Hi,

Happy Thanksgiving! We are launching a new format for this newsletter in the coming weeks. Please let us know what you think about the current newsletter and or suggestions you have by filling out a survey (it take less than 5 mins to complete)! Until then, here's what's included in this week's newsletter:

1. OUR Office Bulletins
   1. Office Hours this week
   2. Apply to be an OUR Ambassador TODAY!
   3. Cord for Seniors Graduating this Fall
2. Research Opportunities
   1. Summer Education Research Program (SERP) - School of Education
   2. Wireless Communications and UAVs Research (Software Development Skills Highly Desired) with Wireless@Virginia Tech at Bradley Department of Electrical and Computer Engineering
   3. Full-time & Paid Summer Research Programs at Virginia Tech and Beyond
3. Scholarship & Funding Opportunities
   1. 2022 Department of Defense Cyber Scholarship Program with the Virginia Tech Hume Center for National Security and Technology
   2. New Research Funding Opportunity- ICTAS Fellowship
   3. Scholarship Opportunities through the Office of Undergraduate Research
   4. Goldwater Scholarship
4. Professional Development Opportunities
   1. Combating Antimicrobial Resistance Traineeship
5. Presentation and Conference Opportunities
   1. Apply today to present at National Conference on Undergraduate Research (NCUR)
   2. Present Your Research at the 2022 ACC Meeting of the Minds
   3. 2022 ConnectUR Annual Conference
6. National Science Foundation Opportunities

1. OUR Office Bulletins
1.1 Office Hours this week
OUR Ambassadors are here to help you navigate undergraduate research. Drop by their weekly office hours either face-to-face or virtually and ask questions or get advice and support. Our office will be closed this week for Thanksgiving. The next office hours will be on Monday, November 29 from 4 to 5 pm, in Burruss Hall, Suite 104 or via zoom at: virginiatech.zoom.us/my/research (Personal ID number: 540 231 3580) Learn about the ambassadors and find all of their Fall drop-in office hours on their webpage.
1.2 **Apply to be an OUR Ambassador TODAY!**
Are you passionate about undergraduate research and want to share that with other students while helping them to navigate their own research journey? Apply to be an OUR Ambassador today! The Office of Undergraduate Research (OUR) is looking for experienced research students who will be the "face" of the Office. You also gain:
- Free swags such as T-shirts, gadgets, stickers, and etc.
- Access to workshops on professional development.
- Advanced access to research excellence graduation cord from the OUR.
- Exclusive networking opportunities during professional conferences/symposiums.

Have Questions about the Ambassador program or application process? Contact Nicole Bottass (nicoleje@vt.edu). For more information click [HERE](#). Access the online application form [HERE](#).

1.3 **Cord for Seniors Graduating this Fall**
For seniors who are graduating this December, this might be your last chance to pick up a specially designed graduation cord from our office if you have done research project(s) and or participated in research-related activities as an undergrad! Regardless of what major you are in, claim this honorable badge of excellence by documenting your undergraduate research experience(s) through the Undergraduate Research Excellence Program (UREP) Canvas site. Learn more and sign up to join the program online. If you have any questions about the program and or items that can be counted as potential substitutions for points, please contact Keri Swaby, the director of the Office of Undergraduate Research, at kswaby@vt.edu. The deadline to complete the program for a graduation cord is Dec. 6 at 9 am.

2. **Research Opportunities**
2.1 **Summer Education Research Program (SERP) - School of Education**
The Summer Education Research Program (SERP) is sponsored by the School of Education (SoE) and the University of Wisconsin-Madison's Graduate School. This program provides traditionally underrepresented undergraduate students interested in pursuing graduate studies related to the School of Education the opportunity to engage in independent research. Research is guided by a faculty/research associate mentor in or affiliated with the School of Education and offers a competitive $4500 stipend for participants as well as other amenities, including travel expenses to Madison and housing.

Click [here](#) to read more. The deadline is **February 15th, 2022**.
2.2 Wireless Communications and UAVs Research (Software Development Skills Highly Desired) with Wireless@Virginia Tech at Bradley Department of Electrical and Computer Engineering

Wireless@Virginia Tech is seeking students for research assistantships, for-credit independent studies, and volunteer research on the topics below. We will consider graduate and undergraduate students in ECE, CS, and others who have relevant experience and who have demonstrated high motivation and effectiveness. Individuals from groups historically underrepresented in science, technology, engineering, and mathematics are encouraged to apply.

Please apply if you have software development skills, a strong interest in wireless communication technologies and applications, and an interest in research. It will also be extremely helpful to have a background in one or more of the following areas: radio frequency hardware, information technology/system administration, virtualization, machine learning, unmanned aerial vehicles, and development of educational materials such as lecture slides, videos, simulations, and animation.

Wireless Communications Research Infrastructure
This project provides a unique opportunity to gain systems engineering and project management-related experience, and to network with potential employers at other research institutions. Co-lead design, development, and testing of a virtualized mobile/portable wireless testbed that includes UAV-based radios. The testbed will enable research on 5G+ wireless communications technologies and applications. You can also be one of the testbed’s first users, as you run experiments for your own research!

5G-enabled Smart Warehouse
Perform fundamental research related to 5G-enabled wireless position location systems to be used for inventory tracking in large warehouses. Test and demonstrate system performance in testbed experiments that use 4G/5G backhaul to enable a wireless position location system for items in a warehouse!

Dynamic Spectrum Access (DSA)
Help enable future bandwidth-hungry wireless applications such as intelligent transportation systems, self-driving vehicles, unmanned aerial systems (UAS), virtual/augmented reality, and others! Investigate radio-frequency spectrum sharing using coordinated or decentralized approaches that set the priority of wireless users to access radio frequencies, based on operational context, e.g., weather (important for radio-wave propagation at millimeter-wave frequencies), special events that affect vehicular and wireless traffic, and emergency or non-emergency status. Devise an efficient system to scan a wide range of radio frequencies quickly and collect information that can be used to determine which frequencies are occupied, and by what types of signals! Timely information of this type is a key to effective and efficient dynamic spectrum access. Test your approach using wireless testbed hardware such as software-defined radios to generate signals that use multiple frequencies within the radio spectrum.
**Interactive Online Education on DSA Concepts**

Prepare yourself to perform original research while helping others to learn important concepts related to dynamic spectrum access (DSA)! DSA is a key to enabling fast wireless communication to serve new, beneficial, and profitable applications, and can be made more efficient by understanding characteristics of spectrum-sharing radios, including nonlinear effects in the radios’ receivers. Translate prior research findings into interactive online learning modules, while familiarizing yourself with the topic and identifying your own potential contributions to the understanding and effective implementation of DSA. A great way to increase competitiveness for academic positions and build multi-media communication skills!

If Interested, please contact Carl Dietrich, Research Assoc. Professor, Bradley Dept. of Electrical and Computer Engineering, cdietric@vt.edu.

**2.3 Full-time & Paid Summer Research Programs at Virginia Tech and Beyond**

Did you know that there are full-time, paid research opportunities available during the summer? If you are considering summer research, now is a good time to explore your options so that you can meet the early spring deadlines. You can always do a web search for "summer undergraduate research" in your field, but we have created a starting point for you on our Research Opportunities webpage, where you can learn about and apply to several summer programs at Virginia Tech and beyond.

Here is a sample of the VT programs available (follow links to learn more):
- Fralin Summer Undergraduate Research Fellowship Program (SURF)
- Translational Obesity Undergraduate Research (TOUR) Scholars Program
- Beckman Scholars Program
- Multicultural Academic Opportunities Program (MAOP)
- Summer Research Programs at Fralin Biomedical Research Institute (Roanoke)
- VT REEL: Securing Our Food
- Beyond VT, there are a LOT of research programs and internships available this summer.

Our webpage has links to searchable databases and opportunities including:
- National Science Foundation-funded Research Experiences for Undergraduates (REU) sites
- PathwaysToScience.org (STEM Funding & Research Opportunities)

Check our webpage often, as we will add information about new programs as we receive them.

**3. Scholarship Opportunities & Funding Opportunities**

3.1 2022 Department of Defense Cyber Scholarship Program with the Virginia Tech Hume Center for National Security and Technology
The Hume Center for National Security and Technology is now accepting applications for the DoD Cyber Scholarship Program (DoD CySP) for the 2022-2023 Academic Year. This scholarship will cover all tuition, fees, books, and a laptop; it will also provide a $25,000 per year stipend for undergraduates and a $30,000 per year stipend for graduate students. This program is aimed at rising juniors, rising seniors, and all graduate students who are interested in cyber security, and who are in a degree program of interest to the DoD, including Computer Engineering, Computer Science, Electrical Engineering, CMDA, BIT Cyber, and other engineering and science programs with a focus on cybersecurity.

In the 2021-2022 Academic year the Hume Center was able to increase the number of students enrolled in the program to 10, and we are hoping to add a minimum of 5 additional students this year. Due to Virginia Tech’s outstanding reputation, VT students tend to be very competitive in the selection process for the program. Current students are slated to work at organizations across the DoD and Intelligence Community, including Naval Sea Systems Command, Space and Naval Warfare Systems, U.S. Air Force Cyber Hunt, and the National Security Agency.

Subscribe [here](#) to be sent the application and instructions. Applications will be due on February 1, 2022. This includes all letters of recommendation and required transcripts.

### 3.2 New Research Funding Opportunity - ICTAS Fellowship

The brand new ICTAS Undergraduate Research Fellowship Program supports early-career undergraduates involved in mentored research at Virginia Tech. The goal of the program is to enable students to extend their current research projects and experience a step further with independent funding, so that they can devote additional time to their project, under the supervision of their chosen mentor. Research can be in any field of study and students from all majors are eligible for the program.

Each spring, one student will be selected to receive the $1,250 award, payable as a fellowship or used to cover other approved expenditures (such as project supplies, research-related travel, use of specialized research services, etc) over the course of one semester. Students may elect to receive this award in the Spring or Summer.

Learn more and apply [HERE](#). The application deadline is **January 5, 2022**.

### 3.3 Scholarship Opportunities through the Office of Undergraduate Research

Applications are now being accepted for two scholarship opportunities through the Office of Undergraduate Research:
The Dennis Dean Undergraduate Research Scholarship recognizes students who engage in research. One awardee each semester will be selected to receive a scholarship in the amount of $1,000. Eligibility: VT undergraduate student in any major who is participating in mentored undergraduate research at Virginia Tech.

The Jacklyn W. and William R. Jones, Jr. Experiential Learning Scholarship recognizes students who engage in experiential learning opportunities. One awardee each semester will be selected to receive a scholarship in the amount of $1,000. Eligibility: VT undergraduate student in any major who is participating in guided experiential learning opportunities at Virginia Tech including, but not limited to: study abroad, unpaid internships with nonprofits or NGOs, undergraduate research opportunities, etc. Preference will be given to students whose experience combines more than one mode of experiential learning, such as research abroad.

*Important note: students will need to complete the General Application, a brief application housed in USFA before they will be able to complete supplemental apply-to scholarship applications.

Spring application period: November 1, 2021 - November 30, 2021
Apply at Scholarship Central. These scholarships will also be offered for the Summer. Get more information HERE.

3.4 Goldwater Scholarship
Calling all STEM sophomores and juniors who are intending to have careers in research! Applications are now being accepted for the prestigious Goldwater Scholarship Program. Each Goldwater Scholar annually receives an amount equal to the cost of tuition, mandatory fees, books, and room and board minus the amount of support provided for by other sources, up to a maximum of $7,500 per full academic year. Scholars who receive the award as sophomores can expect to receive support for a maximum of two years (4 semesters) or until graduation, if sooner. Scholars who receive the award as juniors can expect to receive support for a maximum of one year (2 semesters) or until graduation, if sooner.

Last year, Saket Bikmal received the 2021 Goldwater Scholarship. Read more HERE.

Application process: Students must apply internally to their home institution. The top candidates are selected annually and put forward for consideration at the national level. The Virginia Tech campus deadline is December 1, 2021. In order to apply, you must first complete a pre-application (which takes around 10 minutes). Once approved you will gain access to the complete application. Learn more about the program and application process HERE.
4. Professional Development Opportunities
4.1 Combating Antimicrobial Resistance Traineeship
Combating Antimicrobial Resistance Traineeship

LEARN MORE HERE:

This convergent PhD program integrates across multiple fields to prepare trainees with the skills needed to tackle grand societal challenges:

- data analytics & artificial intelligence
- bioinformatics
- environmental science & engineering
- wastewater monitoring
- microbiology
- environmental chemistry
- stakeholder engagement
- public health
- science-based policy & interventions

bit.ly/NSF-ResearchTraineeship
5. Presentation Opportunities

5.1 Apply today to present at National Conference on Undergraduate Research (NCUR)
NCUR 2021 will be delivered as a virtual event, **NCUR 2022 @ Home**, on April 4-8, 2022. This is an exciting opportunity for thousands of undergraduate researchers from all disciplines to get together for a unique conference experience. Participants will gain experience presenting their research to a broad audience, opportunities for professional development including a virtual graduate school fair, networking sessions with other students and faculty in their fields, and more! Virginia Tech’s OUR will cover registration costs for accepted presenters (one registration covered per presentation).

The submission deadline is **11:59 PM ET on November 29**. [Submit an abstract today!](#)

5.2 Present your research at the 2022 ACC Meeting of the Minds
Each year, 5-6 outstanding undergraduate researchers (accompanied by a faculty/staff member) from each ACC university gather at a host institution to present their research, either verbally or as a poster, at the annual ACC Meeting of the Minds (ACC MoM). All expenses are covered by the ACC Academic Consortium including registration, travel, lodging, and food! On the weekend of April 1-3, 2022, The University of Virginia will be hosting the 2022 ACC MoM. Virginia Tech will select up to five students to represent the university and present their research or creative scholarship at this conference.

Learn more about the conference and apply [HERE](#). The internal application deadline is **January 31, 2022**. Have questions? Email Keri Swaby ([kswaby@vt.edu](mailto:kswaby@vt.edu)).

5.3 2022 ConnectUR Annual Conference
The inaugural ConnectUR conference will provide a forum where attendees can draw on knowledge exchange, scholarship of teaching and learning, group discussion, and community building to expand their approaches to undergraduate research. This conference is open to all individuals with a commitment to or interest in undergraduate research. Overall this conference will focus on the areas of leadership for undergraduate research; diversity, equity, and inclusion; advocacy and partnership; collaboration and community; and accountability and sustainability.

The call for proposals is now open for submissions! We look forward to receiving your ideas as they relate to the focus areas of this conference. We encourage all submitters to download the proposal template prior to submitting it. This template will help you brainstorm and put together your ideas before accessing the submission form. Please note that you will not have an option to save mid-way or go back during your submission process.

Click [here](#) to learn more. The submission form closes on **January 21, 2022, at 11:59 PM ET**.
6. National Science Foundation Opportunities

- Ecology and Evolution of Infectious Diseases | Deadline November 24, 2021
- Archaeology and Archaeometry | Deadline December 1, 2021
- Cyberinfrastructure for Sustained Scientific Innovation (CSSI) | Deadline December 8, 2021
- Biological Oceanography | Deadline December 31, 2021
- Partnerships for Research and Education in Physics (for minority-serving institutions) | Deadline January 21, 2022
- Community Facility Support: Synchrotron-Based Analytical Capabilities Advancing Earth and Environmental Sciences Research and Training | Deadline March 4, 2022

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Share your thoughts with us by taking this short survey (it takes less than 5 min to complete)!

Have a great week!

Best regards,
Shu

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