

# ORS

## Fall Events Timeline



**8-21-18 New Scholar Orientation**  
Returning scholars Jacob Bruhn, Bria Matthews, Alison Kennedy and Evan Shi talk to incoming scholars about balancing their academic load along with research.



**8-23-18 ORS Program Kick-Off**  
Ph.D. Mentor, Angel Daruna, shares a story of resiliency and of using challenges as positive learning opportunities.



**8-23-18 Research Methods Workshop**  
Dr. Tom Gaylord and Librarian, Bette Finn, discuss the importance of information discovery through thorough and continual searching, compiling, and understanding of relevant literature associated with research.

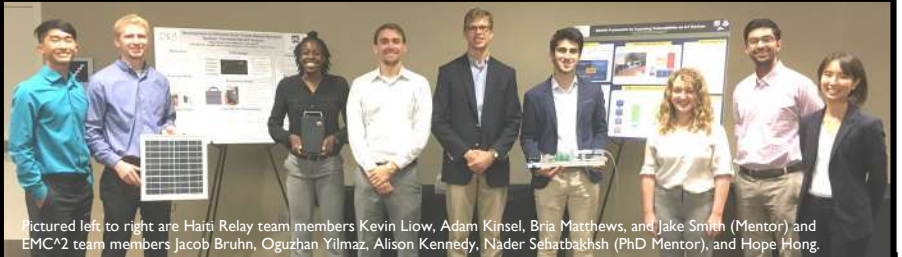


**8-23-18 Texas Instruments Presentation**  
Scholar Hope Hong with Kristen Fernandez, GT alumnus & three year ORS Scholar - now with TI, returns to campus as part of the TI group talking to the ORS students about job opportunities and company culture.



## ORS Haiti Relay and EMC<sup>2</sup> Teams Present to ECE Advisory Board

On September 28 the ECE Advisory Board met and as part of their agenda they heard from two teams of ORS scholars. Each team presented their compelling work and described the impact of these projects on our local and global community. The students also shared their perspectives on how involvement in ORS has been instrumental in their professional development, and how the board can become involved to support and sustain valuable initiatives like ORS in the School of ECE.



Pictured left to right are Haiti Relay team members Kevin Liow, Adam Kinsel, Bria Matthews, and Jake Smith (Mentor) and EMC<sup>2</sup> team members Jacob Bruhn, Oguzhan Yilmaz, Alison Kennedy, Nader Sehatbakhsh (PhD Mentor), and Hope Hong.

## Upcoming Events:

JANUARY	FEBRUARY	MARCH	APRIL
<b>22</b> Anaren Co. Presentation	<b>11</b> NEETRAC & Dielectrics Lab Tour	<b>7</b> Research Poster Design Workshop	<b>8-11</b> Research Competition & Peer Review Judging
<b>24</b> Sandia Nat. Labs Presentation	<b>14</b> Graduate School Admissions Talk	<b>14</b> Technical Research Poster Workshop	<b>15</b> ORS Research Awards Banquet
<b>31</b> Discussion about summer research, internships & IDC Tour	<b>19</b> TECHCON Conf Info Session		
	<b>21</b> Competition Format Workshop		

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[ors.ece.gatech.edu](http://ors.ece.gatech.edu)

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### 9-12-18 Resume Reviews with Texas Instruments

Sai Kilaru, Joao Nascimento Francolin, and Nathan Jenkins discuss job search strategies with Alayna Guerrero, TI Human Resources Director.



### 9-20-18 Research Project Summary Workshop with Jill Auerbach



### 10-2-18 Mentor Meeting

Stacey Doremus from the Office of Leadership Education and Development conducted an engaging leadership exercise with ORS Mentors.



### 10-4-18 Research Presentation Workshop with Anna Holcomb.



### 10-29-18 Sandia National Labs Presentation

## SEMICONDUCTOR RESEARCH CORPORATION ANNOUNCES NEW PROGRAM: ORS SELECTED

The Semiconductor Research Corporation announced a new initiative in 2018 called the Joint Undergraduate Microelectronics Program (JUMP). Attracting and retaining US undergraduate students in science and engineering disciplines relevant to technology-based industries, smart computing, and communications is the program's focus. Increasing the progress of these students to graduate school with an emphasis on diversity is as well. Through a nationwide competitive process, the Georgia Tech School of Electrical and Computer Engineering ORS Program was selected along with the University of California, Berkeley, the University of Texas, Austin, and the University of Virginia to receive committed program support for a five-year period.

Twelve ORS undergraduate scholars: **Brennon Farmer, Ashton Hattori, Laura Heller, Sterling James, Jesse Jiang, Alexander Joo, Connor McMahon, Denden Mussie, Ruth Pavor, Thomas Rodriguez, Will Scott, and Daniel Yang**, will be supported through this program. In addition to the rigorous line-up of ORS research, skill-building workshops, and community activities, students will have the opportunity to be exposed to work in the microelectronics realm. Each will also be encouraged to submit a proposal to present their research at the TECHCON Conference, which takes place in Austin, Texas in September 2019.

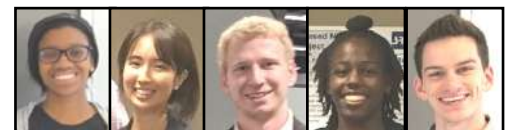
This latest addition to the longstanding ORS/Semiconductor Research Corporation partnership is intended to position young professionals to make wise career direction decisions and to be an instrument to effectively aid in the workforce development for the microelectronics industry. With exposure to this multifaceted and exciting field, opportunities to engage with companies, and experiential learning and skill-building through the ORS methodology, JUMP lines up the stars—so to speak. Young professionals are well prepared to address the technological challenges of the next century with creative solutions.

## SCHOLAR ACHIEVEMENTS

**ADAM KINSEL, BRIA MATTHEWS, and JAKE SMITH, North American Power Symposium, September 2018**, Fargo, ND, Paper and Presentation: "HAITI RELAY: A Cost-Effective and Portable Solar Home System for Rural Haitian Regions", team received **President's Undergraduate Research Award** travel funds to attend.



**JIANNI ADKISSON, HOPE HONG, ADAM KINSEL, BRIA MATTHEWS, and WILL SCOTT, Research Poster Presentation, TECHCON Conference, Austin, Texas, September 2018**



**ERIK CENTENO and OGUZHAN YILMAZ, Fall 2018 PURA Salary Award Recipients**



*A community of dedicated students....*



## MENTOR ACHIEVEMENTS

### YIJUN BAO

**Frontiers in Optics / Laser Science Conference**, September 16-19, Washington, DC, Poster Presentation:

“Characterization of Fiber Bragg Gratings in Multi-core Fibers Using Quantitative Phase Imaging”



### FU-JEN CHU

**40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society 2018**

“The Helping Hand: An Assistive Manipulation Framework Using Augmented Reality and Tongue-Drive Interfaces”



**IEEE/International Conference on Intelligent Robots and Systems, 2018**, “Hands-Free Assistive Manipulator Using Augmented Reality and Tongue Drive System”

**IEEE Robotics and Automation Letters, 2018** “Real-World Multiobject, Multigrasp Detection”

### ALINE EID

**NSF Award** to attend conference & **Best Paper Award, IEEE 13th Nanotechnology Materials and Devices Conference**, October 2018, Portland, OR, Paper and Pres., “Nanotechnology-Enabled Additively-Manufactured RF and Millimeter-wave Electronics”



### IEEE Nanotechnology Magazine

“Nanotechnology-Empowered Flexible Printed Wireless Electronics”, 2018

### IEEE Conference on Antenna Measurements & Applications

“UAV-Enabled RF Sensor Wake-up”, pp. 1-3, 2018

**Second Place Award, International Microwave Symposium 2018 Student Design Competition**

### ALINE EID (continued)

**International Journal of High-Speed Electronics and Systems**

“Additively Manufactured Inkjet-/3D-/4D-Printed Wireless Sensors Modules”, Vol. 27, pp. 1840012, 2018

**IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting, July 2018**, “A Flexible Compact Rectenna for 2.4GHz ISM Energy Harvesting Applications”

**IEEE/MTT-S International Microwave Symposium**, “n-RiM: A Paradigm Shift in the Realization of Fully Inkjet-printed Broadband Tunable FSS Using Origami Structures”, pp. 51-54, 2018

### AISHWARYA NATARAJAN

**IEEE Transactions on Biomedical Circuits and Systems 2018**, “Hodgkin Huxley Neuron and Dynamics on the FPAA”, 12, no. 4: 918-926



### CHENG QI

**WiSEE Conference**, December 2018, Huntsville, AL, “A 5.8 GHz energy Harvesting Tag for Sensing Applications in Space”



### SRIDHAR SIVAPURAPU

**TECHCON Conference** September 2018, Austin, TX, Paper and Presentation: “Model Development for Inductors on Flexible Substrates for Integrated Power Delivery Applications”



**JAKE SMITH**  
**2018 William Brown Fellowship Recipient**

(Note: et al. applies to selected work)



## Fall Events Timeline



**10-13-18** ORS members Adam Kinsel, Jake Smith and Angel Daruna with ECE Associate Chair Dr. Mary Ann Weitnauer, ORS Faculty Advisor Dr. Tom Gaylord, and ORS Asst. Director Julie Ridings take the opportunity to engage with alumni and faculty during a Tech Football game.



**11-7-18** Course Paths for Semiconductor Careers Workshop with Paul Emerson



**11-15-18** Grad School Panel ORS Mentors Alex Chang, Angel Daruna, Aline Eid, Aishwarya Narayanan, and Cheng Qi tell scholars about their path to graduate school and answer probing scholar questions.



**11-26-18** Raytheon Company Interactive Presentation Jon Peoples, with Raytheon, conducts an interactive Missiles and Movies Presentation that reveals truths about missiles that are portrayed in popular movies.



*...who work together to broaden the academic experience*

This program would not be possible without our forward-thinking Sponsors:



## 2018-2019 Research Teams

**Dr. Adibi Ali**

Ali Eshaghian Dorche  
(Ph.D. Mentor)  
Laura Heller  
Ethan Jones  
Edward Zhou

**Dr. Sonia Chernova**

Angel Daruna  
(Ph.D. Mentor)  
Malik Burton  
Brennon Farmer  
Sterling James

**Dr. Mark Davenport**

Nauman Ahad  
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Aditya Retnanto  
Yifan Shen

**Dr. Deepak Divan**

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Ji Ye Chun  
Ibrahim Islam

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Brian Sang

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Justin Kelley  
Sai Kilaru

**Dr. Omer Inan**

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Shayan Siahpoushan  
Connor McMahon

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Kimberly Lie  
Ruth Pavoor

**Dr. Madhavan Swaminathan**

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Alexander Joo  
Thomas Rodriguez

**Frank Lambert**

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Kevin Liow  
Bria Matthews

**Dr. Manos Tentzeris**

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Denden Mussie  
Daniel Yang

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Alex Fache, Nelson Raphael  
Joao Nascimento Francolin  
Liz Prucka

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Nick Flint, Anina Mu  
Satwik Nandala  
Josh Shafran

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Oguzhan Yilmaz

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Vijay Prasad  
Maria Saito

**Dr. Ying Zhang**

Zongyang Xia  
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Aksaya Manickandan  
Alex Xu

**Dr. Ying Zhang**

Yen-Pang Lai  
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Thoai Pham  
Jonghoun Park

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