IEEE
SoutheastCon '19
Huntsville, Alabama

April 11 – 14, 2019

GOLDEN ANNIVERSARY
APOLLO
NASA
POWERED BY THE ROCKET CITY

200
MADISON COUNTY

AAM

THE UNIVERSITY OF
ALABAMA IN HUNTSVILLE

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OFFICE OF THE GOVERNOR

KAY IVEY
GOVERNOR

STATE CAPITOL
MONTGOMERY, ALABAMA 36130

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STATE OF ALABAMA

Greetings:

On behalf of five million Alabamians, I'm delighted to welcome the 2019 IEEE Region 3 Technical, Professional, and Student Conference to Huntsville.

You could not have picked a more appropriate year to visit Huntsville. In addition to celebrating the upcoming 50th anniversary of the launch of the Huntsville-developed Saturn V rocket that sent the Apollo XI spacecraft to the Moon, Huntsville is also the birthplace of the state. We are celebrating the Bicentennial of statehood. It was in the summer of 1819 that 44 delegates met in a carpenter's shop and drafted the first constitution. On December 14 later in that year Congress approved the Alabama Territory's request to become a state.

I hope you tour the reconstructed buildings at Alabama Constitution Village just a block from the Madison County Courthouse. You are invited to return later in the year for the festivities surrounding the anniversary. The original copies of the state's constitutions will be on display in July and August in downtown Huntsville.

In the meantime, enjoy the U.S. Space and Rocket Center. The nation's largest collection of space artifacts is also the state's most popular visitor attraction.

I especially welcome the bright students attending the conference. Huntsville would be an ideal place to launch your careers.

Enjoy your visit!

Sincerely,

Kay Ivey

Governor Kay Ivey

HUNTSVILLE

Tommy Battle
Mayor

As Mayor, and on behalf of the citizens of Huntsville, it is an honor to welcome you to the **IEEE SoutheastCon 2019**, April 11 – 14, 2019.

A special acknowledgement is given to those who coordinated this event. Many hours were spend preparing and planning to make this a great success and our City benefits from those efforts.

While you are here, I hope you have an opportunity to enjoy the many sights and attractions Huntsville has to offer – among them are the U.S. Space and Rocket Center, the Huntsville Museum of Art, Early Works and several other venues of interest. I would also like to invite you to visit Parkway Place Mall and the Bridge Street Town Centre to explore some of our best shopping and dining options.

For those of you who have traveled long distances, I hope your visit is a pleasant one. Enjoy yourselves while you are here and know that you are always welcome in Huntsville!

Sincerely,

Tommy Battle
Mayor

The Star of Alabama

WELCOME TO REGION 3!

On behalf of the IEEE members in the Southeastern US and Jamaica, it is my pleasure as Region 3 Director to welcome you to IEEE SoutheastCon 2019 and Huntsville, Alabama. From the website listed at the bottom of this page, you will find a lot of facts about Region 3, including our geographical boundaries and committees.

SoutheastCon 2019 is really three conferences in one. There is the professional conference in which technical papers are presented in several interesting areas. There is the meeting of the Region Committee in which local and regional volunteers participate in educational sessions about IEEE processes and developments. And there is the student competitions in which Student Branches from Region 3 compete in various formats. I hope you will experience these things (the technical program, Region 3 Committee meeting, and Region 3 Student Competitions) and much more. We are happy to have you in Region 3 and Huntsville. So, come on in, 'sit a spell', and enjoy the great Alabama Hospitality that the IEEE SoutheastCon 2019 Team has put together for us all.

Gregg Vaughn, Ph.D., P.E.
Region 3 Director 2018-2019
http://www.ewh.ieee.org/reg/3/

ORGANIZING COMMITTEE

On behalf of the Organizing Committee, it is a great pleasure to welcome you and your guests to Huntsville, Alabama, and SoutheastCon '19. We hope you will enjoy the quality of the technical program, get a chance to join us in the social activities, and enjoy some of the amenities and natural beauty of Huntsville and the surrounding areas.

SoutheastCon is an annual conference primarily for the members of IEEE in Region 3, bringing together engineering professionals, computer scientists, engineering faculty, students, and business people to share results of the latest in original technical research through information exchange, tutorials, exhibits, seminars, workshops, and student competitions. During the most recent history of the conference, SoutheastCon has extended its reach beyond regional activity as we have seen increased participation by our national and international colleagues.

This years' hardware competition theme, "First 50 – Next 50," exemplifies Huntsville's continued participation in space exploration. With the expanded space travels, autonomous robots will be responsible for clearing earth's orbit from debris and making space travel to Space Hotels (Spectels) safe. Other student competitions include a software competition, design presentation competition, web site design competition, t-shirt design, student paper contest, and ethics competition.

The IEEE Huntsville Section is your host for this year's conference. The Section is very excited about this event because it has been 11 years since the last time the Section had an opportunity to host the event. The Section is also very appreciative of the University of Alabama in Huntsville (UAHuntsville) and Alabama Agricultural and Mechanical University (AAMU) engineering faculty, students, and staff for their enthusiastic commitment and support. This conference could not have been possible without their direct involvement and personal commitment.

We would also like to extend special thanks to members of the Conference Committee and the technical paper reviewers, all of whom gave much of themselves and their time, despite all other obligations, to assure a successful conference. A special thank you to technical program co-chairs Dr. Ravi Gorur and Dr. Kaveh Heidary for making these proceedings possible.

Finally, on behalf of IEEE Region 3 and SoutheastCon 2019, we extend special thanks to all our conference contributors for their generous contributions to the Conference.
Welcome to Huntsville!

Eric Grigorian
General Chair

Raziq Yaqub
Vice-Chair

IEEE REGION 3 EXECUTIVE COMMITTEE

Director	**Gregg Vaughn, Ph.D., P.E.**
Director Elect	**Jill Gostin**
Secretary	**Chase Battaglio, P.E.**
Treasurer	**Ken Pigg**
Past Director	**Jim Conrad, Ph.D., P.E.**
Area 1 Virginia	**Steve Kemp**
Area 2 North Carolina Council	**Charles Lord**
Area 3 Georgia	**Chris Hardy**
Area 4 Florida Council	**Carlos Cabera**
Area 5 Tennessee Council	**Neena Imam**
Area 6 Alabama Mississippi	**Eric Grigorian**
Area 7 South Carolina Council	**Lee Stogner**
Area 8 Kentucky Indiana	**Don Hill**
Area 9 Jamaica	**Damith Wickramamayake**
Awards and Recognition Committee	**Kristin Bing**
Professional Activities Representative	**Ed Kirchner**
Section Representative 1	**Damith Wickramamayake**
Section Representative 2	**Don Hill**
Section Representative 3	**Grayson Randall**
Section Representative 4	**Danny Merkl**
Section Representative 5	**Marie Scantlebury**
Member Activities (MGA-SCSC-ECCS)	**Sonya Dillard**
Newsletter Editor	**Bill LaBelle**
Webmaster Sub-Committee	**Eric Ackerman, Ph.D.**
Information Coordinator	**Steve Jackson**
Fellows Coordinator	**David Conner Ph.D., P.E.**
Conference Committee	**Sean Haynes**
Conference Vice Chair Committee	**Don Hill**
Director-Elect	**Jill Gostin**
Past Conference Committee Chair	**Chris Hardy**
Regional Student Activities Chair	**Victor Basantes**
Former Region Director	**Jim Conrad, Ph.D., P.E.**
Southeastcon 2017	**Charles Lord**
Southeastcon 2018	**Jim Howard**
Southeastcon 2019	**Eric Grigorian**
Southeastcon 2020	**Parag Upadhyay**
Finance (FINCOM) Committee	**Ken Pigg**
Section Support	**Mark Torres**
Life Member Coordinator	**Thomas Bellarmine**
Young Professional Coordinator	**Daniel Diaz**
Women in Engineering Coordinator	**Allison Mercer**
Senior Member Elevation Coordinator	**Jacquelyn Cunningham**
Section Operations Specialist	**Charles Lord**
Section Operations Specialist	**William Marshall**

Project Coordinator	**Grayson Randall**
Technical Activities Coordinator	**Glenn Parker**
Nominations & Appointments	**Jim Conrad, Ph.D., P.E.**
Past-Director	**Mary Ellen Randall**
Past Director	**David Green**
Young Professional Coordinator	**Daniel Diaz**
Operational Audit	**William Harrison**
Committee Member 1	**William Marshall**
Committee Member 2	**Jacquelyn Cunningham**
Committee Member 3	**Carlos Cabera**
Committee Member 4	**Bill Ratcliff**
Professional Activities (USA-PACE)	**Theresa Brunasso**
Employment & Career Services	**Ed Kirchner**
Gov't Activities Coordinator	**Lee Stogner**
Student Prof. Awareness Coordinator	**Bailey Ulferts**
STEM Educational Liaison	**David Conner Ph.D., P.E.**
Strategic Operations & Support	**David Green**
SOSC Vice Chair	**William Ratcliff**
OAC Chair	**William Harrison**
Director (non-voting)	**Gregg Vaughn, Ph.D., P.E.**
Director-Elect (non-voting)	**Jill Gostin**
Secretary (non-voting)	**Chase Battaglio, P.E.**
Treasurer (non-voting)	**Ken Pigg**
Student Activities	**Victor Basantes**
SAC Vice Chair	**Rachel Wilson**
SAC Past Chair	**Pat Donohoe**
Student Representative	**Jill Johnson**
SAC Liaison to PAC	**Bailey Ulferts**

IEEE SOUTHEASTCON 2019 ORGANIZING COMMITEE

Steering Committee Members
General Chair Eric Grigorian, P.E., PMP
Georgia Tech Research Institute
Vice-Chair Raziq Yaqub, Ph.D.
Alabama Agricultural and Mechanical University
Finance Chair Willie Fitzpatrick, Ph.D.
TriVector Services, Inc.
Secretary Paul Sullivan
Northrop Grumman

Technical Program
Co-Chairs Ravi Gorur, Ph.D.
The University of Alabama in Huntsville
Co-Chairs Kaveh Heidary, Ph.D.
Alabama Agricultural and Mechanical University

Student Program
Co-Chairs John Piccirillo, Ph.D.
The University of Alabama in Huntsville
Co-Chairs Laurie Joiner, Ph.D.
The University of Alabama in Huntsville
Members: Leandro Barajas, Eric Grigorian, Thomas Heckwolf, Josh Langford, Glenn Parker, Elena Todorovska

Student Chapters: Jacob Pouncey (UAH), Samuel Banks (AAMU)

Volunteer Coordinator: Ron Jackson

Tutorial
Co-Chair Willie Fitzpatrick, Ph.D.
TriVector Services, Inc.
Co-Chair Eric Grigorian, P.E., PMP
Georgia Tech Research Institute

Contributors/Exhibits
Contributor Chair Eric Grigorian, P.E., PMP
Georgia Tech Research Institute
Co-Chair Paul Sullivan
Northrop Grumman
Co-Chair Will Goins, Mission Driven Research

Publicity/Publications
Website Josh Langford
Georgia Tech Research Institute
Social Media Thomas Heckwolf
Southern Research Corporation
SLACK Elena Todorovska

Logistics Chair Sonya Dillard
NASA / Marshall Space Flight Center

IEEE Huntsville Section Liaison Glenn Parker, Ph.D., P.E., PMP
Georgia Tech Research Institute

IEEE PRESIDENTIAL FORUM & OPENING RECEPTION

Friday, April 12 – VBC Ball Rooms 2 & 3 (4:00pm – 7:00pm)

José M. F. Moura, IEEE President - is the Philip L. and Marsha Dowd University Professor at Carnegie Mellon University, a member of the U.S. National Academy of Engineering and the U.S. National Academies Navy Study Board, corresponding member of Portugal Academy of Sciences, and Fellow of U.S. National Academy of Inventors, IEEE, and American Association for the Advancement of Science (AAAS). He holds a doctorate from MIT and an EE from Instituto Superior Técnico, Lisboa (IST), Portugal.

José holds 14 patents, including two used in over three billion disk drive chips in 60% of all computers sold in the last decade and the subject of a 2016 US $ 750 million-dollar settlement between Carnegie Mellon and a semiconductor manufacturer. He is President and cofounded Spiralgen, a company that specializes in super-fast software components for cutting-edge parallel platforms. This includes technology licensed by Intel (10 million lines of code in Intel's IPP) and licensed and used by several other companies.

He received the IEEE Signal Processing Society Award for outstanding technical contributions and leadership in signal processing and the IEEE Signal Processing Society Technical Achievement Award for fundamental contributions to statistical signal processing.

José will strive for a transparent, lean, open IEEE that runs a balanced operations budget and focuses its capital investments on building IEEE's future by creating new sustainable businesses that serve members and IEEE's technical communities. A second related priority is to significantly increase its membership by making IEEE relevant to professionals from all walks of life, young and seasoned, from any country in the world or industry. José has served as the Technical Activities Vice-President and has been a member of the IEEE Board of Directors where he served as Division IX Director. He was also a member of the Technical Activities Board, IEEE Awards Board, Educational Activities Board, Publication Services and Products Board (PSPB), and PSPB Strategic Planning Committee. He is also a founding member of the IEEE Portugal Section.

James A. Jeffries, IEEE Past President – retired from AT&T and Lucent Technologies following 33 years in engineering and executive positions including fiber optic cable development and manufacturing, quality assurance, and supply chain management. He managed the engineering teams that delivered the first commercial fiber optic cables for AT&T. He served as logistics vice president, responsible for worldwide supply chain and export planning. He has led teams in major technology transfers, transitions of information technology, and organizational change. He has also worked in the entrepreneurial sector as Chief Operating Officer for USBuild.com in San Francisco, CA, USA. Jim served two separate terms on the IEEE Board of Directors, as well as the 2015 IEEE-USA President. As President of IEEE-USA, Jim supported the expanded focus on public visibility, young professionals, and humanitarian outreach.

James received his BS in Electrical Engineering from the University of Nebraska and an MS in Engineering Science from Clarkson University. He attended the Stanford University Graduate School of Business as a Sloan Fellow and earned an MS in Management. Jim is a member of the IEEE Eta Kappa Nu honorary society and a licensed professional engineer (Emeritus).

Stephen Welby, IEEE Executive Director and COO - Prior to joining IEEE, in 2015 Stephen was nominated by President Obama and confirmed by the US Senate as the Assistant Secretary of Defense for Research and Engineering. In this role, he served as the chief technology officer for the U.S. Department of Defense, leading one of the largest and most complex research, development, and engineering organizations in the world. He oversaw a $12.5B annual investment portfolio, managed internal and collaborative research and engineering efforts, drove a culture that valued innovation, and supported the department's global technical engagement. Stephen has more than three decades of government and industrial experience in technology and product development, including senior leadership positions at the Defense Advanced Research Projects Agency (DARPA). His technical experience includes development of leading edge aeronautical and space systems, robotics, machine learning, high-performance software, and sensor systems. Stephen holds a Bachelor of Science degree in chemical engineering from The Cooper Union for the Advancement of Science and Art, a master's degree in business administration from the Texas A&M University, and master's degrees in computer science and applied mathematics from The Johns Hopkins University. He is a fellow of the IEEE.

VBC South Hall Floor Plan
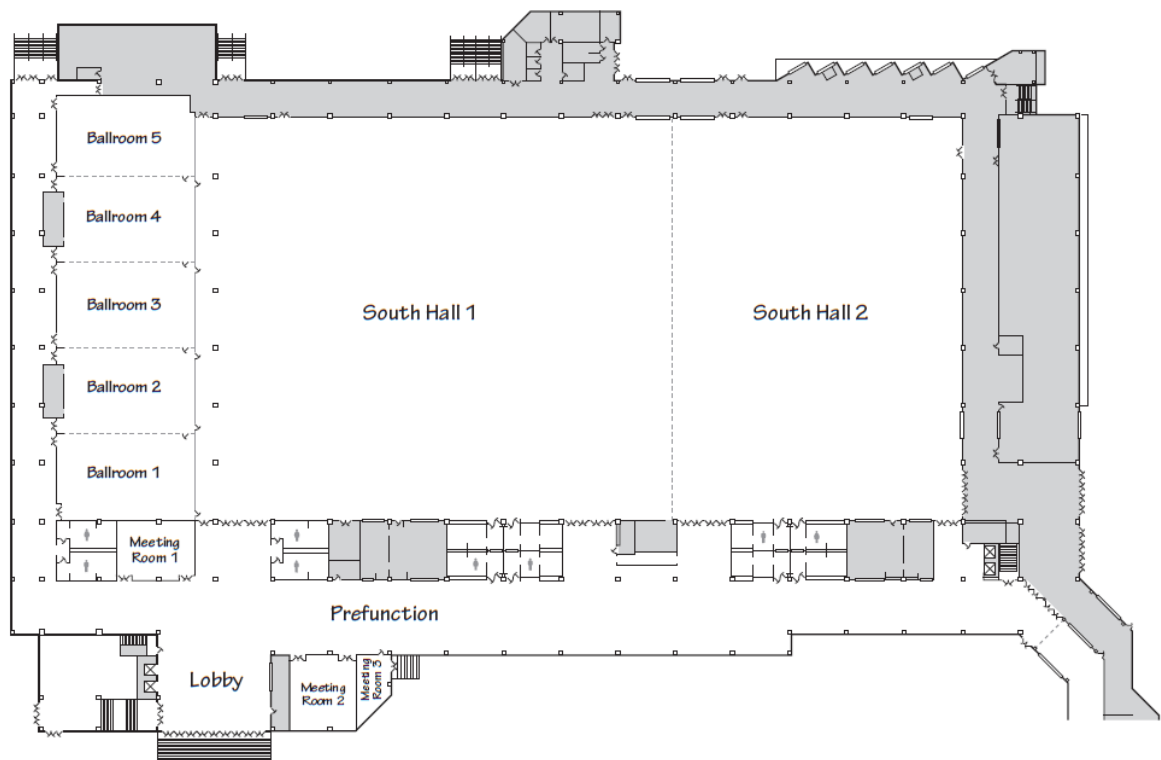
2020 IEEE Presidential – Elect Candidates

Susan K. (Kathy) Land is a Program Manager for the U.S. Missile Defense Agency in Huntsville, Al. She is responsible for advancing Command and Control, Battle Management, and Communications program objectives. She has more than 30 years of industry experience in the application of software engineering methodologies and the management of information systems, as well as leadership of software and systems product development teams. She wrote or co-wrote four books about software engineering principles. Land was elevated to IEEE Fellow in 2018 "for leadership in software product development." Land was the 2018 vice president, IEEE Technical Activities. She served two additional terms on the IEEE Board of Directors as Division VIII director/delegate in 2011 and 2012, and as Division V director/delegate in 2014 and 2015. She was president of the IEEE Computer Society in 2009. In 2013 and 2016, Land was a member of the IEEE-USA Board of Directors. Land has been an active member of the IEEE Standards Association for more than 20 years and served as the Computer Society vice president for Standards in 2004. She was the recipient of the 2007 IEEE Standards Medallion. In 2008 and 2010, she was a member of the IEEE Women in Engineering Committee.

She has been active in Region 3 supporting local Future City Competitions. Land was also a member of the region's Executive Committee, serving as its awards chair. Land is the recipient of several awards, including the 2011 IEEE Huntsville Section Outstanding Engineer of the Year Award, the IEEE Computer Society 2017 Richard E. Merwin Award, and the Huntsville Association of Technical Societies 2018 Moquin Award.

Dejan S. Milojicic is an established researcher with a full career in industry, and a long-term IEEE-CS volunteer. As an IEEE-CS Board of Governors member, he participated in developing the IEEE-CS 2011 Strategic Plan. He is the founding editor in chief of Computing Now and an IEEE Internet Computing editorial board member. He was appointed first Special Technical Communities chair, and served as past chair of the IEEE-CS Technical Committee on Operating Systems and on many program committees (ICDCS, CLOUD, and EDOC, among others). An IEEE-CS, ACM, and Usenix member for more than 20 years, Milojicic is an IEEE Fellow, IEEE-CS Golden Core Member, and ACM Distinguished Engineer. He has received an IEEE-CS Outstanding Contribution award. He has been on many conference program committees and journal editorial boards, spearheading the Computer Society Report 2022, which was a technical underpinning for 2 Computer Society strategic plans. He co-invented Special Technical Communities, innovating organization of IEEE-CS members and contributors. Milojicic co-chaired the IEEE Confluence report (2017), an industry trend paper on Cybersecurity and Artificial Intelligence. He was Chair of the IEEE Industry Engagement Ad Hoc Committee (2015-2017), which culminated in a Committee of IEEE, of which he is the Past Chair and serving a 2-year term (2019-2020).

At HP Labs since 1998, Milojicic is a senior researcher and managing director of the Open Cirrus Cloud Computing Testbed. Previously, he was with OSF Research Institute in Cambridge,

Massachusetts, and Institute Mihajlo Pupin in Belgrade, Serbia. He teaches cloud management at San Jose State University, California. Milojicic received a PhD from Kaiserslautern University, Germany. He has served on six thesis committees and guided 40 interns. He has published two books, more than 120 papers, and been awarded 11 patents.

Since his early career he was involved in infrastructure development: from OS support for transactional systems; to microkernel support for distributed systems; to global memory management in shared memory clusters; to appliance aggregation architecture; virtual desktop systems; Cloud Computing stack; software stack for accelerators for AI, etc. 22 patent applications.

IEEE-USA PRESIDENTIAL CANDIDATES

Katherine J. Duncan has worked in industry, academia and government. She received a bachelor of engineering degree in computer engineering with a minor in electrical engineering as well as a masters of engineering in electrical engineering with an Optics Certificate (minor) from Stevens Institute of Technology, Hoboken NJ. Her doctorate degree is in Physics from New Jersey Institute of Technology. She is currently on temporary assignment as a Visiting Research Fellow in the Department of Electrical Engineering and Computer Science at the U.S. Military Academy West Point, New York. She joined U.S. Army CERDEC in 2009, where she serves as a senior research scientist engaged in the development of novel nanomaterials for the next-generation communication systems. She has worked for Johnson Manufacturing Corporation and taught courses and/or performed research at University of Delaware, Stevens Institute of Technology, Rutgers University and New Jersey Institute of Technology.

Brendan Godfrey has extensive career in government and industry, including director of multiple Air Force laboratories, and regional manager of a small business; responsible for as many as 1500 people and budgets as large as $500M. Serving as IEEE-USA vice president for government relations, previously as chair of R&D and AI policy committees. Also, serving as elected member of NPSS AdCom, previously as chair of its PSAC technical committee. Fellow of IEEE and of APS.

Running for IEEE-USA President to provide greater emphasis on government relations while not ignoring career services and membership development. Will work closely with region directors. Have provided solid results the past four years in government relations, including increased S&T funding, removed barriers to conference attendance by federal S&E, highlighted H1-B visa abuse, made permanent the R&D tax credit. Will increase government relations visibility and mobilize membership for advocacy; address important issues such as internet privacy, H-1B reform, cyber security, balanced export control, and improved R&D tax credit; and recruit more volunteers, especially young professionals. As IEEE Board member, will collaborate with U.S. region directors to identify and champion common issues, explore alternative membership and financial models, and promote openness and transparency.

THURSDAY TUTORIAL SESSIONS

Thursday, April 11 (8:00am – 12:00pm)	
Red Cross Disaster Services Technology (DST) Training	VBC Ball Room 3
Hands-On Introduction to Field Programmable Gate Arrays	VBC Ball Room 1
Artificial Intelligence	VBC Ball Room 2
Morning Break, All Sessions (10:00am – 10:15am)	
Lunch Break, All Sessions (12:00pm – 1:00pm)	
Thursday, April 11 (1:00pm – 2:30pm)	
Red Cross Disaster Services Technology (DST) Training	VBC Ball Room 3
Hands-On Introduction to Field Programmable Gate Arrays	VBC Ball Room 1
Artificial Intelligence	VBC Ball Room 2
Big Data in Healthcare	VBC Ball Room 4
Afternoon Break, All Sessions (2:30pm – 2:45pm)	
Thursday, April 11 (2:45pm – 5:00pm)	
Red Cross (DST) Training, (Continues until 6:00pm)	VBC Ball Room 3
Hands-On Introduction to Field Programmable Gate Arrays	VBC Ball Room 1
Artificial Intelligence	VBC Ball Room 2
Big Data in Healthcare	VBC Ball Room 4

FRIDAY TUTORIAL SESSIONS

Friday, April 12 (8:00am – 12:00pm)	
Software System Safety	ES Big Spring C
Hands-on SCADA Cyber-Security	ES Big Spring D
Future of Cybersecurity	VBC Ball Room 1
Additive Manufacturing & Printable Electronics (9 - 11:15am)	VBC Meeting Rm 1
Partial Discharges	VBC Ball Rm 4
Morning Break, All Sessions (10:00am – 10:15am)	
Reverse Engineering Network (10:00am – 12noon)	VBC Meeting Rm 2
Lunch Break, All Sessions (12:00pm – 1:00pm)	
Friday, April 12 (1:00pm – 2:30pm)	
Blockchain	VBC Meeting Rm 1
Guided Inquiry Collaborative Learning in Cybersecurity	VBC Meeting Rm 2
Fast-tracking Safe Autonomous Vehicles through Simulation	VBC Ball Room 1
Partial Discharges	VBC Ball Rm 4
Afternoon Break, All Sessions (2:30pm – 2:45pm)	
Friday, April 12 (2:45pm – 5:00pm)	
Blockchain	VBC Meeting RM 1
Launching a New Product or Product Line? Legal Strategies	VBC Meeting RM 2
Introduction to GPS	VBC Ball Room 1
Partial Discharges	VBC Ball Rm 4

PARTNERING SESSIONS WITH CYBERREACH

Friday, April 12 (8:30am – 1:00pm)	
Women in Engineering (WIE) Training	
Power Skills – Senior Associate of Booz, Allen & Hamilton	VBC Ballroom 5
My Journey in STEM – S/W Engineer, Raytheon	VBC Ballroom 5
Balancing Being Right & Effective – University of Alabama	VBC Ballroom 5
Leadership – Deputy Dir. Engineering at NASA/MSFC	VBC Ballroom 5
WIE Networking Luncheon (Embassy Atrium) *RSVPs Only 12 – 1pm	
Friday, April 12 (1:00pm – 5:00pm)	
Cybersecurity Career Development Workshop	
Cyber Security Expert Panel	VBC Ballroom 5
How to Capitalize on Increasing Demand for Cyber Talent	VBC Ballroom 5
Saturday, April 13 (8:30am – 12:00pm)	
CYBER STEM Event for Students in K-12	
Hands-on Training in Cybersecurity Threats	VBC Ball Room 5
Networking Protocols, H/W & S/W, Earn Skill Badges	VBC Ball Room 5

SUNDAY TUTORIAL SESSIONS

Sunday, April 14 (9:00am – 5:00pm)	
MOVE Training	VBC Meeting RM 2
Lunch Break (11:30am – 12:00pm)	

Check us out here: https://move.ieeeusa.org/

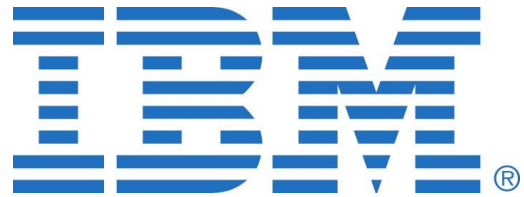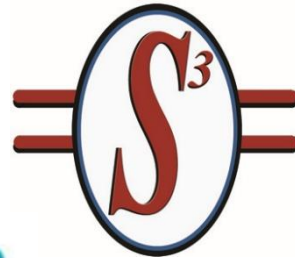**Find out more about how IEEE is on the MOVE!**

MOVE Truck tours will be open from 9am – 5pm on Friday and Saturday during SoutheastCon. Be sure to stop by and see us to find out how you can get involved in disaster relief and STEM outreach!

GOLD LEVEL CONTRIBUTORS
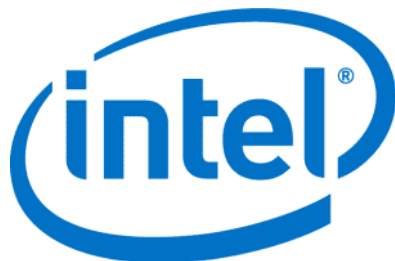
Georgia Tech Research Institute

S³

MERCER

Torch TECHNOLOGIES

IBM

SILVER LEVEL CONTRIBUTORS

ADTRAN®

Dynetics
The Power of Solutions®

COLSA CORPORATION

ABT
Alpha Beta Technologies

MISSION DRIVEN RESEARCH

SIMTECH
SIMULATION TECHNOLOGIES, INC.

SRC®
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ITCDEFENSE
INTEGRATING TECHNOLOGY & CULTURE
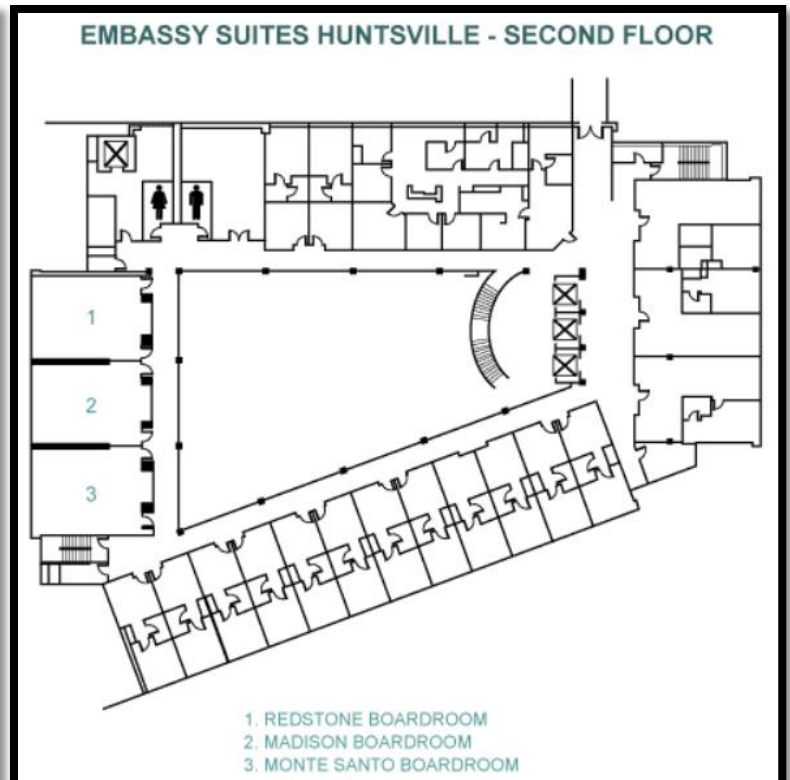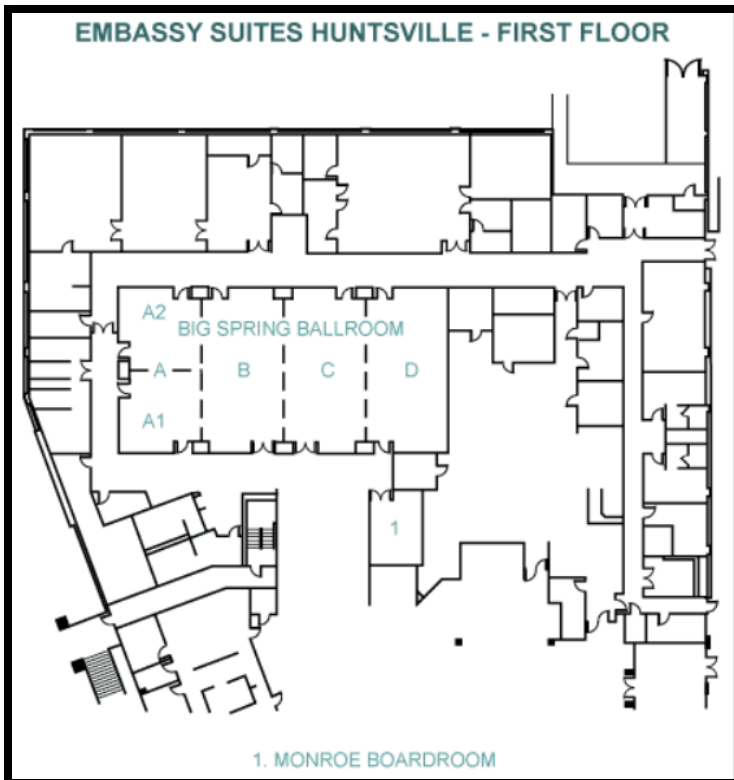
TARGETED CONTRIBUTIONS

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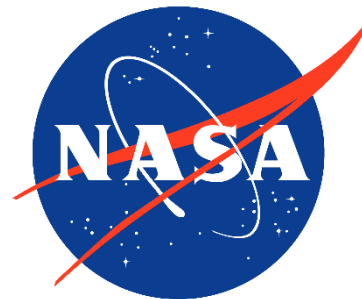
Friday Technical Paper Sessions

Friday, April 12 (8:00am – 12:00pm)	
Track 1 – Power / Smart Grid	Embassy – Big Spring A1
Track 2 – Communications / Signals	Embassy – Big Spring A2
Track 3 – Computers / Controls / Robotics	Embassy – Big Spring B
Track 4 – Advanced Computing & Technologies	Embassy – Monte Sano
Track 5 – Sensor Networks and IoT	Embassy – Madison
Track 6 – Miscellaneous / Interdisciplinary	Embassy – Redstone
Morning Break, All Sessions (10:00am – 10:15am)	
Lunch – VBC South Hall 2 (12:00pm – 1:00pm)	
Friday, April 12 (1:00pm – 5:00pm)	
Track 1 – Power / Smart Grid	Embassy – Big Spring A1
Track 2 – Communications / Signals	Embassy – Big Spring A2
Track 3 – Computers / Controls / Robotics	Embassy – Big Spring B
Track 4 – Advanced Computing & Technologies	Embassy – Monte Sano
Track 5 – Sensor Networks and IoT	Embassy – Madison
Track 6 – Miscellaneous / Interdisciplinary	Embassy – Redstone
Afternoon Break, All Sessions (2:30pm – 2:45pm)	
Friday, April 12 (4:00pm – 7:00pm)	
IEEE Presidential Forum	VBC – Ball Rooms 2, 3
Opening Reception (6:00pm – 7:30pm) VBC South Hall 2	
Area 1 – 9 Council Meetings (7:00pm – 9:00pm) Embassy Suites	

EMBASSY SUITES HUNTSVILLE - FIRST FLOOR

A2 BIG SPRING BALLROOM
A — B — C — D
A1
1

1. MONROE BOARDROOM

EMBASSY SUITES HUNTSVILLE - SECOND FLOOR

1
2
3

1. REDSTONE BOARDROOM
2. MADISON BOARDROOM
3. MONTE SANTO BOARDROOM

SATURDAY PAPER SESSIONS

Breakfast (6:30am – 8:00am) Embassy Suites	
Saturday, April 13 (8:00am – 12:00pm) & (1:00pm – 5:00pm)	
Track 1 – Power / Smart Grid	Embassy – Big Spring B
Track 2 – Communications / Signals	Embassy – Big Spring C
Track 3 – Computers / Controls / Robotics	Embassy – Big Spring D
Track 4 – Advanced Computing & Technologies	Embassy – Monte Sano
Track 5 – Sensor Networks and IoT	Embassy – Madison
Track 6 – Miscellaneous / Interdisciplinary	Embassy – Redstone
Morning Break, All Sessions (10:00am – 10:15am)	
Lunch Break, All Sessions (12:00pm –1:00pm) VBC South Hall 2	

FRIDAY & SATURDAY POSTER SESSIONS

Friday, April 12 (1:00pm – 5:00pm)	
Poster Session 1	VBC Pre-function Area
Saturday, April 13 (8:00am – 12:00pm)	
Poster Session 2	VBC Pre-function Area
Saturday, April 13 (6:00pm – 10:00pm)	
Awards Banquet, All Registered Attendees VBC North Hall	

FRIDAY REGION 3 SESSIONS

MOVE Truck Tours (Open Doors from 9am – 5pm)	
Friday, April 12 (8:00am – 12:00pm)	
Track 1 – Section Foundations, Part 1	VBC Ball Rm 2
Track 2 – Section Growth, Part 1	VBC Ball Rm 3
Morning Break, All Sessions (10:00am – 10:15am)	
Lunch Break, All Sessions (12:00pm – 1:00pm)	
Friday, April 12 (1:00pm – 3:30pm)	
Track 1 – Section Foundations, Part 2	VBC Ball Rm 2
Track 2 – Section Growth, Part 2	VBC Ball Rm 3
Move Tour (3:30pm – 4:00pm)	Vehicle Outside
Afternoon Break, All Sessions (2:25pm – 2:35pm)	
Friday, April 12 (4:00pm – 7:00pm)	
President's Forum	Ballroom 2&3
Opening Reception (6:00pm – 7:30pm) VBC South Hall 2	
Friday, April 12 (7:30pm – 8:30pm)	
Area 1 Meeting / Virginia	Big Springs D
Area 2 Meeting / North Carolina	Big Springs A1
Area 3 Meeting / Georgia	Big Springs A2
Area 4 Meeting / Florida	Big Springs B

Area 5 Meeting / Tennessee	Big Springs C
Area 6 Meeting / Alabama & Mississippi	Redstone
Area 7 Meeting / South Carolina	Monte Sano
Area 8 & 9 Meeting / Indiana, Kentucky, and Jamaica	Madison
Area Chairs Meet with Director (8:30pm – 9:00pm)	Big Spring B

SATURDAY REGION 3 SESSIONS

Breakfast (6:30am – 8:00pm) Embassy Suites	
MOVE Truck Tours (Open Doors from 9am – 5pm)	
Saturday, April 13 (8:00am – 12:00pm)	
IEEE HKN Induction Ceremony	VBC Ball Rm 2
IEEE & IEEE-USA President Elect Candidates	VBC Ball Rm 2
Region 3 Committee Reports	VBC Ball Rm 2
Morning Break, All Sessions (10:00am -10:15am)	
Lunch Break, All Sessions (12:00pm – 1:00pm) VBC South Hall 2	
Saturday, April 13 (1:00pm – 5:10pm)	
Region Support of Your Section	VBC Ball Rm 2
Region 3 Committee Reports (1:00pm – 2:35pm)	VBC Ball Rm 2
Deeper Dive Breakout Sessions (2:50pm – 5:10)	Ball Rms. 1 - 5
Afternoon Break, All Sessions (2:35pm - 2:50pm)	
Awards Banquet (6:00pm – 11:00pm) VBC North Hall	
WIE / YP Reception & Networking Event (10:00pm – 11:00pm)	
Women in Engineering & Young Professionals	South Hall 2

SUNDAY REGION 3 SESSIONS

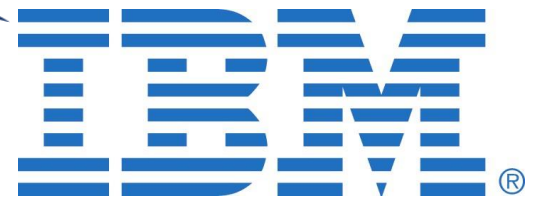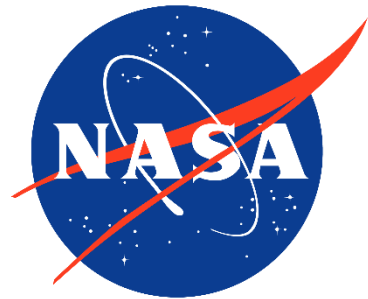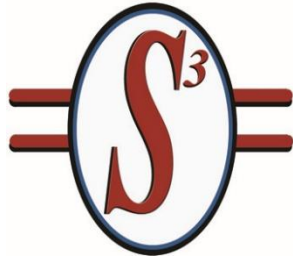|	
Breakfast (6:30am – 8:00am) Embassy Suites	
Sunday, April 14 (8:00am – 12:00pm)	
Region 3 Committee Meeting	VBC Ball Rm 2
Morning Break, (9:35am – 9:50am)	
Region 3 Committee Meeting	VBC Ball Rm 2
End of Region Meeting & Events (12:00pm)	
Sunday, April 14	
Move Truck Training (9:00am – 5:00pm)	VBC Mtg. Rm 2
Conf. Debriefing – 2019 & 2020 Planning Comm. (1 – 3pm)	VBC Mtg. Rm 1

STUDENT ACTIVITIES (ALL SESSIONS)

Student Branch (SB) Counselors Mtg. & SB Leadership Training	
Friday, April 12 (1:00pm – 3:00pm)	ES Big Spring C/D
Ethics Competition – Preliminary Round	
Friday, April 12 (3:00pm – 5:00pm)	ES Big Spring C/D
Ethics Competition Judge Training and Preliminary Round Judging	
Friday, April 12 (5:00pm – 7:00pm)	Big Spring B
Ethics Competition Sequestration	
Saturday, April 13 (8:00am – 12:00pm)	VBC Meeting RM 2
Ethics Competition	
Saturday, April 13 (8:00am – 12:00pm)	VBC Ball Room 1
Design Presentation Competition	
Friday, April 12 (3:00pm – 4:00pm) Part 1	VBC Reception
Friday, April 12 (7:00pm – 9:00pm) Part 2	VBC Reception
Hardware Competition Practice	
Friday, April 12 (8:00am – 12:00pm)	South Hall 1
Friday, April 12 (4:00pm – 5:00pm) – FIELDS CLOSED	South Hall 1
Friday, April 12 (4:00pm – 5:00pm) – Student Group Photo	South Hall 1
Saturday, April (1:00am – 4:00pm)	South Hall 1
Hardware Competition Team Captains Meeting	
Friday, April 12 (10:00pm –11:00pm)	South Hall 1
Hardware Competition	
Saturday, April 13 (8:00am – 4:00pm)	South Hall 1
Drone Competition Practice	
Friday, April 12 (1:00pm – 6:00pm)	South Hall 1
Drone Competition	
Saturday, April 13 (8:00am – 4:00pm)	South Hall 1
Career Networking Competition Kick-Off Meeting	
Saturday, April 13 (8:00am – 9:00pm)	VBC Meeting RM 2
Software Competition Scrimmage	
Friday, April 12 (2:00pm – 5:00pm)	South Hall 2
Software Competition	
Saturday, April 13 (8:00am – 4:00pm)	South Hall 2
Student Paper Competition	
Saturday, April 13 (8:00am – 12:00pm)	VBC Reception
Student T-Shirt Competition	
Saturday, April 13 (8:00am – 12:00pm)	VBC Reception
Student Website Competition	
Saturday, April 13 (8:00am – 12:00pm)	VBC Reception
Saturday, April 13 (6:00pm – 10:00pm) Awards Banquet	VBC North Hall
Branch Leaders & 2020 Hardware	
Sunday, April 14 (8:00am – 12:00pm)	VBC Ball Rm 1

Awards Banquet Program

I. **Welcome (Gregg Vaughn)**

II. **IEEE-USA Awards (Tom Coughlin & Diana Librizzi)**
   a. **Robert S. Walleigh Award – John Paserba**
   b. **Jim Watson Student Professional Awareness Achievement Award – James Peterman**
   c. **Distinguished Literary Contributions – Guru Madhavan**

III. **Region 3 Professional Awards (Gregg Vaughn & Kristin Bing)**
   a. **Joseph M. Biedenbach Outstanding Engineering Educator Award – Rami J. Haddad**
   b. **Outstanding Engineer Award – Maryam Saeedifard**
   c. **Outstanding Service Award – Tim Forrest**
   d. **Outstanding Professional Leadership Award – Daniel W. McDonald**

IV. **Region 3 Director's Choice Awards (Gregg Vaughn & Kristin Bing)**
   a. **E. Chase Battaglio**
   b. **J. Ken Pigg**

V. **Region 3 Senior Membership Development Awards (Gregg Vaughn & Sonya Dillard)**
   a. **Strongest Performance – Jamaica Section**
   b. **Most Improved – Virginia Mountain Section**

VI. **Region 3 MOVE Recognition (Mary Ellen Randall)**

VII. **Other IEEE Awards (Kristin Bing)**
   a. **Dr. R.E. Hanneman Community Service Award – Steve Kemp**
   b. **IEEE Haraden Pratt Award – David G. Green**
   c. **IEEE Undergraduate Teaching Award – Lisa G. Huettel**
   d. **IEEE EAB Meritorious Achievement Award in Accreditation Activities – Franc E. Noel**
   e. **Fellows in Region 3, Class of 2019**
      Steven Butler, Jiyuan Fan, Maysam Ghovanloo, Ahmed A-g Helmy, C. Steven Lingafelt, Tim Menzies, Mary Ellen Randall, Shuo Wang

VIII. **Student Awards (Victor Basantes)**

IX. **SoutheastCon Recognition (Gregg Vaughn & Eric Grigorian)**
   a. **R3 James Beall SoutheastCon Recognition – Eric Grigorian**
   b. **2019 SoutheastCon Volunteers (See Page 9 for Listing)**

X. **Announcing SoutheastCon 2020 (Charles Lord)**

* Awards Banquet Concludes *

CONFERENCE EXHIBITORS

Mark your calendar!

WED
11   March 2020

SoutheastCon 2020

Set your GPS!

Raleigh   New Bern Ave

Raleigh
Convention Center

PATTERSON

Plan to attend

20 20

IEEE SoutheastCon 2020

In

Beautiful Downtown Raleigh, NC!

Raleigh Marriott City Center
And
Raleigh Convention Center

March 11-15, 2020

"Engineering Vision 2020 – The Future is Bright!"
(so bright, we... you know the rest...)

Sponsored by Region 3 and the Eastern NC Section

https://attend.ieee.org/southeastcon-2020/

Papers, registration open July 1, 2019!!!