virginia Tech

2007 Top 20 Leading Research Collaborators, FY 2007 (1st & 2nd Q)

2006 Accessibility Research Award, VT Office of ADA Compliance

2005 Multicultural Fellow, VT Office of Multicultural Affairs

2005 Diggs Teaching Scholar Award, Virginia Tech

2004 Dean's Award for Innovation in Teaching, College of Engineering

2004 *Faculty Member of the Year*, Black Graduate Student Organization (VT)

2003 Human Factors and Ergonomics Society Awards (VT Student Chapter): "Best Lecturer", "Most Dynamic Professor", Best Advisor of the Year

1997 Preparing the Professoriate Fellowship and Mentoring Program, North Carolina State University

1997 John Oliver Cook Fellowship, North Carolina State University

1997 *Women's Achievement Award*, American Association of Women in Community Colleges

1988-1997 PSI CHI Honor Society, North Carolina State University

1988, 1995 Awards for Academic Achievement in the School of Education and Psychology, Association for the Concerns of African-American Graduate Students'

1991 Command General's Award for Outstanding Service as Women's Program Manager, US Army- European Division, Federal Republic of Germany

ACADEMIC TEACHING

Graduate Courses

Cognitive Ergonomics*	Research Methods and Experimental Design
Cultural Ergonomics**	Supervised Teaching and Research
Graduate Seminar: Professional Development	
Graduate Seminar: Research Skills Development	System Safety Analysis
Human-Computer Interaction	System Safety Engineering and Risk Analysis*
Industrial Health and Safety Engineering	

*Traditional classroom and online/distance education; **Conceived and Developed

Undergraduate Courses

Statistics I: Descriptive Statistics Individual Differences
Statistics II: Probability & Inferential Statistics Occupational Safety and Hazard Control
Engineering Teams and Leadership Organizational Theory
Applied Ergonomics Research Methods and Experimental Design
Introduction to Human Factors Eng. Applied Psychology
Introduction to Psychology Applied Cognition
Social Psychology Ethnic Relations

Pedagogies

Inclusive Pedagogy, Paideia Method, Social Constructivism, Socratic Questioning, Experiential Methods

WORKSHOPS

2018	<i>Cornell University: National Science Foundation, Research and Proposal Preparation in Computer & Information Science & Engineering Directorate</i>
2018	<i>Quality Education for Minorities Network: National Science Foundation, Research and Proposal Preparation in Computer & Information Science & Engineering Directorate, Washington, DC</i>
2014-2017	<i>Psychometrics and Survey Methodology: Bi-weekly one hour workshop for graduate and undergraduate students on administration, analysis and interpretation of subjective instruments.</i>
2001-2013	<i>Cognitive Ergonomics: It's All in the Mind, Distance Education Short Course for Virginia Tech Alumni (Institute for Distance and Distributed Learning), Blacksburg, VA</i>
2003-2011	<i>Graduate Student Workshops on Advisor and Advisee Relationships (Virginia Tech), Blacksburg, VA</i>
2009-2011	<i>Training Sessions on Inclusive Engineering and Science, Multicultural Academic Opportunities Program (MAOP) and the Louis Stokes Alliance for Minority Participation (LSAMP), Blacksburg, VA</i>
2007-2008	<i>Faculty Advising and Communication Skills, King Abdul Azziz University, College of Engineering, Jeddah, Saudi Arabia</i>
2007	<i>Games to Explain Human Factors, with Ron Shapiro and Sharnnia Artis, HFES Diversity Task Force at the National Society of Black Engineers, Columbus, OH</i>

- 2004 *Overview of Universal Design Concepts and Methods*, Toshiba Corporation of Japan, Ome, Japan
- 2003 *Human Participants in Research: Ethics and Issues*, USDA Food and Nutrition Summer Institute, Bethesda, MD
- 2003 *Design of Risk Communications*, 4th ErgoDesign Conference, Rio de Janeiro, Brazil
- 2002 *Human Factors Applications to Learning Systems Design*, Roanoke Rapids Graded School District, Roanoke Rapids, NC
- 2002 *Research Methods in Cultural Ergonomics, Afternoon Workshop*, 12th Annual ABERGO Conference, Recife, Brazil.
- 2001 *Cognitive Ergonomics: It's All In the Mind*, Ford Motor Company Training Division, Detroit, Michigan.
- 2000 *Student Success in Engineering*, National Society of Black Engineers, Virginia Tech Chapter, Blacksburg, VA
- 2000 *Occupational Safety and Ethics Module*, Engineering Ethics Freshman Course, College of Engineering, Virginia Tech
- 2000 *Cognitive Ergonomics in Systems Design Module*, Integrated Systems Design, Virginia Tech
- 1993-1996 *Certified American Red Cross Adult and Infant CPR Instructor-Trainer* (NC)
- 1993-1996 *Certified American Red Cross Community HIV/AIDS Educator* (NC)
- 1993-1996 *Certified American Red Cross Teen Babysitter Licensing Trainer* (NC)
- 1990-1991 *U.S. Federal Government Equal Employment Opportunity Training for Civil Service Employees*, Goepingen, Federal Republic of Germany
- 1990 *Teams and Communication Skills*, Hester and Associates, Inc. Watertown, NY
- 1990 *Systematic Training for Effective Parenting* (STEP). Army Community Services, Watertown, NY.

OUTREACH

(PUBLIC TALKS, SEMINARS SUPPORTING EDUCATIONAL EFFORTS)

- 2017 Food and Drug Administration: *Best Practices for Risk Communications: A Sociotechnical Systems Perspective*, April 2017, Washington, DC.
- 2013 Open Plan Offices: Yes, no, and "it depends". *National Aeronautics and Space Administration (NASA)*, Hampton, VA.
- 2005 Public Testimony: NIOSH Town Hall, National Occupational Research Agenda for the Next Decade; Chicago, Illinois, Docket ID: NIOSH-0470-w325:
Online: <http://www2a.cdc.gov/niosh-comments/noracomments/noracmtsdetail.asp?area=Construct&id=325&rcdid=42>
- 2003 *Three Requirements for Senior-Centered Design*. 1st International Symposium and Textile Sciences. Yonsei University, Seoul, Korea
- 2002 *Cultural Ergonomics and Safety*. 12th Annual ABERGO Conference, Morning Plenary Address, Recife, Brazil
- 2002 *Human Factors Applications to Learning Systems Design*, Roanoke Rapids Graded School District, Roanoke Rapids, NC
- 2000 *Cognitive Ergonomics and Patient Safety Workshop* (Occupational Therapy Students), Roanoke College of Health Sciences, Roanoke, VA
- 1997 *Motivating Learners: Active Learning and Effective Teaching Principles*. Wake Technical Community College (New Faculty Training), Raleigh, NC

PROFESSIONAL SERVICE

2018	Reviewer, Institutional-level Projects at the Association for American Colleges and Universities, Transforming STEM Education Conference
2018-Present	Chair Elect, Fellows Selection Committee, Human Factors and Ergonomics Society
2018-Present	Chair, Task Force on Diversity and Inclusion, Institute of Industrial and Systems Engineers
2018	Panel Organizer, HFES Annual Meeting, <i>Embracing the Grind: Why We Chose Academic Administration; Maybe You Should Too</i>
2017-2018	Technical Group Program Chair, Education Technical Group, Human Factors and Ergonomics Society
2017-2018	Track Chair, Institute of Industrial and Systems Engineers, 2017-2018 Technical Program Committee
2016	Panel Moderator, Human Factors and Ergonomics Annual Meeting, HFES Diversity Task Force
2016	Panel Moderator, Human Factors and Ergonomics Annual Meeting, Educators and Professionals Technical Group
2016	New Faculty Colloquium Chair, Institute of Industrial and Systems Engineers, Council of Industrial Engineering Department Heads
2016	Session Co-Chair/Co-organizer, Arnold M. Small Lecture on Safety, Chairman Elliott Kay, Consumer Product Safety Commission, Human Factors and Ergonomics Society 60 th Annual Meeting, Washington, DC , Co-chair: Michael Kalsher
2016-2018	Secretary, Minorities in Engineering Division (MIND), American Society of Engineering Education
2015-2018	Technical Group Co-chair; Healthcare Technical Group, Human Factors and Ergonomics Society
2015-2016	Program Chair Elect; Education Technical Group, Human Factors and Ergonomics Society
2015-2018	Arnold Small Lecture Series Co-coordinator, Human Factors and Ergonomics Society 59 th Annual Meeting, Los Angeles, CA
2015	Session Co-Chair/Co-Organizer, Arnold M. Small Lecture on Safety: Construction Safety and Health as a Leading Indicator, Dr. Christine Branche (NIOSH Speaker), Human Factors and Ergonomics Society 59 th Annual Meeting, Los Angeles, CA , Co-chair: Noelle Brunelle
2015-2016	Chair, New Faculty Colloquium, Institute of Industrial Engineers (co-chair: G. Don Taylor)
2014-2015	Co-Chair, New Faculty Colloquium, Institute of Industrial Engineers (Chair: Tapas Das)
2014-2018	National Institute for Occupational Safety and Health, Scientific Review Committee, Education and Research Centers
2014-2017	American Society of Safety Engineers, Triad Chapter, Student Chapters Liaison
2014	Student Forum Co-chair, Education, Training, and Performance, Human Factors and Ergonomics Society, 58 th Annual Meeting, Chicago, Illinois, Chair: Ashley Hughes
2013	Human Factors Track Co-chair, Institute of Industrial Engineers, Industrial and Systems Engineering Research Conference, with Kari Babski-Reeves
2012-Present	Booth Volunteer, Board of Certification in Professional Ergonomics

2012-2013	National Research Council/National Academies, Committee on Staffing Needs of FAA Systems Specialists
2011-2012	External Evaluator, Department of Human Kinetics and Ergonomics, Rhodes University, Grahamstown, South Africa (Doctoral Thesis)
2011-Present	Editorial Board, <i>Ergonomics in Design</i>
2011-Present	International Editorial Board, <i>Applied Ergonomics</i>
2011	Session Chair, Cultural Ergonomics and Safety Culture, Organizational Design and Management, Grahamstown, South Africa, with Enid Headen Montague (co-chair)
2010-Present	Editorial Board, IIE Transactions on Occupational Ergonomics and Human Factors
2010	Symposium Chair, Inclusive Design Symposium, Applied Human Factors and Ergonomics International
2010	Session Co-chair, Forensics Challenges in Human Factors and Ergonomics, Human Factors and Ergonomics Society, 54 th Annual Meeting, San Francisco, CA (Session Chair: Erin Alves)
2010	Session Co-chair, The Current State of Legal, Design, and Residual Usability Issues for People with Disabilities: Discussion Panel, Human Factors and Ergonomics Society, 54 th Annual Meeting, San Francisco, CA (Session Chair: M. Wogalter)
2010	Contributor, Assessment Items for the BCPE Examination for Professional Ergonomists
2010	International Technical Advisory Committee, 10 th International Symposium, Human Factors in Organizational Design and Management (Chair: Prof. Matthias Goebel)
2009-2018	Member, National Occupational Research Agenda, Construction Sector Council
2009-2013	A.R. Lauer Safety Award Sub-committee Member, Human Factors and Ergonomics Society
2009-2012	A.R. Lauer Safety Award Sub-committee Chair, Human Factors and Ergonomics Society
2009	Co-editor, Special Issue on Construction Safety and Health, <i>The Open Occupational Safety and Health Journal</i>
2009	Session Chair, Issues in Forensics Research and Practice, Human Factors and Ergonomics Society, 53 rd Annual Meeting, San Antonio, TX
2009	Session Chair, Deconstructing Product Design: Various Approaches, Human Factors and Ergonomics Society, 53 rd Annual Meeting, San Antonio, TX, Co-chair: Kristi Beverly
2009	Session Chair, Applications of Empirical Research to Forensics Practice, Human Factors and Ergonomics Society, 53 rd Annual Meeting, San Antonio, TX
2008-2010	Technical Program Chair, Forensics Professionals Technical Group, Human Factors and Ergonomics Society
2007-2008	Member, Evaluation Committee, National Academies/Institute of Medicine Review Panel of the NIOSH Personal Protective Technologies Program
2008	Product Design Technical Group Award Committee, Human Factors and Ergonomics Society
2008	Panel Coordinator and Moderator, Self-Globalization, Human Factors and Ergonomics Society, 52 nd Annual Meeting, New York, NY
2006	Co-Presenter, Games to Explain Human Factors: Come, Participate, Have Fun!!, Human Factors and Ergonomics Society, 50 th Annual Meeting, San Francisco, CA (co-presenters, Shapiro, R., Artis, S., Meyer, A, and Naga, J.)
2006-2010	Internal Advisory Board, North Carolina Agromedicine Institute, Southern Coastal Agromedicine Center, Greenville, NC

2006-2008	Technical Group Chair, Safety Technical Group, Human Factors and Ergonomics Society
2005-2006	Conference Program Chair, Transforming the Professoriate, Virginia Tech (National Conference); Advance VT, Advancing Women in the Professoriate
2004-2007	Chair, Diversity Task Force, Human Factors and Ergonomics Society
2005-2006	Evaluator, National Academies Review of the NIOSH Personal Protective Technology Program
2004	Panel Moderator, Human Factors and Ergonomics Society, 48th Annual Meeting, New Orleans, LA
2004-2010	Member, Diversity Task Force, Human Factors and Ergonomics Society
2004-2006	Newsletter Editor, International Society for Occupational Ergonomics and Safety
2004	Editorial Board, Handbook of Warnings
2003-2007	Proposal Reviewer, National Defense Scholarships for Graduate Education
2003-2005	Technical Group Secretary-Treasurer, Safety Technical Group, Human Factors and Ergonomics Society
2003-2005	Technical Group Web Master, Personality and Individual Differences Technical Group, Human Factors and Ergonomics Society
2002-present	Proposal Reviewer, National Science Foundation (Multiple Programs)
2002-2003	Contributor (Ergonomics Section), American Psychological Association Dictionary of Terms
2002-2003	Member-at-Large Representative, International Society for Occupational Ergonomics and Safety
2002-2005	Society for Environmental Graphic Design, Representative to the ANSI-ASC-Z535 Committee, National Electrical Manufacturers Association
2001	Chair, Human Factors and Child Safety Symposium, Human Factors and Ergonomics Society 42 nd Annual Meeting, Minneapolis, MN
2000	Session Co-chair, Two Technical Sessions, Joint International Ergonomics Association/Human Factors and Ergonomics Society Annual Meeting (Consumer Products Research and Methods; Safety Monitoring and Reporting)
1997	Annual Meeting Volunteer, Human Factors and Ergonomics Society, 41 st Annual Meeting, Albuquerque, NM

Professional Service as a Peer Reviewer:

2017-Present	Manuscript Reviewer, Applied Ergonomics, Human Factors Journal, Construction Safety journals (various), Ergonomics in Design
2017	Panelist, National Science Foundation
2016	Panelist, National Science Foundation (two panels)
2016	Scientific Review Committee, National Institute for Occupational Safety and Health
2015	Manuscript Reviewer, Institute of Industrial and Systems Engineers
2015	Proposal Reviewer, National Institute for Occupational Safety and Health
2014	Abstract and Manuscript Reviewer, American Society of Safety Engineers
2011-Present	Journal Manuscript Reviewer, <i>Applied Ergonomics</i>
2010-Present	Journal Manuscript Reviewer, <i>IIE Transactions on Occupational Ergonomics and Human Factors</i>
2009-Present	Abstract and Manuscript Reviewer, <i>Institute of Industrial Engineers</i>
2008-Present	Journal Manuscript Reviewer, <i>Ergonomics in Design</i>

2007-2008	Proposal Reviewer, American Society for Engineering Education (ASEE) National Defense Science and Engineering Grant Reviewer
2007-Present	Journal Manuscript Reviewer, <i>Construction Engineering and Management</i>
2006-Present	Journal Manuscript Reviewer, <i>Journal of Environmental Psychology</i>
2006-2010	Journal Manuscript Reviewer, <i>Journal of Experimental Psychology: Applied</i>
2005–Present	Journal Manuscript Reviewer, <i>Risk Analysis</i>
2004-Present	Journal Manuscript Reviewer, <i>Accident Analysis and Prevention</i>
2004-2009	Journal Manuscript Reviewer, <i>International Journal of Industrial Ergonomics</i>
2003–Present	Journal Manuscript Reviewer, <i>Gerontechnology</i>
2003-Present	Proposal Reviewer and Site Reviewer, National Science Foundation
2003	Book Reviewer, <i>User Interfaces for All</i>
2002–Present	Journal Manuscript Reviewer, <i>IEEE Transactions on Systems, Man, and Cybernetics</i>
1997-Present	Proposal, Paper Reviewer, Human Factors and Ergonomics Society Proceedings (various TGs), Organizational Design and Management, International Ergonomics Association, Institute of Industrial Engineers, American Society of Engineering Education

RESEARCH AND SCHOLARSHIP

BOOKS

Smith-Jackson, T.L., Resnick, M., and Johnson, K. (Eds.). (2013). *Cultural Ergonomics: Theory, Methods, & Applications*. London & Oxford, UK: CRC Press – Taylor and Francis. ISBN-978-1-4398-1260-0.

REFEREED JOURNAL PUBLICATIONS

**Legend: Underlined names – graduate student thesis/dissertation work; underline and bold – undergraduate coauthor.*

1. Smith-Jackson, T. L. and Essuman-Johnson, A. (2002). Cultural Ergonomics in Ghana, West Africa: A descriptive survey of industry and trade workers' interpretations of safety symbols. *International Journal of Occupational Safety and Ergonomics*, 8, 37 - 50.
2. Smith-Jackson, T.L. and Hall, T.E. (2002). Information order and sign design: A schema-based approach. *Environment and Behavior*, 34, 479 - 492.
3. Smith-Jackson, T. L. and Williges, R. C. (2001). User-centered design of tele-support systems. *Assistive Technology*, 13, 144 – 169.
4. Wogalter, M.S., Conzola, V.C., and Smith-Jackson, T.L. (2002). Research-based Guidelines for Warning Design and Evaluation. *Applied Ergonomics*, 33, 231-240.
5. Wogalter, M.S., Smith-Jackson, T.L., Mills, B.J., and Paine, C. S. (2002). Effects of Direct-to-Consumer Advertisement Format on Risk Knowledge and Preference. *Drug Information Journal*, 36, 693-705.
6. Smith-Jackson, T. L. and Wogalter, M. S. (2002). Potential Uses of Technology to Communicate Risk in Manufacturing. *Human Factors and Ergonomics in Manufacturing*, 14, 1 – 14.
7. Smith-Jackson, T. L., Nussbaum, M. A., and Mooney, A. M. (2003). Accessible cell phone design: Development and application of a needs analysis framework. *Disability and Rehabilitation*, 25, 549 - 560.

8. Smith-Jackson, T.L. and Wogalter, M.S. (2007). Application of a mental models approach to MSDS Design. *Theoretical Issues in Ergonomics Science*, 8, 303 – 319.
9. Soh, B.K. and Smith-Jackson, T.L. (2004). Influence of map design, individual differences, and environmental cues on wayfinding performance. *Spatial Cognition and Computation*, 4, 137 - 166.
10. Nam, C.S., Smith-Jackson, T. L., and Thomas, C. (2004). Effects of individual differences and task environments on users' interactions with web resource seeking. *Computers in Education*, 15, 79 - 92.
11. Lee, Y.S., Hong, S.W., Smith-Jackson, T.L., Nussbaum, M.A., and Tomioka, K. (2006). Systematic evaluation methodology for cell phone user interfaces. *Interacting with Computers*, 18, 304-325.
12. Nam, C.S. and Smith-Jackson, T.L. (2006). Web-based learning environments: A theory-based design process for development and evaluation. *Journal of Information Technology Education*, 6, 23 – 43.
13. Hughes, L. E., Babski-Reeves, K., & Smith-Jackson, T. (2006). Effects of psychosocial and individual factors on physiological risk factors for upper extremity musculoskeletal disorders while typing. *Ergonomics*, 50, 275 – 288.
14. Ryu, Y.S. and Smith-Jackson, T.L. (2006). Reliability and Validity of the Mobile Phone Usability Questionnaire (MPUQ). *Journal of Usability Studies*, 2, 39 - 53.
15. Ryu, Y.S., Babski-Reeves, K., Smith-Jackson, T.L., and Nussbaum, M.A. (2007). Decision models for comparative usability evaluation of mobile phones using MPUQ. *Journal of Usability Studies*, 3, pp. 24 – 40.
16. Kleiner, B.M., Smith-Jackson, T.L., Mills, T.H., O'Brien, M.J., and Haro, E. (2008). Design, development, and deployment of a rapid universal safety and health (RUSH) system for construction. *Journal of Construction Engineering and Management*, 134, pp. 273 – 279.
17. Howarth, J., Smith-Jackson, T., and Hartson, R. (2009). Supporting novice usability practitioners with usability engineering tools. *International Journal of Human-Computer Studies*, 67, 533-549.
18. Smith-Jackson, T.L. and Klein, K.W. (2009). Open-plan Offices: Task performance and mental workload. *Journal of Environmental Psychology*, 29, 279-289.
19. Martin, C. and Smith-Jackson, T.L. (2008). Evaluation of pictorial assembly instructions for children. *Human Factors*, 50, pp. 652-662.
20. Smith-Jackson, T.L., Wogalter, M.S., Quintela, Y. (2010). Safety Climate and Pesticide Risk Communication Disparities in Crop Production by Ethnicity. *Human Factors and Ergonomics in Manufacturing*, 20, 511-525.
21. Yoo, H. S. and Smith-Jackson, T.L. (2009). Colour Size Illusion on Liquid Crystal Displays and Design Guidelines for Bioinformatics Tools. *Behavior and Information Technology*, 29, 2.
22. Yi Wang, D. Bowman, D. Krum, E. Coelho, T. Smith-Jackson, D. Bailey, S. Peck, S. Anand, T. Kennedy, Y. Abdrazakov (2008). Effects of Video Placement and Spatial Context Presentation on Path Reconstruction Tasks with Contextualized Videos. *IEEE Transactions on Visualization and Computer Graphics*, 14, 1755 - 1762.
23. Kim, S.J., Smith-Jackson, T., Carrol, K., and Suh, M. (2009). Implications of participatory design for a wearable near and far environmental awareness systems (NaFEAS) for users with severe visual impairments. *Universal Access in Human-Computer Interaction*. Lecture Notes in Computer Science, 5674, 85-95.
24. Smith-Jackson, T., Carroll, K., Kim, S., Suh, M., and Ryu, Y. (2010). Socially-smart computing to support older adults with severe visual impairments: Proof-of-concept *Gerontechnology*, 9, 429 – 432.
25. Hung, Y.S., Smith-Jackson, T., and Winchester, W. (2011). Use of attitude congruence to identify safety interventions for small residential builders. *Construction Management and Economics*, 29, 2, 113-130.
26. Ku, K., Rahmandad, H., Smith-Jackson, T., and Winchester, W. (2010). Factors influencing the risk of falls. *Construction Management and Economics*, 29, 397-416.

27. Smith-Jackson, T., Artis, S., Hung, Y-S, Kim, H., Hughes, C., Kleiner, B., and Nolden, A. (2011). Safety critical incidents among small construction contractors: A prospective study. *The Open Occupational Health and Safety Journal*, 3, (Suppl 1-M5), 39-47.
28. Kim, H. N., Smith-Jackson, T., & Bohn, J. H. (2011). Younger and older adults with low vision have similar haptic capabilities and needs in 3D virtual navigation. *Gerontechnology*, 10, 72-89.
29. Kwon, G., Smith-Jackson, T., Bostian, C. (2011). Socio-cognitive aspects of interoperability: Understanding communication task environments among different organizations. *ACM Transactions on Computer-Human Interaction*, 18 (4) pp. 20: to 20:21.
30. Gausepohl, K., Winchester, W., Arthur, J., and Smith-Jackson, T. (2011). Using storytelling to elicit design guidance for medical devices. *Ergonomics in Design*, 19, 19-24.
31. Nam, C.S., Yueqing, L., Takehiko, Y., and Smith-Jackson, T.L. (2012).
32. Haptic user interfaces for the visually impaired: Implications for haptically-enhanced science learning systems. *International Journal of Human-Computer Interaction*, 28, 784-798.
33. Bankole, A., Anderson, M., Lach, J., Smith-Jackson, T., Knight, A., Oh, K., Brantley, J., and Barth, A. (2012). Validation of a non-invasive body sensor network technology in the detection of agitation in dementia. *American Journal of Alzheimer's Disease and Other Dementias*, 27, 346-354.
34. Kim, H., Smith-Jackson, T., and Terpenney, J. (2012). Haptic perception of users with low vision and their needs in haptic-incorporated user interfaces. *Disability and Rehabilitation: Assistive Technology*, 9, 195-208.
35. Hung, Y., Winchester, W., Smith-Jackson, T., Kleiner, B., Babski-Reeves, K., and Mills, T. (2012). Identifying fall protection training needs for residential roofing subcontractors. *Applied Ergonomics*, 44, 372-380.
36. Smith-Jackson, T., Evia, C., Tabor, L., and **Benson, K.** (2012). Design of an inclusive science learning system for Appalachian children. *Theoretical Issues in Ergonomics Science*, 13, 18-32.
37. Oh, K. and Smith-Jackson, T. (2012). Effects of sign design features in bicycle pictorial symbols on bicycling facility signs. *Applied Ergonomics*, 44, 990-995.
38. Hindman, D., Morris, J., Mohamadzadeh, M., Koch, L., Angles, J., and Smith-Jackson, T. (2013). Personal fall arrest system anchors in residential construction. *Wood Design Focus*, 23 (1), 20 – 27.
39. Kim, H., Smith-Jackson, T., and Kleiner, B. (2013). Accessible haptic user interface design approach for users with visual impairment. University Access in the Information Society. Accepted for publication.
40. Mi, N., Cavuoto, L., Benson, K., Smith-Jackson, T., and Nussbaum, M. (2013). A heuristic checklist for an accessible smart phone interface design. *University Access in the Information Society*, 1-15.
41. Kim, H., Smith-Jackson, T., and Nam, C. (2013). Elicitation of haptic user interface needs of people with low vision. *International Journal of Human-Computer Interaction*, 29, 488-500.
42. Zhao, D., McCoy, A., Kleiner, B., and Smith-Jackson, T. (2015). Control measures of electrical hazards: An analysis of the construction industry. *Safety Science*, 77, 143-151.
43. Zhao, D., McCoy, A.P., Kleiner, B.M., Smith-Jackson, T.L., and Liu, G. (2015). Sociotechnical Systems of Fatal Electrical Injuries in the Construction Industry. *ASCE Journal of Construction Engineering and Management*, 142 (1).
44. Zhao, D., McCoy, A.P., Kleiner, B.M., Du, J., and Smith-Jackson, T.L. (2015). Decision-Making Chains in Electrical Safety for Construction Workers. *ASCE Journal of Construction Engineering and Management*, 142 (1).
45. Smith-Jackson, T., **Middlebrooks, R., Francis, J., Gray, T., Nelson, K., Steele, B., Townsend, K., and Watlington, C.** (2016). Open plan offices as sociotechnical systems: What matters and to whom? *Work: a journal of prevention, assessment & rehabilitation*, 54(4), 807-823. doi:10.3233/WOR-162362 <http://content.iospress.com/articles/work/wor2362>

46. Gausepohl, K., Winchester, W., Smith-Jackson, T., Kleiner, B., and Arthur, J. (2016). A conceptual model for the role of storytelling in design: leveraging narrative inquiry in user-centered design (UCD). *Journal of Health and Technology*.
47. Saunders, L., Kleiner, B., McCoy, A., Ellis, K., Smith-Jackson, T., and Wernz, C. (2017). Developing an inter-organizational safety climate instrument for the construction industry. *Safety Science*, 98, 17-24.
48. Morris, J., Hindman, D., Mohamadzadeh, M., Smith-Jackson, T. (2017). Effect of bracing and anchor choice on the strength of metal plate-connected wood-truss assemblies carrying fall arrest loads. *Journal of Architectural Engineering*, 23, 11 pages.
49. Sourbeer, K., Bankole, S., Anderson, M., Newbold, T., Nama, R., Belay, M., Meda, H., and Smith-Jackson, T. (2018, in-press). Assessing BESI mobile application usability for caregivers of persons with dementia. *Gerontechnology*, 17, 102-112.

REFEREED PROCEEDINGS PUBLICATIONS

**Legend: Underlined names – graduate student thesis/dissertation work; underline and bold – undergraduate coauthor.*

1. Smith-Jackson, T. and Taylor, G. (2018). Empowering undergraduate student researchers through inclusive research learning systems. *Proceedings of the International Conference on Industrial Engineering and Operations Management*, Washington, DC, 9/27-9/29/18. 7 pages. Best Track Paper Award, Global Engineering Track.
2. Goins, H., Fyffe, N., Smith-Jackson, T., Homdee, N., Ridwan, A., and Lach, J. (2018). Structuring coalesced multisource data for artificial neural network modeling. *Proceedings of the Institute of Industrial and Systems Engineers Conference*, Orlando, FL, May 20-23, 2018, 8 pages.
3. Fyffe, N., Goins, H., Smith-Jackson, T., Homdee, N., Alam, R., and Lach, J. (2018). Structuring big data using principal components analysis and decision rules. *Proceedings of the Institute of Industrial and Systems Engineers Conference*, Orlando, FL, May 20-23, 2018, 8 pages.
4. Alam, R., Gong, J., Hanson, M., Bankole, A., Anderson, M., Smith-Jackson, T., Lach, J. (2017). Early detection of dementia-related agitation. *ACM Proceedings on Digital Biomarkers*, June 2017. Niagara Falls, NY, pp. 15-20.
5. Sourbeer, K., Bankole, A., Anderson, M., Alam, R., Belay, M., Nama, R. Lach, J., and Smith-Jackson, T. (2017). BESI: Reliable and Heterogeneous Sensing and Intervention for In-Home Health Applications. *Connected Health: Applications, Systems And Engineering Technologies (Chase)*, IEEE/ACM International Conference.
6. Faucette, C., Shravan, S., Avnet, M., and Smith-Jackson, T. (2016). The System Safety Database: Challenges and Opportunities. June 22, 2016, George Washington University, Washington, DC. *Council on Engineering Systems Universities*, 5 pps.
7. Smith-Jackson, T. and Avnet, M. (2016). Modeling proxies for culture in systems design and evaluation. In H. Yang, Z. Kong, MD Sarder (Eds.). *Proceedings of the Industrial and Systems Engineering Research Conference*, Anaheim, CA, 6 pps.
8. Benedict, B., Bells, A., and Smith-Jackson, T. (2016). Development and design for 21st century socio-cognitive writing technologies. *Proceedings of the Human Factors and Ergonomics Annual Meeting*, Washington, DC, September 19-23. In-press. 5 pps.
9. Avnet, M. and Smith-Jackson, T. (2016). Human error in context: A multilevel framework of system safety. *Proceedings of the Human Factors and Ergonomics Annual Meeting*, Washington, DC, September 19-23. In-press. 5 pps.

10. **Benedict, B., Stewart, G., Brown, J.,** Vinson, E., Smith-Jackson, T. (2015). Use of front-end evaluation to design an undergraduate Industrial and Systems Engineering Ambassador Program (ISEAMP). *Proceedings of the Human Factors and Ergonomics Society*, 59, 347-351.
11. **Akter, T.** and Smith-Jackson, T. (2015). Effects of context on performance times of residential roofers. *Proceedings of the Human Factors and Ergonomics Society 59th Annual Meeting*, 59, 1467-1470.
12. **Nama, R.** and Smith-Jackson, T. (2015). Cyber-socio-physical systems: A new human factors paradigm. *Proceedings of the American Society for Engineering Management*, Accepted.
13. Smith-Jackson, T. (2015). Research challenges in multicultural human-systems engineering. *Proceedings of the 2015 Industrial and Systems Engineering Research Conference*, Nashville, TN, May 31-June 2, 2015.
14. **Nama, R., Sanders, K., Guy, J.,** Smith-Jackson, T., Lach, J., Bankole, A., Anderson, M. (2015). Knowledge Representation for Complex Systems: Empowering Caregivers of People with Dementia. *Proceedings of the 2015 Industrial and Systems Engineering Research Conference*. Nashville, TN, May 31-June 2, 2015.
15. **Belay, M., Henry, C.,** Smith-Jackson, T. (2015), Dementia caregiver empowerment using a cybersociophysical model. *Proceedings of the Human Factors and Ergonomics Society 59th Annual Meeting*, 59, 1162-1166.
16. **Belay, M., Henry, C., Wynn, D.,** Smith-Jackson, T. (2015). A data framework to understand the lived context for dementia caregiver empowerment. *Proceedings of the 26th Modern AI and Cognitive Science Conference*, M. Glass and J. Kim (Eds.). Greensboro, NC, pp. 31-37.
17. **Middlebrooks, R., Hayden, T.,** and Smith-Jackson, T. (2014). A conceptual hierarchy for ecologically valid open plan office research. *Proceedings of the Human Factors and Ergonomics Annual Meeting*, 58, 490-494.
18. **Park, J.,** Cullen, R., and Smith-Jackson, T. (2014). Designing a decision support system for disaster management and recovery. *Proceedings of the Human Factors and Ergonomics Annual Meeting*, 58, 1993-1995.
19. **Middlebrooks, E., Heard, A., Singletary, A.,** Smith-Jackson, T., and Hindman, D. (2014). Critical incident patterns of residential roofers. *Proceedings of the IIE Annual Conference and Expo, Montreal, Canada, May 31, 2014 – June 3, 2014*.
20. Choi, J., Guha, A., Romano, F., Galeshi, R., Smith-Jackson, T., Dietrich, C. (2014). Exploration of efficient testing methodology for effective spectrum sharing. *IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting*, Memphis, TN, July 6-11, 2014.
21. **Slaughter, A., Murphy, J., Archer, S.,** and Smith-Jackson, T. (2014). The ecological validity of scaled models in construction research. *Proceedings of the IIE Annual Conference and Expo, Montreal, Canada, May 31, 2014 – June 3, 2014*.
22. **Murphy, J., Archer, S., Slaughter, A.,** Pope-Ford, R., and Smith-Jackson, T. (2014). Enhancing harness usability to reduce injuries for construction workers. *Proceedings of the IIE Annual Conference and Expo, Montreal, Canada, May 31, 2014 – June 3, 2014*.
23. **Archer, S., Murphy, J., Slaughter, A.,** Pope-Ford, R., and Smith-Jackson, T. (2014). Harness effects on postural sway. *Proceedings of the IIE Annual Conference and Expo, Montreal, Canada, May 31, 2014 – June 3, 2014*.
24. **Toole, L.,** Hanowski, R., Smith-Jackson, T., and Winchester, W. (2013). Towards understanding mobile device use in commercial motor vehicle drivers: Can interaction improve performance? *3rd International Conference on Driver Distraction and Inattention (DDI 2013)*.
25. Elglaly, Y, Quek, F., Smith-Jackson, T., and **Dhillon, G.** (2012). Audible Rendering of Text Documents Controlled by Multi-Touch Interaction. *ACM International Conference of Multimodal Interaction*.

26. Elglaly, Y. Quek, F., Smith-Jackson, T., Dhillon, G. (2013). Touch-Screens are Not Tangible: Fusing Tangible Interaction with Touch Glass in Readers for the Blind. *International conference on Tangible, embedded, and embodied interaction*, 245-253.
27. Dhillon, G., El-Glaly, G., Holbach, W., Smith-Jackson, T., and Quek, F. (2012). Use of Participatory Design to Enhance Accessibility of Slate-Type Devices, in *Proceedings of the 56th Annual Meeting of the Human Factors and Ergonomics*, Boston, Massachusetts., USA. 1952-1956
28. Azziza Bankole, Martha Anderson, Aubrey Knight, Kyunghui Oh, Tonya Smith-Jackson, Mark A. Hanson, Adam T. Barth, John Lach (2011). Continuous, non-invasive assessment of agitation in dementia using inertial body sensors. *Wireless Health 2011: 1*.
29. Gausepohl, K., Winchester, W., Smith-Jackson, T., Arthur, S., and Kleiner, B. (2012). Context matters: Design guidance for maximizing success of storytelling sessions during a user-centered design task. *56th Annual Meeting of the Human Factors and Ergonomics Society*, 56, 767-771.
30. Angles, J., Trochez, G., Nakata, A., Smith-Jackson, T., Hindman, D., and Harold, V. (2012). Application of a scaled-world model for structural and usability testing of fall arrest technology in residential construction. *56th Annual Meeting of the Human Factors and Ergonomics Society*. 18-23.
31. Angles, J., Thompson, N., Trochez, G., and Smith-Jackson, T. (2012). Ladder task performance and mental workload: A scaled world study. *2012 Industrial and Systems Engineering Research Conference*, Orlando, Florida, May 18 – 24, 2012.
32. Angles, J., Nakata, A., Morris, J., Dhillon, G., Smith-Jackson, T., and Hindman, D. (2012). Requirements and task analysis of fall protection for residential construction. *2012 Industrial and Systems Engineering Research Conference*, Orlando, Florida, May 18 – 24, 2012.
33. Dhillon, G., Smith-Jackson, T., and Dhillon, B. (2012). Effect of user's mood on technology acceptance of high-fidelity and low-fidelity prototypes. *2012 Industrial and Systems Engineering Research Conference*, Orlando, Florida, May 18 – 24, 2012.
34. Smith-Jackson, T., Bose, T., Dietrich, C., Hsieh, G., Xin, C., DePoy, D., Thamvichai, R. (2012). Evaluation of integrated and inclusive pedagogy for cognitive communications. *Proceedings of the Human Factors and Ergonomics Society*, 56 (1), pp. 551-555.
35. Foldenauer, A., Donaldson, K., Smith-Jackson, T., and Bradburn, I. (2012). Conceptual design of a decision support system for child abuse risk evaluation. *2012 Industrial and Systems Engineering Research Conference*, Orlando, Florida, May 18 – 24, 2012.
36. Kothaneth, S., Scales, G., and Smith-Jackson, T. (2012). Keeping up with technology by understanding organizational culture. *Proceedings of the XXIVth Annual International Occupational Ergonomics and Safety Conference*. Fort Lauderdale, Florida, June 7 – 8, 2012.
37. Singh, A., King, E., Milby, M., Wray, N., Haskins, A., and Smith-Jackson, T. (2011). Accessible community emergency management system. In T. Doolen and E. van Aken (Eds.). *Proceedings of the Industrial Engineering Research Conference, 2011*, Reno, Nevada.
38. Smith-Jackson, T., Hindman, D., Shields, L., Thomas, B., Gallagher, C., & Koch, L. (2011). Safety Climate and Use of Fall Arrest Systems. *Proceedings of CIB W099 2011, Prevention: Means to the End of Construction Injuries, Illnesses and Fatalities*, 24-26.
39. Oh, K., King, E., Oh, C., Kwon, G., Smith-Jackson, T., Bostian, C. (2011). Usability evaluation of a public safety cognitive radio. In T. Doolen and E. van Aken (Eds.). *Proceedings of the Industrial Engineering Research Conference, 2011*, Reno, Nevada.
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BOOK CHAPTERS

**Legend: Underlined names – graduate student thesis/dissertation work; underline and bold – undergraduate coauthor.*

1. Smith-Jackson, T. (2018). Navigating at the Nexus: My Journey to Full Professor. In Eds. S. Luster-Teasley, et al. *Women Impact STEM*. Fielding University Press.
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SUBMITTED (UNDER REVIEW)

Azziza Bankole MD¹, Martha S. Anderson DNP², Ridwan Alam MS³, John Lach PhD³, Harshitha Meda MS⁴, Tonya Smith-Jackson PhD⁴ (2016). BE SI: Behavioral and environmental sensing and intervention for dementia caregiver empower: Study methods and phase 1 results. *American Journal of Geriatric Psychiatry*.

Nama, R., Smith-Jackson, T., Seong, Y., McCullough, M., Bankole, A., Anderson, M., and Lach, J. (2018). : Designing Dementia Caregiver Empowerment Interventions through a Simulation Study: A Conceptualization Study. *International Journal of Healthcare Systems Engineering*.

INVITED PRESENTATIONS AND PANELS

1. Panel, National Institute of Standards and Technology (NIST), “Elaborating the Human Aspect of the NIST Framework for Cyber-Physical Systems,” HFES Annual Meeting 2018, October 1-5, 2018.
2. Quality Education for Minorities (QEM) Network, QEM/NSF Outreach Forum on Building Research and Education Capacity in Computer and Information Science and Engineering (CISE) at Historically Black Colleges and Universities (HBCUs) (July 2018): Plenary Session – “What it means to be in the CISE Core,’ Panel: CISE Core Research Proposals.
3. Cornell University, Cornell Summer School on Designing Technology for Social Impact (June 2018) “National Science Foundation: Overview of the Computer and Information Science and Engineering (CISE) Directorate”
4. Panel co-moderator and Organizer: Smith-Jackson, T. and Pak, R. (2016). HFES Diversity Task Force: Challenges and Opportunities. Human Factors and Ergonomics Society, 60th Annual Meeting, Washington, DC.
5. Panel Chair and Organizer: Valerie Rice (2015). Designing for children: What do human factors professionals need to know? Human Factors and Ergonomics Society, 59th Annual Meeting, Los Angeles, CA, pp. 413-415.
6. Smith-Jackson, T. (2014). The illusion of inclusion: advancing Human Factors and Ergonomics in the context of sociotechnical cultural pluralism. University of Michigan, Human Factors and Ergonomics Student Chapter.
7. Smith-Jackson, T. (2014). Inclusive Design of a Cybersociophysical System. Virginia Tech, Human Factors and Ergonomics Student Chapter.
8. Smith-Jackson, T. (2014). The illusion of inclusion: advancing Human Factors and Ergonomics in the context of sociotechnical cultural pluralism. University of Wisconsin – Madison, Human Factors and Ergonomics Student Chapter.
9. Smith-Jackson, T. (2013). Cultural ergonomics: Engineering to benefit the rest of the world. Department of Engineering Education, Virginia Tech.
10. Smith-Jackson, T. (2013). The illusion of inclusion: Human factors challenges in an increasingly diverse environment. *Carolina Chapter of the Human Factors and Ergonomics Society*.
11. Smith-Jackson, T. (2011). *Qualitative and quantitative modeling of risk-related constructs: A cultural ergonomics approach*. The Ohio State University, Department of Industrial and Systems Engineering.
12. Smith-Jackson, T. (2007). *Inclusive Engineering: Designing Warnings and Risk Communications for the 80%*. IE Distinguished Speaker Series, Department of Industrial Engineering. Mississippi State University.
13. Smith-Jackson, T. (2012). Counting on both hands: from proud positivist to rational scientist. Center for Human-Computer Interaction. Virginia Tech.
14. Panel Chair and Organizer: Carolyn Sommerich (2010). Visualizing innovative uses of technology and devices for engaging college students in active learning (alternative format). Panel E4, Human Factors and Ergonomics Society, 50th Annual Meeting, San Francisco, CA.
15. Smith-Jackson, T.L. (2008). From Forensics to Research: Cases of MSDs and Pharmaceutical Risks. Proceedings of the Applied Human Factors and Ergonomics International Conference. Las Vegas, NV, July 14 – 17, 2008.
16. Ryu, Y.S., Babski-Reeves, K., Smith-Jackson, T.L., and Nussbaum, M. (2007). Enhancing the mobile phone usability questionnaire (MPUQ) with a multi-criteria decision making method. *HCI International 2007*; poster.

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18. Pyla, P., Hartson, R., Arthur, J., Smith-Jackson, T., and Perez-Quinones, M. (2007). Increasing the Impact of Usability Work in Software Development, CHI 2007 Workshop.
19. Panel Chair and Organizer: Eric Olsen (2004). Teen drivers, education, and licensing: A panel discussion. Human Factors and Ergonomics Society 48th Annual Meeting, New Orleans, LA, pp. 2349-2353.
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21. Smith-Jackson, T. L. (2003). *Culture-based Risk Mental Models: Overview of methods to develop culturally-centered safety information*. Anais Do, *Proceedings of the 3rd International ErgoDesign Conference*, Rio de Janeiro, Brazil, June 5 – 6, 2003.
22. Robert C. Williges, Jiyoung Kwahk, and Tonya L. Smith-Jackson. University of Virginia School of Medicine *Growing Younger: A Conference on Medical Technologies*, Presentation of Remote Needs Assessment and Usability Research.

OTHER PAPERS AND REPORTS

1. Smith-Jackson, T., Spengler, S., Cobb Payton, F., Epstein, J., Robila, S., Wachter, R., Kimbrel, T. (November 2018). Fairness, Ethics, Accountability, and Transparency: Enabling Breakthrough Research to Expand Inclusivity in Computer and Information Science and Engineering Research, National Science Foundation, NSF 19-016, <https://www.nsf.gov/pubs/2019/nsf19016/nsf19016.pdf>.
2. Smith-Jackson, T. (June 8, 2015). Inclusive research validity gives us the whole truth about the systems we study and their diverse users, LinkedIn Post: <https://aggieresearch.wordpress.com/2015/06/08/inclusive-research-validity>
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4. Harold, V., Smith-Jackson, T., and Hindman, D. (2012). Scaled-world prototype for structural and usability testing in residential construction. *2012 Industrial and Systems Engineering Research Conference*, Orlando, Florida, May 18 – 24, 2012.
5. Dhillon, G., Smith-Jackson, T., Quek, F., and El-Glaly, Y. (2012). Participatory design to enhance slate device accessibility. *2012 Industrial and Systems Engineering Research Conference*, Orlando, Florida, May 18 – 24, 2012.
6. Smith-Jackson, T., Oh, K., Rogoff, A., and Shukur, N. (2010). Comparative evaluation of bicycle symbols for cycling facility signs. Report Prepared for the Working Group for Signing Bicycle Facilities.
7. Smith-Jackson, T., Kleiner, B., Artis, S., Hughes, C., and Lancaster, G. (2008). Informal training in small construction work systems. Fourth Annual Meeting of the National Occupational Injury Research Symposium, October 21 – 23, 2008; Pittsburgh, PA.
8. Lee, W., Winchester, W., & Smith-Jackson, T. (2005) WARD: An Affective Sociotechnical Framework for Addressing Medical Errors, *IIE Annual Conference*.
9. Smith-Jackson, T.L., Nussbaum, M.A., Lee, Y.S., and Hong, S.W. (2003). *Usability Inspection, Testing, and Evaluation of Cellular Phone Interfaces*. Toshiba Corporation of Japan.
10. Smith-Jackson, T.L. (2003). *Follow-up Care Assessment Survey: Results and Requirements Determination*. Woodrow Wilson Rehabilitation Center.
11. Smith-Jackson, T.L. (2003). Culture-based Risk Mental Models: Overview of Methods to Develop Culturally-centered Safety Information. Anais Do, *Proceedings of the 3rd International ErgoDesign Conference*, Rio-de Janeiro, Brazil (June 5-6, 2003).
12. Smith-Jackson, T.L., Mooney, A., Nussbaum, M.A (2002). *Accessibility of Cellular Phones: Design Recommendations*. Toshiba Corporation of Japan.

13. Mooney, A., Nussbaum, M.A., Smith-Jackson, T.L (2002). *Accessibility of Notebook Computers: Issues and Recommendations*. Toshiba Corporation of Japan.
14. Smith-Jackson, T.L., Soh, B.K., and Keer, M. (2002). *Evaluation of the Jefferson National Forest Sign and Trail System* (Technical Report #ACE 006-2002).
15. Hall, T.E. and Smith-Jackson, T.L. (2001). *Evaluation of the National Park System Sign Format and Design* (Technical Report). Department of Forestry, Blacksburg, VA.
16. Smith-Jackson, T.L. and Hall, T.E. (2001). *Evaluation of the National Park System Sign Format and Design: Preliminary Development Activities for the National Park Service Evaluation Project* (Tech Report ACE-003-2001). Grado Department of Industrial and Systems Engineering, Blacksburg, VA.
17. Smith-Jackson, T.L., Mooney, A., and Nussbaum, M.A. (June, 2001). *Survey on Technology Needs of Disabled Persons* (Technical Report: Toshiba Corporation). Grado Department of Industrial and Systems Engineering, Blacksburg, VA.
18. Smith-Jackson, T.L., Williges, R.C., Kwahk, J., Capra, M., Durak, T., and Nam, C.S., Ryu, Y.S. (2001). *User Requirements Specification for a Prototype Health Care Information Web Site and Online Assessment Tool* (Tech. Report ACE/HCIL-01-01). Grado Department of Industrial and Systems Engineering, Blacksburg, VA.
19. Williges, R.C., Smith-Jackson, T.L., and Kwahk, J. (July, 2001). *User-centered Design of Telesupport Systems for Seniors* (Tech Report HCIL/ACE-01-02). Grado Department of Industrial and Systems Engineering, Blacksburg, VA.
20. Smith-Jackson, T.L. (1999). Cultural Human Factors/Ergonomics: Are We Practicing a Culture of Avoidance? *Individual Differences in Performance News, Vol 12 (2)*, 2 and 5.
21. Jackson, T.S. (1988). *Alternative Testing Strategies for Information Products* (Technical Report: IBM). Research Triangle Park, NC: International Business Machines.
22. Smith-Jackson, T.L. (1998). Wanted: Universal Access. *BDPA Triangle Journal, 1*.

SPONSORED RESEARCH

EXTERNALLY FUNDED GRANTS AND AWARDS -- Total - **\$16,466,760**; (AdvanceVT – added as coPI after grant was funded = **\$2,877,970**); **GRAND Total Externally Funded Projects = \$19,344,730.**

1. 8/15/18-8/14/21: Department of Defense, Cyber Identity and Behavioral Analytics Research (CIBAR), PI: King, CoPIs: Dozier, Frahm, Shafto, Ricanek, Woodard. Pending Award and Transfer to New PI (Anwar), **\$3,900,000**; **NCAT PI Share (\$400,000)**.
2. 2/5/18 – 2/4/19: Interagency Personnel Agreement, Computer and Information Science and Engineering Directorate, Information and Intelligent Systems Division, National Science Foundation. PI: Smith-Jackson, **\$188,495**.
3. 11/17/17 – 11/16/18: Department of Defense, Center for Advanced Studies in Identity Sciences. PI/Lead Institution: Smith-Jackson; coPIs: Anwar, Bryant, Doss, Esterline, McCullough. Subaward Institutions: Florida Institute of Technology (M. King), UNC-Wilmington (K. Ricanek), University of Florida (D. Woodard). **\$629,758**. *PI-role transferred to Anwar due to NSF Program Director Position.*
4. 7/23/17 - 7/22/19: National Science Foundation: Collaborative Research: HBCU-DCL EAGER: Broadening Participation and Strengthening Capacity in Interdisciplinary Engineering Model Development. PI/Lead Institution: Smith-Jackson (**\$100,090**); coPI/collaborator: Shittu (\$199,910), George Washington University. *PI-role transferred to Kim due to NSF Program Director Position.*
5. 9/1/16 – 12/31/17: National Science Foundation: HBCU-DCL Supplement: BESI, Postdoctoral Researcher to Expand Research Capacity. PI: Smith-Jackson. **\$105,232**. *PI-role transferred to Byrd due to NSF Program Director Position.*

6. 7/1/16 – 6/30/17: National Science Foundation: REU Supplement: SCH:INT: Collaborative Research: BESt: Behavioral and Environmental Sensing and Intervention for Dementia Caregiver Empowerment. PI: Smith-Jackson. **\$16,000**. *PI-role transferred to Byrd due to NSF Program Director Position.*
7. 1/1/16 – 5/31/16: Department of Defense: Center for Advanced Studies in Identity Sciences (CASIS): **\$550,000** (PI: Dozier); Senior Personnel Lead: Behavioral script modeling for the Internet of Things (IoT), Smith-Jackson, **\$165,000**.
8. 4/15/16-4/14/19: National Science Foundation: REU SITE: Research Experiences for Undergraduates. Engineering modeling and computational research. **\$348,657**, PI: Ram; coPIs: Smith-Jackson (8%; **\$27,892**), Stanfield, Kabadi, Flurchick, Williams, Yi, Nassif, Davis, McCullough, Kabadi, Sundaresan, Sain, Jha.
9. 7/1/15-6/30/20: NC-Manufacturing Extension Partnership. PI: Mintz, NC State University; Total **\$3,036,183**. NCAT Subaward PI: Ram; coPIs: Smith-Jackson, Oneyear. Total: \$50,000 plus cash match of \$50,000; **\$100,000**.
10. 3/14/15-7/31/15 Systems Engineering Research Center, Stevens Institute: A multilevel framework for systems safety. Total: **\$20,000**. NCAT Share: **\$8000**. PI: Mark Avnet, Texas A&M University; CoPI: Tonya Smith-Jackson.
11. 1/1/15 – 12/31/16: Capstone Senior Design Project - Avoiding Information Overload, Systems Engineering Research Center and US Special Operations Command; **\$10,000**. PI: Smith-Jackson, CoPIs: Ram, Oneyear.
12. 9/1/14 – 8/31/18 National Science Foundation: SCH:INT: Collaborative Research: BESt: Behavioral and Environmental Sensing and Intervention for Dementia Caregiver Empowerment. Total: **\$2.1M**; NCAT Share: **\$526,162**. Collaborating partners: John Lach, Electrical and Computer Engineering, University of Virginia; Martha Anderson and Azziza Bankola, Carilion Health Systems/Carilion Clinic, Roanoke, VA. *PI-role transferred to Byrd due to NSF Program Director Position.*
13. 1/1/2014 – 12/31/2014 Office Ergonomics Research Council: Open Plan Offices and the CAFÉ of EVE, **\$29,758**. PI: Tonya Smith-Jackson.
14. 3/12/12 – 3/11/15 REU Site: Cognitive Communications. National Science Foundation, **\$346,096**. PI: Tonya Smith-Jackson; CoPI: Carl Dietrich, Scott Midkiff.
15. 7/1/11 – 6/30/14 Situated Touch Audio Annotator and Reader for Individuals with Blindness and Severe Visual Impairments. National Science Foundation, **\$498,781**. PI: Quek; coPI: Smith-Jackson
16. 1/1/11 – 12/31/13 Device and Display Ecologies. National Science Foundation, **\$600,000**. PI: Quek; CoPIs: Smith-Jackson, North, Martin.
17. 5/23/11 – 6/30/11: System Safety Analysis of Platform Kneader Machine. Southwest Virginia Composite Materials Industry Center, **\$5000**. PI: Tonya Smith-Jackson. Federal Grant #545174 in org 065900.
18. 6/1/10 – 10/31/10 Validation of a Wearable Motion Sensor Technology for Agitation in Dementia. Carilion Clinic, **\$4950**. PI: Smith-Jackson.
19. 8/1/10 – 7/31/14 A Fall Protection System for Residential Construction Considering Usability and Worker Attitudes. NIOSH, **\$821,166**. PI: Hindman, coPI: Smith-Jackson.
20. 8/1/09 – 9/20/10 Prototype Public Safety Radio for Universal Interoperability (Phase 3) National Institute of Justice, **\$498,272** PI. Bostian, Smith-Jackson, Hsiao, McKenzie.
21. 8/15/09 – 5/15/2010 REU Supplement: Research Experiences to Design for Inclusion (REDI). National Science Foundation, PI: Nam, coPI: Smith-Jackson, **\$99,750**.
22. 7/1/11 – 6/30/15 Occupational Safety and Health Training Grant. National Institute for Occupational Safety and Health (NIOSH). **\$236,384**. PI: Nussbaum, coPIs: Smith-Jackson, Kleiner, Casali, Lockhart, Winchester, Young-Corbett.
23. 8/1/09 – 7/31/11 Collaborative Research: Implementation of vertically-integrated curricula for cognitive radio communications. **\$174,999**. PI: Bose, coPI: Smith-Jackson, Dietrich, Thamvichai.

24. 4/15/09 – 3/31/12: REU: Cognitive Communications. National Science Foundation. **\$345,000**. PI: Bose; coPI: Smith-Jackson.
25. 7/1/09 – 6/30/10 Occupational Safety and Health Training Grant, NIOSH. PI: Nussbaum; Co-PIs: Smith-Jackson, Babski-Reeves, Casali, Kleiner, Lockhart; **\$60,050**.
26. 1/15/09-6/30/09: Sensemaking in Command and Control. Army Research Office. **\$25,000**. PI: Smith-Jackson, subcontract: North Carolina A & T State University.
27. 1/4/09 – 9/15/09: Accessible Smart Phones. Toshiba Corporation of Japan. **\$30,000**. PI: Smith-Jackson; coPI: Nussbaum.
28. 7/1/08 – 6/30/09 Occupational Safety and Health Training Grant, NIOSH. PI: Nussbaum; Co-PIs: Smith-Jackson, Babski-Reeves, Casali, Kleiner, Lockhart; **\$68,050**.
29. 8/15/08 – 8/14/09: Embodied Interaction Paradigm for Users with Severe Visual Impairments. National Science Foundation. **\$96,393**, PI: Smith-Jackson, Co-PI: Quek, Co-PI: Carroll (subcontract to NC State University).
30. 6/1/08 – 12/31/08: Research Experiences for Teachers (Supplemental Grant); Work Organization in Logistics for Workers with Disabilities. National Science Foundation (through the Center for Engineering Logistics and Distribution (CELDi)). **\$20,000**; PI: Ellis; Co-PI: Smith-Jackson.
31. 4/18/08 – 10/31/08. Compensation and Usability to Reduce Hyperstereopsis in Target Acquisition. ITT Night Vision. **\$450,000**. PI: Inge, Co-PIs: Lockhart, Smith-Jackson, and Sturges.
32. 7/1/07 – 6/30/08 Occupational Safety and Health Training Grant, NIOSH. PI: Nussbaum; Co-PIs: Smith-Jackson, Babski-Reeves, Casali, Kleiner, Lockhart; **\$60,050**.
33. 2/1/08 – 1/31/09. A Prototype Public Safety Cognitive Radio for Universal Interoperability., National Institute of Justice. PI: Bostian (ECE), Co-PIs: M. Hsiao, A. McKenzie, T. Smith-Jackson; **\$500,000**.
34. 9/1/07 – 8/31/10. Innovative Flexible Experimental Environment for Learning in Science (I FEEL SCIENCE), National Science Foundation. PI: Chang Soo Nam, University of Arkansas; co-PI: Tonya Smith-Jackson; **\$570,000**.
35. 2/1/07 – 1/31/08. A Prototype Public Safety Cognitive Radio for Universal Interoperability., National Institute of Justice. PI: Bostian (ECE), Co-PIs: M. Hsiao, A. McKenzie, T. Smith-Jackson; **\$725,000**.
36. 8/1/06-7/31/11 AdvanceVT Women in Science and Engineering, National Science Foundation. Co-PI, added after grant was funded (PI: Provost Mark McNamee); 5 year award (2003); **\$2,877,970**.
37. 7/1/06 – 6/30/07 Occupational Safety and Health Training Grant, NIOSH. PI: Nussbaum; Co-PIs: Smith-Jackson, Babski-Reeves, Casali, Kleiner, Lockhart; **\$60,050**.
38. 6/1/06 – 12/31/07 New Mountain Climbers, **\$750**; Science and Mathematics Inclusive Learning and Engagement, Community Collaboration.
39. 9/15/06 – 8/30/07 United Parcel Service; DSP Safety Training System, **\$40,000**; PI: Smith-Jackson, Co-PI: Kleiner.
40. 6/8/06 – 11/1/07 United Parcel Service; DSP Safety Training System, **\$450,000**, 6/8/06 – 11/1/07. VT-PI: Smith-Jackson; MSU-PI: Babski-Reeves, co-PIs: Casali, Kleiner, Lancaster, Lockhart, Nussbaum, Winchester.
41. 1/06-12/09 NSF-Computer and Research Infrastructure: Interfaces for the Embodied Mind; 1/1/06 – 12/31/09; Funded at **\$200,000**. PI: Quek; Senior Personnel, Smith-Jackson (5%) and others.
42. 5/2005 – 02/2006 Toshiba Corporation of Japan, Needs Analysis and Requirements Acquisition for Inclusive Design of Cell Phones: UK and Germany. Toshiba Corporation. PI: Smith-Jackson (60%), Co-PI: Nussbaum (40%); **\$58,461**.
43. 7/2004 – 6/2006 Occupational Safety and Health Training Grant, NIOSH. PI: Nussbaum; Co-PIs: Smith-Jackson, Casali, Babski-Reeves, and Lockhart; **\$60,049**.
44. 2004 – 2009 Army Research Office/W911NF-04-R-0004 Center for Excellence for Battle Capability Enhancement, **\$2,491,476**; NC A & T State University Center Grant; PI: Celestine Ntuen, Co-PIs:

- Several (10% Responsibility); Project Grant (2004 – 2006): **\$60,001**, PI: Smith-Jackson (100% Responsibility) Human Engineering Research in Cognition: Sensemaking.
45. 2004 – 2009 National Institute for Occupational Safety and Health, \$3,250,000; PI: Kleiner, Co-PIs: Nieto, Nussbaum, Smith-Jackson, Wakefield (9.67% Responsibility, **\$223,817**); Center for Innovation in Construction Safety and Health.
 46. 2004 – 2007 National Institute for Occupational Safety and Health, **\$273,840**, PI: Smith-Jackson (60% Responsibility-**\$164,304**), Co-PI: Kleiner. Training Needs Analysis of Informal Construction Work Systems.
 47. National Institute for Occupational Safety and Health, “Occupational Safety and Health Training Grant”, 2004. **\$60,049**. Nussbaum, M.A. (PI), Smith-Jackson, T.L. (30% Responsibility), Babski-Reeves, K.L., Casali, J.G., and Lockhart, T.E. (Co-PIs). 07/01/04-06/30/05. Non-competing renewal.
 48. National Institute for Occupational Safety and Health, “Occupational Safety and Health Training Grant”, **\$51,173**, 7/1/02- 6/30/03, Responsibility: 30%, PI: Maury Nussbaum, Co-PIs: Smith-Jackson, Babski-Reeves, Casali, Lockhart. Non-competing renewal.
 49. National Institute for Occupational Safety and Health, , “Occupational Safety and Health Training Grant”, **\$49,000**, 7/1/01- 6/30/02, Responsibility: 30%, PI: Maury Nussbaum, Co-PIs: Smith-Jackson, Babski-Reeves, Casali, Lockhart. Non-competing renewal.
 50. Toshiba Corporation, “Design, Testing and Verification of the Cellular Phone Navigation System”, 2004. **\$60,049**. Smith-Jackson, T.L. (PI, 60% Responsibility) and Nussbaum, M.A. (Co-PI).
 51. National Science Foundation, “Identification and Modeling of the Culture-based Risk Mental Model”, 2003-2004. **\$93,664**. Smith-Jackson, T.L. (PI, 100% Responsibility)
 52. Toshiba Corporation, “Evaluation of Cell Phone Usability and Accessibility”, 2002-2003. **\$44,410**. Smith-Jackson, T.L. (PI, 50% Responsibility) and Nussbaum, M.A. (Co-PI).
 53. National Institute for Occupational Safety and Health Agromedicine Grant, “Cultural Ergonomics Applied to Pesticide Exposures”, 2001-2004. **\$188,885**. Smith-Jackson, T.L. (PI, 70% Responsibility), Wogalter, M.S. (Co-PI).
 54. Virginia Department of Rehabilitation Services and Woodrow Wilson Rehabilitation Hospital, “Improving Community-based Follow-up Services for Long-term Health Maintenance Needs of Persons with Spinal Cord Injury”, 2001-2003. **\$45,100**. Smith-Jackson, T.L. (PI, 100% Responsibility).
 55. Carilion Biomedical Institute, “Design of a Smarthouse Interface using Neural Network Modeling”, 2001-2002. **\$59,000**. Williges, (PI) and Smith-Jackson (Co-PI, 60% Responsibility).
 56. Toshiba Corporation, “Requirements Capture for Cell Phone Usability”, 2001-2002. **\$26,828**. Nussbaum, M.A. (PI), Smith-Jackson, T.L. (Co-PI, 50%, Responsibility).
 57. Toshiba Corporation, “Survey of Cell Phones and PCs for Accessibility”, 2001-2002. **\$25,535**. Nussbaum. M.A., (PI) and Smith-Jackson, T.L. (Co-PI, 50% Responsibility).
 58. Carilion Biomedical Institute, “Development of a Senior-Centered Health Information Website”, 2000-2001. **\$66,000**. Williges (PI) and Smith-Jackson, T.L. (Co-PI, 75% Responsibility.)
 59. National Park Service, “Evaluation and Testing of the NPS Sign Design”, 2000-2001. **\$106,149**. Smith-Jackson, T.L. (PI; 100% Responsibility).

External Funding Prior to 1999:

60. 1993 – 1994 Z. Smith-Reynolds Foundation, Better Life, Incorporated Public Radio and Community Education, **\$18,000**. PI: Smith-Jackson.
61. 1994 – 1995 Z. Smith-Reynolds Foundation, Better Life, Incorporated Public Radio and Community Outreach, **\$25,000**. PI: Smith-Jackson.

Internal Funding (VT):

1. Center for Instructional Development and Educational Research (CIDER): \$300. November 2011 –

- May 2012, Faculty Study Group, SCALE-UP Pedagogy. coPIs: Smith-Jackson, Barbara Bekken.
2. Center for Community Security and Resilience: \$52,000. July 1, 2010 – June 30, 2011. Accessible Community Emergency Management System (ACEMS).
 3. State Council for High Education: \$9000. September 2007 – August 2008. Wayfinding System for Users with Severe Visual Impairments.
 4. Virginia Tech Office for Outreach and International affairs, \$2500. April 2008 – December 2008: International Development Grant to Establish the TIES Program: Transdisciplinary and Inclusive Engineering and Science Tools to transfer human factors knowledge to West Africa.
 5. Virginia Tech Office for Outreach and International Affairs, 2005 – 2006. \$4500; Science and Mathematics Inclusive Learning and Engagement, Multidisciplinary Collaboration.
 6. Virginia Tech Center for Gerontology, 2005. \$4200 Smith-Jackson, T.L. (75% responsibility) and Dwyer, S. Cultural Barriers to the use of Blood Glucose Monitors by Older Adults.
 7. Virginia Tech Student Success Grant (Internal VT Award). 2002-2003. \$13,000. Smith-Jackson, T.L. (PI) 100%.
 8. Virginia Tech Student Success Grant (Internal VT Award). 2001-2002. \$14,000. Smith-Jackson, T.L. (PI) 100%.
 9. ASPIRES/VT Distance Learning for GPS Education (Internal VT Award). 2003-2005. \$165,000. Scales (PI), Smith-Jackson, T.L. (Co-PI, 50% Responsibility).
 10. ASPIRES/VT Drive Simulator for Collaborative Research. 2003. \$30,000. PI: E. Scott Geller, Co-PIs: Helen Crawford, Tonya Smith-Jackson (33% Responsibility).
 11. CEUT Summer Faculty Fellows (Internal VT Award). 2000. \$5,000. Smith-Jackson, T.L. (PI) 100%.

PATENTS AND INTELLECTUAL PROPERTY DISCLOSURES

1. Tactile Overlay for Touch Devices, US Patent Application 61/718,452, Filed: 2013 (Co-Inventors: Yasmine El-Glaly, Tonya Smith-Jackson, and Francis Quek).
2. BESI Tablet Interface, Intellectual Property Disclosure, Application Pending Submission.

STUDENT MENTORING AND ADVISING

DOCTORAL DISSERTATIONS SUPERVISED TO COMPLETION

(*Current Employment)

1. Suzanne Stevens. *Developing Guidelines for Designing Child Safety Printed Educational Materials: A User-Centered Approach*. Spring 2003. ***Research Scientist, HMR, Inc.**
2. Chang Soo Nam. *A Theory-Based Integrated Design Process for Development and Evaluation of Web-Based Supplemental Learning Environments*. Fall 2003. ***Associate Professor, NC State University, CAREER Award Winner, Outstanding Researcher Award.**
3. Young Sam Ryu. *Development of Usability Questionnaires for Electronic Mobile Products and Decision-Making Methods*. Summer 2005. ***Director of UX at Design for Use.**
4. Miranda Capra. Usability Problem Description and the Evaluator Effect in Usability Testing. Spring 2006. ***User Research Manager, BB&T.**
5. Sharnnia Artis. *The Effects of Perceived Organizational Support on Training and Safety in Latino and Non-Latino Construction Workers*. Summer 2007. (Co-chair with Dr. Brian Kleiner) ***Education and Outreach Director, University of California – Berkeley.**
6. Young Seok Lee. *Older Adults' User Experiences With Mobile Phones: Identification of User Clusters and User Requirements*. Fall 2007. ***Senior UX Architech at CA Technologies.**

7. Cortney Martin. *Usability of Pictorial Assembly Instructions for Young Children*. Spring 2007. ***Director of Client Marketing, 49 Group.**
8. Boon Kee Soh. *Validation of the Recognition-Primed Decision Model and the Roles of Common-Sense Strategies in an Adversarial Environment*. Spring 2007. ***Researcher, Government of Singapore.**
9. Zachary Doerzaph. *Development of a Threat Assessment Algorithm for Intersection Collision Avoidance Systems*. Spring 2007. (Co-chair with Dr. Thomas Dingus). ***Researcher, Virginia Tech Transportation Institute.**
10. Ying Hu. *Motivation, Usability and Their Interrelationships in a Self-paced Online Learning Environment*. Fall, 2008. ***User Experience and Interaction Designer, Whirlpool, Inc.**
11. Kayenda Johnson. *Process, Preference and Performance: Considering Ethnicity and Socio-Economic Status in Computer Interface Metaphor Design*. Spring 2008. ***Human Factors Engineer, SRA International.**
12. Kimberly Myles. *Activity-based Target Acquisition Methods for Use in Urban Environments*. Summer 2009. ***Human Research Engineering Directorate, Aberdeen Proving Ground.**
13. William Lee. *The Influence of Emotion on the Risk Perception and Situation Awareness of Clinicians*. Spring 2009. (Co-chair with Dr. Woodrow Winchester). ***Systems Engineering in Data Analytics and Human Behavior Modeling, MITRE Corporation.**
14. Hyung Nam Kim. *Usable Accessibility and Haptic User Interface Design Approach*. Spring 2010. ***Assistant Professor, University of Tennessee.**
15. Si-Jung Kim. *An Environmental User Interface (EUI) Framework to Convey Environmental Contexts in Interactive Systems Design*. Spring 2010. (Co-chair with Dr. Woodrow Winchester). ***Assistant Professor at University of Central Florida.**
16. Gyu Hyun Kwon. *A Model-based Design Framework for Interoperable Community Systems*. Fall 2010. ***Assistant Professor, Hanyang University.**
17. Yu-Hsiu Hung. *How Technology Diffuses Through a Construction User Culture: Design to Improve Safety Through Adoption* (Co-chair with Dr. Woodrow Winchester). Fall 2010. ***Assistant Professor, National Cheng Kung University.**
18. Shreya Kothaneth. The relationship between organizational culture, usability, and instructional technology acceptance. Spring 2012 (Co-chair with Dr. Glenda Scales). ***Director of UX Research, SPARK Experience.**
19. Kyunghui Oh. Use of reading strategy to assess reading medium effectiveness: application to determine the effects of reading medium and generation in an active reading task. Summer 2013 ***Senior UX Designer, Samsung Corporation.**
20. Na Mi. Extending situation awareness theory in the context of mobile augmented reality enabled urban navigation. Spring 2014. ***User Experience Professional, MivaTek in San Francisco.**

DOCTORAL DISSERTATIONS IN PROGRESS

(NC A&T State University)

1. Sarah Lewers, Location logistics for autonomous vehicles in humanitarian relief efforts (co-chair, Chrysafis Vogiatzis)

MASTERS THESES SUPERVISED TO COMPLETION

(*Current Employment)

1. Sriram Sridharan. *Usability and Reliability of the User-Action Framework: A Theoretical Foundation for Usability Engineering Activities*. Fall 2001. ***Executive Director, Gorme Market, Merpha Property Development.**

2. Raquel Ferreira. *Culture and e-Commerce: Culture-based Preferences for Interface Information Design*. Spring 2002. (Co-chair with Dr. Manuel Perez-Quinones) ***Engineer, Lenovo.**
3. Aaron Mooney. *Usability Evaluation of Notebook Computers and Cellular Phones Among Users with Visual and Physical Disabilities*. Spring 2002. (Co-chair with Dr. Maury Nussbaum). ***User Experience, SAS.**
4. Boon Kee Soh. *Developing Outdoor Map Design Guidelines Using a Real-World Wayfinding Task*. Spring 2002. ***Researcher, Government of Singapore.**
5. Jennifer Wissman. *Minimalist and Traditionalist Training Methods for Older Adults: A Theoretical Foundation for Usability Engineering Activities*. Spring 2002. ***Human Factors Engineer, Certified Rolfer, Self-Employed.**
6. Sushma Rao. *Application of Human-Computer Interaction Theories to Information Design on Internet Portals*. Fall 2002. ***User Experience Consultant, First Usable.**
7. Venkat Balasubramanian. *Design and Evaluation of a Web-based Training Tool for the User Action Framework Explorer*. Fall 2002. ***Sr. Director, Verve Mobile.**
8. Young Seok Lee. *A Study of Reading with a Handheld Computer*. Spring 2003. ***Senior UX Architech at CA Technologies.**
9. Tolga Durak. *Design and Testing of an Adult Age-Independent Online Needs Assessment Tool and Development of Adult Age-Independent Design Guidelines*. ***Director of Environment, Health, and Safety Services, Radford University.**
10. Maria Fumero-Aguilo. *Development of Guidelines for In-vehicle Information Presentation: Text vs. Speech*. Summer 2004. (Co-chair with Dr. Suzanne Lee) ***EDC Program Assistant, Puerto Rico LTAP Transportation Technology Transfer Center.**
11. Zachary Doerzaph. *Intersection Stopping Behavior Influenced by Driver State: Implications for Intersection Decision Support Systems*. Spring 2004. (Co-chair with Dr. Vickie Lewis). ***Research Associate, Virginia Tech Transportation Institute.**
12. Prakaash Selvaraj. *A Comparative Study of Synchronous and Traditional In-Lab Usability Evaluation Methods Usability Evaluation Methods*. Fall 2004. ***Sr. Manager, User Experience, CISCO.**
13. LaTanya Martin. *Cultural Differences in Risk Perception: An Examination of USA and Ghanaian Perceptions of Risk Communications*. Summer 2004. ***User Experience Consultant at User View.**
14. Sajitha Narayan. *Comparison of Various Display Representation Formats for Older Adults using In-lab and Remote Usability Testing*. Spring 2004. ***Senior Usability Engineer, Oracle.**
15. M. Lucas Neurauter. *Multidimensional Warnings: Determining an Appropriate Stimulus for a Curve-Warning Device*. Fall 2004. (Co-chair with Dr. Myra Blanco). ***Research Associate, Virginia Tech Transportation Institute.**
16. Sarah Brown. *Effects of Haptic and Auditory Warnings on Driver Intersection Behavior and Perception*. Spring 2005. ***Product Safety and Hazard Analysis, Consumer Product Safety Commission.**
17. Melinda McElheny. *Multidimensional Warnings: Evaluating Curve Warning Stimuli in an On-Road Environment*. Spring 2005. ***Senior User Experience Specialist, User Centric.**
18. John Lockett. *The Effects of Symbol Size and Workload Level on Status Awareness of Unmanned Ground Vehicles*. Spring 2006. ***Chief, Integration Methods Branch, U.S. Army.**
19. Darshan Baldev. *Design of a Construction Safety Training System Using Contextual Design Methodology*. Fall 2006. Co-chaired with Dr. Woodrow Winchester. ***User and Experience HF Professional, Beckman Coulter**
20. Ira Jhangiani. *A Cross-Cultural Comparison of Cell Phone Interface Design Preferences from the Perspective of Nationality and Disability*. Fall 2006. ***Consultant at eYeka**
21. Rebecca Olson. *Assessment of Drowsy-related Critical Incidents and the 2004 Revised Hours-of-Service Regulations*. Fall 2006. (Co-chair with Dr. Richard Hanowski) ***Researcher, Virginia Tech Transportation Institute.**

22. Yogesh Bhatkhande. Comparison of Traditional and Activity Theory Based Analysis Methods for Verbal Protocol Data. Summer 2006.
23. Doug Savick. *The Relationship Between Color and Inattentive Blindness for Military Target Detection*. Spring 2006. ***Researcher, Human Research and Engineering Directorate.**
24. Chanel Thomas. *Influence of Acculturation and individual Differences on Risk Judgments of Construction Laborers*. Spring 2006.
25. Shawnette Adams. *Disciplinarily Hetero- and Homogeneous Design Team Convergence: Communication Patterns and Perceptions of Teamwork*. Summer 2007.
26. Yoon Suk Lee. *An Approach to Identify Effective Learning Outcomes for a Training Program*. Fall 2007. ***User Experience Researcher, Wiley.**
27. Hyun Seung Yoo. *Color Illusions on Liquid Crystal Displays and Design Guidelines for Information Visualization*. Fall 2007. ***Software Engineer, Argonne National Laboratories.**
28. David Ramsey. *Newly Licensed Teenaged Drivers: A Field Study Evaluation of Eye Glance Patterns on Straight Road Segments*. Spring 2009. ***Director of Product and Analytics at Academic Analytics, Inc.**
29. Laura Toole. *Crash risk and mobile device use based on fatigue and drowsiness factors in truck drivers*. Spring 2013. (Co-chaired with Dr. Richard Hanowski). ***Transportation Specialist, Federal Highway Administration.**
30. Tahmina Akter. *A comparative study of indoor and outdoor scaled world models in residential roofing*. Spring 2014. ***Transitioned to Doctoral Program, North Carolina A&T State University.**
31. Marta Belay. *Development of a Data Framework to Quantitatively Model a Cybersociophysical System for Dementia Caregiver Empowerment*. ***Pratt & Whitney, Quality Engineer.**
32. Brianna Benedict. *Design and Testing of a Personalized Writing Support Tool for Engineering Students*. ***Transitioned to Doctoral Program, Purdue University.**
33. Rohith Nama. *Use of Personas for Inclusive Modeling of Environmental Data for Dementia Caregiving*. ***Lean Innovations Lab.**
34. Harshitha Meda, *Information Visualization for Dementia Caregiver Empowerment*. Spring 2017. ***Transitioned to Doctoral Program at NC A&T State University.**
35. Janelle Horton, *Pedestrian Safety with Personal Listening Devices*, Fall 2018, co-chair: Maranda McBride.

NON-THESIS MASTERS PROJECTS

(Virginia Tech)

1. Byron Bazemore, ***Lexmark International**
2. Arul Imran, ***Director, Product Design, Accela**
3. Chang Geun Oh, ***Panasonic Avionics Corporation**
4. Joyner Perez, ***User Experience Researcher, CA Technologies**
5. Carrie Slater

MASTERS PROJECTS SUPERVISED TO COMPLETION

(North Carolina A&T State University)

1. Tarataneecha McDougall. *London Fall Protection: A Systematic Quality and Usability Test*. Fall 2014. Current Position and Employer: ***Production Engineer, Toyota.**
2. Maria Perez-Suarez. *Process Standardization, Quality Control, and Quality Assurance Before and After Mass Production*. Fall 2014. ***Quality Engineer, Toyota**
3. Aric Slaughter. *Factors that Contribute to the Ecological Validity of Scaled Models in Construction Research*. Fall 2014. ***CGSS-Cutover, Northrop-Grumman**

4. Shatarata Tarte. *Development of a Cyber-Human Systems Testbed for Behavioral Biometrics Research*. Spring 2017. Systems Engineer, Air Force Research Lab, South Carolina.

MASTERS THESES IN PROGRESS

(North Carolina A&T State University)

1. Nykesha Fyffe, Comparison of Structural Equation Models to detect precursors to agitation in persons with dementia.
2. Ashley Lofton, Modeling human attributes in Cyber-Human Systems.

MASTERS PROJECTS IN PROGRESS

(North Carolina A&T State University)

UNDERGRADUATE PROJECTS ADVISED TO COMPLETION

1. Sathyendra Nandula (Fall 2001). *Comparative Usability Evaluation of Mouse and Touchpad Input Devices*. Virginia Tech
2. Lewis Venable (Fall 2002). *Cultural Differences in Safety Behavior During a Simulated Manufacturing Task*. Virginia Tech
3. Courtney Welch (Fall 2002). *Usability Inspection of Booster Seat Designs*. Virginia Tech
4. Chanel Thomas (Spring 2003). *Effects of Individual Differences on Engineering Students' Web Search Behavior*. Virginia Tech
5. Sharnnia Artis (Spring 2003). *Development of a Culture-based Learning Module to Diversify the Engineering Curriculum*. Virginia Tech
6. Alexis Beckford (Fall 2004). *Cultural Customization of Cellular Phone Interfaces*. Virginia Tech
7. Sarah Brown (Fall 2002). *Risk Perception and Hazards of Child Meal Toys*. Virginia Tech
8. Cory Brozina (Fall 2004). *Risk Knowledge Transfer and the Usability of Broadcast Television Prescription Medication Advertisements (Study 2- continuation of Slater, 2004)*. Virginia Tech
9. Carrie Slater (Spring 2004). *Prescription Medication Broadcast Media Design: Study 1*. Virginia Tech
10. Daveta Henderson (Fayetteville State University). *System Interfaces for Conflict Resolution*. Summer 2006, Human-Computer Interaction NSF Research Experiences for Undergraduates. Virginia Tech
11. Ashley People (Bennett College). *Usability Guidelines for Group Decision Support Systems*. Summer 2006, Human-Computer Interaction NSF Research Experiences for Undergraduates. Virginia Tech
12. Yolian Amaro-Rivera (U of Puerto Rico, Mayaguez), Nigel Wray (VT), Douglas Hogan (VT). *Interface Design for Public Safety Cognitive Radio Summer, 2009*, Cognitive Communications R Research Experiences for Undergraduates. Virginia Tech
13. Bradford Hassell (ME), Sam Kantor (AOE), Eric King (ISE). *Research Experiences to Design for Inclusion (NSF REDI Scholars)*. Fall 2009 – 2012. Virginia Tech

SENIOR DESIGN PROJECTS DIRECTED AND COMPLETED

1. Charles Douros, Christopher Gaffney, Philip Quansah (2001): *Emergency Department Exam Room Layout and Standardization*, Mary Washington Hospital.
2. Clifton Johnson, Laura Jones (2002). *Design of a User-Centered Proactive Medical Event Reporting System*. Carilion Health System
3. Mazi Arzanpouli, Luke Neurauter, Richard Sowdon (2002). *Development of a System Safety and Audit Inspection Program*. Federal Mogul.
4. Stephen Lloyd, Jason Rubin (2003). *Redesign of Incoming Traffic Flow and Warning Signs for Hazardous Chemical Transporters*. Celanese Acetate with Ecole Des Mines De Nantes (France). Selected as the top-ranked Senior Design team for 2002-2003.

5. Jennifer Leister, Matthew Conn, Amanda Wagener (2003). *Design of an Employee Safety Program*. Riverbend Nursery.
6. Kacy Albert, Radhika Kapur, Brian Painter (2004) – *User-Centered Design of Pesticide Safety Risk Communications*. National Institute for Occupational Safety and Health.
7. Danial Bernard, Thomas Casey, Doyle Yoon (2004). *Bending Machine Changeover*. Northrup-Grumman Newport News (co-directed with Dr. Michael Taaffe).
8. Nour Dib, Ryun Rhee, Cihan Cakal (2004). *Optimize Nursery Traffic Flow for Material Handling Vehicles*. Riverbend Nursery with Ecole Des Mines De Nantes (France).
9. William Liu, Won Jang, Ryan Held (2004). *Redesign of Failure Analysis Software Tool*. UPS.
10. Paul Brown, Michael Danzi, Peter Helvey, Ned Walker (2004). *Facility Redesign of the Clara Hearn School for Pre-K Users*.
11. John-Michael Becker, J.R. Humphrey, Stephen Kinsel, Bret Salmons, Emma White (2005). *Training Needs Analysis of Informal Construction Work Systems*.
12. Paul Brown, Michael Danzi, Peter Helvey, Ned Walker. *Facility Redesign of the Clara Hearn School for Pre-K Users*. 2004-2005.
13. John-Michael Becker, J.R. Humphrey, Stephen Kinsel, Bret Salmons, Emma White. *Training Needs Analysis of Informal Construction Work Systems*. 2004-2005.
14. Monique Sno, Jawara King. *Science and Mathematics Inclusive Learning and Engagement*. New River Community Action. 2006-2007.
15. Jiff Chan, Brian Humphreys, Woo Lee, Ritesh Saraiya. *Volvo Trucks North America: Development of a Communication System*. 2005-2006.
16. Sara Lu, Priyanka Malla, Jennifer Thangjitham. *Universal Design of a Manufacturing Workstation*. Walgreens. Co-directed with Dr. Kimberly Ellis. 2008-2009.
17. Anuja Agnihorti, Seul Kim, Christian Phelan, Edwin Yusman. *Instrumented Crib*. U.S. Consumer Product Safety Commission. 2009-2010.
18. Tim Barnes, Jesse East, Brian Sewell, Eric Ward. *Portable Pool Submersion Prevention System*. U.S. Consumer Product Safety Commission. 2009-2010.
19. Eric King, Matthew Milby, Angad Singh, Nigel Wray. *Accessible Community Emergency Management System (ACEMS)*. Center for Community Security and Resilience, IBM. 2010-2011.
20. Jeffrey Howell, Alexia Ioannou, Clayton Harvey, Kelly Miller. *ATV Child Restraint Ignition Mechanism*. U.S. Consumer Product Safety Commission. 2010-2011.

North Carolina A&T State University

21. Alex Beauboeuf, Lawanda Govan, Joshua McNeil, Lamar Woods, Facilities Layout for Safe Pallet Placement. Sponsor: Industries of the Blind Manufacturing, Spring 2013. North Carolina A&T
22. Rodney Middlebrooks, Garner Stewart, Ambrose Wallace. Avoiding Information Overload. Sponsor: U.S. Special Operations Command. Spring 2015. North Carolina A&T
23. Jared Banks, Jamari Guy, Kylon Rorie, Akeem Walker. Avoiding Information Overload. Sponsor: U.S. Special Operations Command. Fall 2015. North Carolina A&T.

UNDERGRADUATE RESEARCH PROJECTS DIRECTED AND COMPLETED

(North Carolina A&T State University)

24. Jarrod Murphy, Samuel Archer, Alea Singletary, Evan Middlebrooks. *Harness design for residential roofing*. 2013-2014. Sponsor: NIOSH and Center for Innovation in Construction Safety and Health. North Carolina A&T
25. Rodney Middlebrooks, Troy Hayden, Tiara Gray. *Conceptual Hierarchy for Ecologically Valid Open Plan Office Research*. 2013-2014. Sponsor: Office Ergonomics Research Committee. North Carolina A&T.
26. Middlebrooks, R., Francis, J. (2014) Methodology for Assessment of Behavior and Subjective Experience in Open Plan Office Designs, *Proceedings of the NC-LSAMP Research Conference* (Abstract), Durham, NC

27. Rodney Middlebrooks, John Francis, Cedric Watlington, Demesha Peebles, Briana Steele, Curtis Collins, Tiara Gray. *Conceptual Hierarchy for Ecological Valid Open Plan Office Research*. 2013-2014. Sponsor: Office Ergonomics Research Committee. North Carolina A&T.
28. Akeem Walker, Cedric Watlington, Jared Banks. *A multilevel system safety framework*. Summer 2015. Sponsor: Systems Engineering Research Center. North Carolina A&T.
29. Angelica Hood, Equity Matters: African American Inclusion in Alzheimer's Research, Undergraduate, NSF, Fall 2017, Spring 2018
30. Jemari Johnson, Increasing Diversity in Alzheimer's Research, Undergraduate, NSF, Fall 2017, Spring 2018

31. Wynn, D., Henry C., Belay, M., Smith-Jackson, T. (2014) Data Framework to Understand the Lived Context for Dementia Caregiver Empowerment. 10th Annual State of North Carolina Undergraduate Research & Creativity Symposium (Abstract), November, 22, 2014, McKimmon Center, NC State University, p.211.
32. John Francis, Tiara Gray, Rodney Middlebrooks, Kaleb Nelson, Briana Steele, Kionda Townsend Cedric Watlington. Ecological Validity and the CAFÉ of EVE: Research in Open Plan Office Designs. (Journal article accepted for publication). Sponsor: Office Ergonomics Research Committee. 2014-2015.
33. Akeem Walker, Jared Banks, Kionda Townsend, Cedric Watlington. Multilevel Framework for Systems Safety. Sponsor: Systems Engineering Research Center. Summer 2015.
34. Cedric Watlington and Lashondra Butler (Fall 2015). *Cybersociophysical design of a smart classroom to minimize stereotype threat*. Sponsor: Louis Stokes Alliance for Minority Participation, 2015-2016. Pembroke, NC. North Carolina A&T.
35. Guy, J., Meda, H., Mack, M., Kafele, A., and Smith-Jackson, T. (2015). Human Factors Approach for Design of A Caregiver Application. *NC-LSAMP Annual Conference* (Poster), October 31, 2015
36. Wynn, D., Henry C., Brooks, D., Belay, M., Smith-Jackson, T. (2015) The Application of Living Space Models to Understand Influences of Environmental Factors on Agitation. 2015 NC-LSAMP Annual Research Conference (Abstract), October 31, 2015, Chavis Center Annex Assembly, UNC Pembroke, P.30.
37. Jawari Boyd, Destiny Brooks, Julian Gaines, Jamari Guy, Charles Henry, Akilah Kafeleh, Muhammad Mack, Kiffinae Sanders, Jeffron Smalls, Darran Wynn (2014-2016; various employment periods). *Behavioral and Environmental Sensing and Integration: Android Tablet Interface Design and Usability Testing*. 2014-Present. Sponsor: National Science Foundation and National Institutes of Health (2014-2017). IP Disclosure in Preparation: BESI Tablet Interface. Sponsor: NSF Grant.
38. Sanders, K., Guy, J., Mack, M., Brooks, D., Gaines, J., and Smith-Jackson. (2016). The Importance of the System Usability Scale in the Development of BESI. Sponsor: NSF Grant.
39. Joel Egwezu and Jeffrey Egwezu (Summer 2016). Simulation modeling for sensor networks in dementia living spaces. Sponsor: National Science Foundation Grant.
40. Asante Bells, Trevor Downey, and Patti Kamara (Summer 2016). Layout and specification of a Living Space Model for Behavioral Scripts and Intrusion Detection. Sponsor: Department of Defense/CASIS.
41. Charles Henry, Kiffinae Sanders, Duran Walker. *Living Space Models for Behavioral and Environmental Sensing and Intervention for Caregiver Empowerment*. North Carolina A&T.
42. Asante Bells, Trevor Downey, Charles Henry. *Sensor and layout specifications for behavioral monitoring systems*. North Carolina A&T.
43. Halle Hammond and Eugene Clarke, *Guidelines for the implementation of in-home Tablet alerts for caregivers of persons with dementia*. National Science Foundation Grant.
44. Alea Singletary. *Design challenges in artificially-intelligent residential home systems*, Fall 2017.
45. Cedric Watlington and Lashondra Butler. *Augmented Cognitive Classroom Agents: NextGen Teaching and Learning*. Sponsor: Louis Stokes Alliance for Minority Participation, 2015-2017. North Carolina A&T. Abstract, SNCURCS conference, NCCU 2016.
46. Maya Ford. *NextGen Workplace Violence Prevention: Applications of the Internet of Everything*. Sponsor: Louis Stokes Alliance for Minority Participation, 2015-2017. North Carolina A&T. Abstract.

47. Gabrielle Rodgers. *Motor units to simulate behavioral scripts for user requirements in the Internet-of-Things (IoT)*. Associated with the CHARIOT Lab.
48. Hammond, H., Kakhu, O., Meda, H., Craig, K., and Smith-Jackson, T. (2016). *Dementia Caregiver Empowerment Using a Living Space Model*. *Louis Stokes Alliance for Minority Participation*. UNC Charlotte. Sponsor: NSF Research Experiences for Undergraduates, REU Supplement.
49. Asante Bells. *Using Data Mining of Internet of Things Sensor Data to Distinguish Personas*. Abstract, SNCURCS conference, NCCU 2016.
50. Charles Henry. Use of carbon dioxide detectors for integration in IoT-enabled security systems, Fall 2017.
51. Eric Carmichael. *User-centered design and security for a cyber-human systems app*, Fall 2017. Honorable Mention, 2017 NC LSAMP Conference, Raleigh, NC.
52. Christin Holmes. *Use of remote heart-rate sensors to capture behavioral scripts in intelligent home design*, Fall 2017.
53. Dexter McCoy, REU Supplement, Notification design to support caregivers of persons with dementia, Fall 2017.

UNDERGRADUATE PROJECTS IN PROCESS

(North Carolina A&T State University)

1. Angelica Hood, REU Supplement, Usability of notifications to support caregivers of persons with dementia, Fall 2017, 2018, present.
2. Jamari Johnson, REU Supplement, Inclusive Research for Caregivers of Persons with Alzheimer's, 2017, 2018, present.

HIGH SCHOOL STUDENT PROJECTS ADVISED TO COMPLETION

Virginia Tech

1. Kenneth Benson. *Science and Mathematics Inclusive Learning and Engagement*. Summer 2008, 2009.
2. Kenneth Benson. *Science and Mathematics Inclusive Learning and Engagement*. Summer 2010. Journal publication published.
3. Conor Gallagher. *Systems Approaches to Address Nanosafety Risk Communications*. Summer 2008.
4. Demeh Smith, Kenneth Benson, Devon Johnson. *YouTube Teaching Tools: Occupational Safety and Human Information Processing*.

STUDENT ORGANIZATION ADVISING

2015-2016	Co-Advisor, Institute of Industrial Engineers, NC A&T State University Student chapter
2006-2013	Advisor, Virginia Tech Student Chapter of the National Association for the Advancement of Colored People (NAACP)
2000-2011	Faculty Advisor, American Society of Safety Engineers

CONSULTING ACTIVITIES

2003 – 2015	Risk Communications and Interface Usability Design and Evaluation Use expertise to ensure standards-based design and evaluation of risk communications using scientific methods, including hazard and safety analysis and usability evaluations.
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1999 – 2018

Human Factors and Safety Forensics

Expert witness in product safety litigation. Provide research, analysis, expert-based opinions in legal settings regarding usability, risk communications, and product safety. Provided deposition testimony in 9 cases.

COMMUNITY SERVICE

2018

National Science Foundation, Judge, NSF 2026 Idea Machine National Competition

2018

National Science Foundation, Judge, 2018 Vizzies Competition

2018

IIS Division Coordinator, 2018 Feds Feed Families, National Science Foundation

2017-Present

Fundraising Chair, Smart Smile GoFundMe Campaign (social media campaign to for individual living with quadriplegia in need of medical and educational funds)

2017-2018

Organizer and Chair, North Carolina School of Science and Mathematics Class Affinity Giving Campaign

2010–2013

Volunteer, Females on the Right Track (FORT), Montgomery County (Middle School Minority Girls), VA

2010-2013

Christiansburg Institute (Historically African-American School), Volunteer

2008–2010

Member, The Community Group and the New Mountain Climbers (public service organization and giving circle), Christiansburg, VA

2002-2005

Manager, NO LIMIT Basketball Club, Blue Ridge Region, Girl Scouts of America

1996–1998

Reader, Wake County Reading Service for the Blind, Raleigh, North Carolina

1992–1997

Advisory Board, Better Life, Inc., Roanoke Rapids, North Carolina

1994–1996

Baby Sitter/Childcare Certification Trainer, American Red Cross
Raleigh, North Carolina

1992–1994

Certified Adult and Child CPR Trainer, American Red Cross
Halifax County, North Carolina

1992–1993

Certified HIV/AIDS Community Educator, American Red Cross
Halifax County, North Carolina

1989–1992

Volunteer Crisis Counselor, Army Community Services
Schwabisch Gmeund and Goepingen Army Installations, Federal Republic of
Germany