

HAPS Virtual Regional Meeting November 7, 2020



hhmi BioInteractive

Come see us to learn about free Anatomy and Physiology resources!





X-Chromosome Inactivation

In every somatic cell of individuals who are 46,0%, one of the two X chromssomes is inactivated and condenses into a compact structure called a Bar body. One type of sex verification test tooks for the presence of a Barr body in somatic cells swabbed from inside an athlete's cheek. The presence of a Barr body in each cell indicates that the individual has more than one X chromosome.



The Barr body can be seen as a darkly staining structure against the cell's nuclear envelope. The other darkly stained body typically seen the nucleus is a nucleolus, a nuclear subdomain where ribosomes an

Photoreceptor

www.BioInteractive.org

Empowering Educators. Inspiring Students.



Welcome to Utica!

Hello Everyone,

Welcome to the Fall 2020 HAPS Eastern Regional Meeting from Mohawk Valley Community College in Utica, NY! As you probably *didn't* notice, it is fall here in the Mohawk Valley Region of Central New York and the fall colors are just about past peak right now. When we had discussed dates for this conference, we immediately thought of the fall. Our college sits on the border of the Adirondack Park; in a pre-pandemic era, we had hoped to share our campus with you. Unfortunately, the best we can do is share a picture from our main campus.



Unfortunately, as we have all came to live with by now, the pandemic has forced us to work in a virtual format. Our current guidelines in New York and Oneida County do not allow us to be together face to face. Like we have all gotten used to by now, that has meant shifting our focus. We have worked with HAPS to put together a great set of Update Speakers and had some great submissions by workshop and poster presenters. We know that this isn't an ideal situation, but we think we have put together an exceptional experience for everyone.

We look forward to an engaging meeting and hope you all have a great time!

Sincerely,

Aaron Fried Host



HAPS Virtual Regional November 7, 2020 Schedule of Events

all times are in EST

Time	Event
8:45 am – 9:00 am	Welcome
9:00 am - 10:00 am	Update Speaker 1: Dani Waters "Multiple Representations in Anatomy and Physiology Educational Materials"
10:00 am - 10:45 am	Visit with Exhibitors & Posters 1-4
10:45 am - 11:40 am	Concurrent Workshops
11:45 am - 1:10 pm	Update Speaker 2: Dee Silverthorn "Teaching Tough Topics Using Core Concepts and Active Learning"
1:15 pm – 2:10 pm	Concurrent Workshops
2:15 pm – 3:00 pm	Visit with Exhibitors & Posters 5-8
3:00 pm – 3:55 pm	Panel Discussion: Judi Nath, Shawna Rushford-Spence, and Kristy Wittman Howell "Talking About Science, Pseudoscience, and Changing Minds During a Pandemic"
4:00 pm – 4:55 pm	Concurrent Workshops
5:00 pm – 6:00 pm	Closing Remarks & Networking



DISSECT REAL SPECIMENS WITHOUT A CADAVER LAB



TRY NOW AT WWW.4DANATOMY.COM

HAPS Regional Meeting Exhibitors

HAPS would like to recognize and thank our conference exhibitors. Their generous support makes this conference possible.

Exhibitors

3B Scientific 4D Interactive Anatomy Zrt. Anatomage Autopsy.Online Backyard Brains BIOPAC Systems Elsevier Experience Anatomy HHMI BioInteractive Holt Anatomical Macmillan Learning Morton Publishing Company Touch of Life Technologies Vernier Software & Technology Visible Body

HAPS 2021 Annual Conference

<u>Registration</u> is now open for the HAPS 2021 Annual Conference! This will be a virtual meeting held May 23-26. The early bird registration and poster/workshop proposal submission deadline is March 5, 2021. Need assistance to attend this meeting? Check out HAPS website and see what Awards & Scholarships we have available to assist.

We hope to see you in May!



Update Speaker I



Dani Waters

"Multiple Representations in Anatomy and Physiology Educational Materials"

9:00 AM - 10:00 AM

Abstract: Instructors use multiple external representations (MERs) whenever we present two or more educational resources (text, diagrams, videos, models, and specimens) to students at the same time. Educators assume that with each additional representation, students are learning more information. The research literature describes the benefits and pitfalls of using MERs. In this presentation, we will discuss what MERs are, how they benefit students, and the external and internal factors that inhibit student learning. Lastly, we will discuss how to overcome some common challenges when presenting students with MERs in anatomy and physiology lectures and laboratories.

Bio: Danielle N. Waters is a third-year doctoral candidate in Educational Psychology at The Pennsylvania State University, where she also earned a Master of Biology degree and a Baccalaureate degree in Biobehavioral Health. Currently, Dani coordinates and teaches courses in advanced cadaver anatomy laboratory for undergraduate students and advanced cadaver dissection for undergraduate, graduate, and medical students in the Department of Biology. Dani also co-facilitates cadaver anatomy workshops for Penn State's College of Medicine. Dani's master's work explored the relationship between students' individual differences and exam performance in an introductory college biology course. Her current research in Educational Psychology focuses on how STEM students use and learn from verbal and nonverbal learning materials, the learning strategies that help students integrate and transfer knowledge among educational materials, as well as the ways that individual differences between students, such as metacognition and self-efficacy, impact learning. Dani has been an active HAPS member since 2014, giving both poster and workshop presentations, while serving on the HAPS Communications Committee as the HAPS Instagram page and blog author, and a reviewer for the HAPS Educator.

Update Speaker II



Dee Silverthorn

"Teaching Tough Topics Using Core Concepts and Active Learning"

11:45 AM - 1:10 PM

Abstract: One of the challenges of teaching physiology is helping students apply core concepts to understand complex physiological events, such as the cardiac cycle. In this talk I will present one approach to teaching complex topics by having students apply the core concepts of pressure and flow in the cardiovascular system to the complex figure commonly known as the Wiggers diagram. First developed by Carl J. Wiggers, M.D. from his studies of cardiovascular function, the multifactorial Wiggers diagram shows the simultaneous relationships between the electrocardiogram, ventricular volume, heart sounds, and pressures in the left heart chambers and aorta. Students often find these stacked graphs to be confusing and nearly indecipherable. In this session the audience will act as students and learn how to deconstruct this complex process using the core concepts of pressure and flow.

Bio: Dee Silverthorn is Distinguished Teaching Professor Emeritus of Physiology at the University of Texas-Austin and a past-president of HAPS (2012-13). Dee has spent most of her career using active learning and interactive classroom teaching with a variety of students, from pre-health professions to nonmajors and medical students. When she is not writing or teaching, she can be found in the garden or in her studio doing multimedia fiber art.

Panel Discussion: "Talking About Science, Pseudoscience, and Changing Minds During a Pandemic"

3:00 PM – 3:55 PM

This panel discussion will focus on interdisciplinary themes related to having tough discussions about scientific understandings. Talking to the public can be very different than talking to people with training in science. Given the current pandemic, the panel will share their experience and expertise in language and messaging when the potential for misinformation is high.

The panelists include:



Judi Nath, PhD. Professor in the Department of Biology & Health Sciences at Lourdes University. Dr. Nath is a former president of HAPS, she currently chairs the Presidents Emeriti

Advisory Committee and Membership Committee. Her teaching tenure and HAPS career are nearly identical, and she credits HAPS with helping her flourish as an academic writer and educator. She has authored multiple textbooks in anatomy, physiology, and medical terminology and won the Faculty Excellence Award numerous times. This past year, as COVID-19 began spreading across the globe, she found herself uniquely positioned to calm the

misinformation/disinformation/conspiracytheory chaos by blogging, writing, and talking about the science.



Shawna Rushford-Spence, Ph.D. Associate Professor of English at Lourdes University.

Dr. Rushford-Spence studies pseudoscience, in particular the eugenics movement of the mid to late 19th century, which spawned many of the beliefs we, as a culture, still hold today about people with disabilities and is potentially linked to the cultural distrust of medicine/science. She will discuss analysis of language related to both message and response in terms of analyzing the impact of language on message delivery.



Kristy Wittman Howell, Ed.D. Coordinator Sustainability Education and Engagement Johnson County Community College

Dr. Howell's work at JCCC focuses on curricular and co-curricular education, faculty development, and student

leadership growth in environmental, economic, and social sustainability across the curriculum. Prior to joining JCCC, she directed a sustainability-focused small business incubator in Illinois and spent nearly a decade in higher education administration and sustainability at a small, rural community college in Kentucky. She has an EdD in Community College Leadership with a focus on community college history, an MA in Social Responsibility and Sustainable Communities from Western Kentucky University with a focus in sustainability-related curriculum development in the humanities, and a BA in History from the University of Southern Mississippi.

VISIBLE BODY® Taking Virtual & In-Person Learning to New Heights



3D + AR anatomy + physiology content accessed via apps and a best-in-class teaching and learning platform named Courseware.



Our interactive and customizable lessons and labs will engage students, elevate comprehension and ignite their passion for anatomy + physiology whether they're on campus or off.

Be sure to attend the Visible Body workshop demo: **4pm on November 7th during the HAPS Regional Conference**

To read professor testimonials and request a free trial, visit:

visiblebody.com/customer-stories

Poster Presentations

Poster 1: <u>Comparing Asynchronous and Synchronous Group Discussion in a Remote Introductory Anatomy and</u> Physiology Course

Ghulam Saadat, Malcolm X College, gsaadat@ccc.edu

The purpose of this study was to investigate the effect of synchronous group discussion on student learning outcomes (LOs) and satisfaction. Students participated in a discussion post on Homeostasis. Then the same group of students met through a video conferencing tool to engage in a group activity. Student LOs were assessed by a quiz, both before and after the group activity. Analysis of results showed a statistically significant difference between asynchronous and synchronous groups on questions falling under higher levels of Bloom's taxonomy. Findings also revealed that synchronous group activity influences students' satisfaction with their learning processes positively.



Poster 3: Totally Online with a Virtual Cadaver

Hala Bastawros, ISU, halafb@iastate.edu

To enhance and facilitate the learning objectives of a comprehensive/regional human anatomy online course, I have integrated a 3D virtual reality online anatomy lab using virtual cadaver solution. A virtual lab provides the students with hands on experience and the ability for dissection of anatomical regions, while looking for assigned structures, organs, systems and establishing the relationships with each other. A virtual lab, accompanied by several assigned formative and summative virtual dissection quizzes, facilitate proper comprehension of the subject. Virtual discussion has greatly enhanced students' interest in the course and proven to be a valuable teaching tool.

Poster 4: A Flipped Classroom Without the Classroom: Teaching A&P During COVID-19

Heather Billings, West Virginia University School of Medicine, hbillings@hsc.wvu.edu

Here I describe the approach taken in moving an Anatomy & Physiology course to full online delivery in 2020, including a cadaver-based anatomy lab. Course enrollment is 140 students annually. Informal feedback from students in advance of the online course indicated their primary concern was accountability with asynchronous activities. To address this, scheduled synchronous activities were planned to supplement asynchronous lecture and lab video content. To focus on laboratory learning without a lab, comparison of performance on laboratory test questions, which were delivered online in both 2019 (traditional lab) and 2020 (remote lab) will be presented.

Poster 5: <u>The Hidden Curriculum in Anatomy & Physiology Case Studies: An Analysis of Character Representations</u> Meaghan MacNutt, Quest University, meaghan.macnutt@questu.ca

Co-Authors: Mai Yasue, Quest University Canada, mai.yasue@questu.ca, Ahalya Satkunaratnam, Quest University Canada, ahalya.s@questu.ca, Michelle Montgomery, University of Washington, montgm2@uw.edu

Case studies are a source of hidden curriculum, conveying values, norms, and beliefs through the stories they tell about people. We present a preliminary analysis of character identities in 432 A&P-related cases published in a large, peer-reviewed database. Each character is defined by role, centrality to storyline, and position of dominance/subordination. Character identity (gender, sexuality, race, ethnicity) is defined to the extent possible using implicit/explicit descriptors. By analyzing over 1500 characters across hundreds of cases, we will 1) quantify the character identities that students encounter in A&P case studies; and 2) determine whether character representations privilege some identities over others.

Poster 6: <u>Increasing Engagement and Application of Material in the Undergraduate A&P Classroom</u> Seena Mathew, University of Mary Hardin-Baylor, ssjmathew@yahoo.com

Most A&P classroom grades are based on traditional assessments, such as exams and quizzes, which often have limited utility in promoting long-lasting understanding of course material. Assignments that require exploration into peer-reviewed journal articles, especially in lower level courses, are uncommon and underutilized. The inclusion of an "A&P in the News" assignment allowed students to apply material they were learning in the classroom and relate it to research occurring in the field. The addition of this assignment, which included a written analysis of the paper and an oral presentation, increased engagement and retention of course material. This enabled students to envision the importance of what was being taught in the classroom and relate it to the outside world.

Poster 7: Sing Your Anatomy

Amanda Pierman, The Benjamin School, amanda.pierman@thebenjaminschool.org

Instead of trying to memorize anatomical terminology, sing about it, and let the memorization happen naturally. If your favorite song comes on the radio, you KNOW the words - same concept, just different words! Make learning easy and fun!

Poster 8: Examining Anatomy and Physiology Instructors' Teaching Approaches and First-Year Health Science Students' Learning Preferences

Una DeChellis, Regis College, una.dechellis@regiscollege.edu

This study shows the existence of a fundamental gap between the teaching approaches employed by college-level anatomy and physiology (A&P) instructors and the learning preferences of first-year health science (FYHS) students. A mixed methods research design was used to determine whether results converged or diverged, revealing a central phenomenon. Data gathered from the VARK learning preferences questionnaire results of FYHS students and from A&P classroom observations and instructor interviews were merged to interpret the results. It was found that the A&P instructors' teaching approaches met the participating FYHS students' learning preferences in the visual, aural, and read/write categories. However, the learning preferences of kinesthetic was not addressed by the A&P instructors' teaching approaches. The study's findings illustrate the central phenomenon and recommendations for research and opportunities to modify teaching approaches.

Innovative Virtual Anatomy Solutions from ToLTech

Touch of Life Technologies provides cutting edge anatomy education tools for healthcare students and professionals. All of our products are built on real anatomy from the National Library of Medicine's Visible Human Project[®] along with clinical and photographic imaging so users can have full confidence in what they see. Our products make it easy to take your lab completely virtual, create a hybrid environment or augment a full dissection experience through innovative software and hardware tools that work together as a complete platform.

VH Dissector

- Real anatomy with integrated 3D and cross-sectional views
- Extensive pre-built curriculum content
- LMS integration for building custom curriculum
- Compatible with Windows, macOS and iPad
- Support for VR and AR environments

Sectra Education Portal

- Clinical imaging case library
- Cloud based for remote learning
- Histology library with view sharing
- Accessible from any modern web browser

Sectra Table

- Large multi-touch environment for teambased learning
- Highly adjustable for mobility and ergonomics
- Expansive clinical imaging library and ability to upload your own cases
- Includes all VH Dissector and Education Portal features

SECTRA

Contact us today for a web demonstration and free instructor trial

West: Tom Chelston 303.885.0789 tom.chelston@toltech.net East: Mike Roseman 631.365.4625 mike.roseman@toltech.net



www.toltech.net

Workshop Presentations

Session 1: 10:45 AM – 11:40 AM

101: Teaching the Immune System: Active Learning Strategies

Rachel Klaus, Experience Anatomy, rklaus@experienceanatomy.com

Sponsored by Experience Anatomy

The immune system is a notoriously difficult subject to teach. In part because it is complicated, but also because it is a highly hypothetical subject without much more to look at than pictures. During this workshop we will go over the basics of the immune system and discuss some active learning strategies that can be utilized to help students retain their knowledge.

102: <u>Affordable and Creative Solutions to Anatomy & Physiology and Physical Science Labs During the COVID-19</u> <u>Pandemic</u>

Layne Rayder, Arkansas Northeastern College, Irayder@smail.anc.edu, Ginger Berry, Arkansas Northeastern College, gberry@smail.anc.edu

Arkansas Northeastern College Anatomy & Physiology and Physical Science instructors share their journey during the onset of the COVID-19 pandemic to produce affordable and creative solutions for science labs for their students. This includes the creation of online resources for lab practice quizzes, online lab exams, and the assembling of our own lab kits.

103: Apps that Work!

Amanda Pierman, The Benjamin School, amandampierman@yahoo.com

Technology is great... when it works! Sifting through the plethora of educational apps is arduous and time-consuming. I've done it for you! Learn about a number of tried and tested apps that save you time and money, and that actively engage your students, making your lessons both memorable and meaningful. Embrace technology without it overpowering you or detracting from the curriculum.

104: Explore Remote Learning Options for Physiology with Vernier

Sara Tallarovic, Vernier Software & Technology, aharr@vernier.com, John Melville, Vernier Software & Technology Sponsored by Vernier Software & Technology

Learn how to integrate real-time data collection into remote teaching. Using experiments from our human physiology lab books, we will demonstrate new ways of encouraging students to think about the physiology of human organ systems. Our free sample data files for the experiments in our human physiology lab books makes it easy for students to gain valuable experience analyzing and studying data while they learn from home. We will also discuss how to rent our sensors for a more hands-on data-collection experience. Attend our workshop and see how Vernier technology can enhance remote learning.

105: Emphasizing Anatomy in Surgical and Clinical Management

Hala Bastawros, ISU, halafb@iastate.edu,

Teaching innovation and topographical approach of regional/compartmental comprehensive anatomy course for undergraduates through designing a Clinically Oriented anatomy Course. Brief background and rational study of anatomical feature, function, location, relation to surroundings, vascular supply and innervation of an organ is of significant value in understanding clinical diseases, possible complication, and prognosis. Normal and various variations of arteries and veins are noteworthy in determining surgical procedures and manipulations. Students taught anatomy through various critical thinking problems and case histories. Examples of the Thoracic, abdominal, pelvic cases discussed!

Session 2: 1:15 PM - 2:10 PM

201: Active Learning in Uncharted Hyflex Waters: Lessons from a Gross Anatomy Course

Amy Gyorkos, Albion College, agyorkos@albion.edu, Holly Hill, Albion College, hhill@albion.edu

The Covid-19 pandemic imposes unexpected disruptions to anatomical educational practice that increase pressures on instructors to make rapid and uncharted pedagogical decisions. The pressure to adopt active learning approaches in an unfamiliar and under-researched learning environment creates a need for sharing authentic experiences amongst colleagues. This workshop gives an opportunity to discuss pedagogical approaches across Institutions, including our carefully designed Gross Anatomy course at Albion College. This undergraduate anatomy course is classified as hyflex and was designed to engage students in active learning, including flipped classroom, asynchronous interactive lessons, remote 3D exploration, problem-based learning, and socially distanced face-to-face lab stations.

202: <u>School Lab Kits for Remote Learners – Details to Consider</u>

Tom Lehman, Coconino Community College, tom.lehman@coconino.edu

If you are thinking of packaging your own lab kits for your remote learners, here are a few details that you will want to consider. We will discuss financial, liability, and staffing issues with creating your own in-house kits.

203: <u>Smartphone Application for Learning Medical Terminology and Improving Academic Performance in Vocational</u> <u>Nursing Students</u>

Katherine Rosselot, karosselot@yahoo.com

Nursing students are expected to learn medical terminology through immersion in their coursework. Learning vocabulary using immersion strategies and textbook glossaries used by nursing schools provided minimum learning and low retention of new terminology. Immersion and incidental exposure are inefficient, ineffective, and unreliable methodologies for learning vocabulary. This research study utilizes a smartphone device as the delivery methodology for the adjunctive education for learning basic medical terminology. The data demonstrated a positive effect on the academic performance of nursing students. Nursing schools should incorporate more educational technologies to create adjunctive educational tools into the didactic curriculum to improve academic performance.

204: <u>Using Video to Deliver Content and Create Connections When Teaching Online</u> Wendy Riggs, College of the Redwoods, wendogg1@hotmail.com

Video can be effectively used in online and face-to-face classes to deliver content and create connections. In this workshop, we'll look at the different uses for videos and learn how to easily record and share your work with students. We'll also talk about ensuring accessibility and overcoming your own "shy" hurdle.

205: Introducing the Anatomage eBook for Online Anatomy & Physiology Education

Christian Carmino, Anatomage, Christian.carmino@anatomage.com

Sponsored by Anatomage

We have recently launched the Anatomage eBook as a tool for students and instructors to utilize true cadaver data for online education. Featuring both an anatomy and physiology component, the Anatomage eBook offers a comprehensive overview of content for an Anatomy and Physiology course. In this workshop, we will breakdown the technology behind the eBook and teach instructors how to integrate the eBook into their online anatomy and physiology curriculum.

301: <u>Students Are from Venus; Teachers Are from Mars: A Look at Differences in Anatomy Teaching and Learning</u> <u>Motivations to Find a Common Language</u>

Edgar Meyer, University of Arkansas for Medical Sciences, ermeyer@uams.edu

Anatomy students have different motivations to learn anatomy. Similarly, anatomy instructors have different motivations to teach anatomy. Intrinsically motivated students might learn anatomy just to learn it while extrinsically motivated students might learn clinical anatomy. Anatomists might be intrinsically motivated to teach students anatomical complexities while clinicians might be extrinsically motivated to teach students discipline-specific anatomy. This workshop will explore student and faculty insights regarding how anatomy educators tailor instruction to students' motivations while leveraging their own motivations. Participants will discuss motivations for learning and teaching anatomy and benefits of adapting anatomy instruction to appeal to student and teacher motivations.

302: Writing and Critiquing Assessment Items

Elizabeth Co, Boston University, eco@bu.edu, Jenny McFarland, Edmonds College, jennyleemcfarland@gmail.com Sponsored by HHMI BioInteractive

Machine gradable questions (MGQs) provide an opportunity to for quick feedback, low stakes learning, and common feature of the learning cycle. They are useful both for high-stakes (summative) assessments and low stakes (formative) assessments (ex: "clicker"). But what makes a "good" MGQ? This workshop will guide participants through identifying and developing effective questions and critiquing them based on accessibility, inclusion, difficulty index, item discrimination and distractor validity. This workshop will focus on writing MCQs that assess higher level cognitive skills (or critical thinking) and aligning these questions to learning objectives.

303: Virtual Rat for Online Undergrad Human Physiology Lab

Usha Sankar, Fordham University, usankar@fordham.edu

The pandemic and the resultant online teaching of A&P have sent us on quests for effective online labs. While there are commercially available virtual anatomy options, it is always great to find more virtual labs that teach fundamental physiology concepts. I modified an older, published Virtual Rat model to teach Endocrine System to undergraduates in my Human Physiology Lab online. Virtual Rat models can be used to help students work online collaboratively, and to have them apply what they have learned to an experimental situation, reinforcing foundational concepts while being fun at the same time.

304: Using 3D Human Anatomy To Transform Labs + Instruction During a Pandemic

Pam Auckland, Visible Body, pam.auckland@visiblebody.com, Carley Strachan, Visible Body, carley.strachan@visiblebody.com

Sponsored by Visible Body

Visible Body's 3D anatomy labs, apps and Teaching and Learning platform named Courseware are enabling better student engagement, comprehension and overall performance on-campus and off. Instructors who use Visible Body Courseware see significant improvements in grades - eg. one full letter grade jump as well as a dramatic decrease in the D, F + Withdrawl rates. This workshop will have two parts: We will illustrate how instructors nationwide use Visible Body Courseware to engage students and get increased performance in the virtual, hybrid and in-person environments. We will include examples of how instructors use Courseware in lecture, lab, and homework. We also demo the easy steps to take to start a trial, review our awesome price point, and how to save money for students with open institutional access.

305: Using the HAPS Exam

Valerie O'Loughlin, HAPS Exam Program Lead, voloughl@hapsconnect.org, Dee Silverthorn, HAPS Exam Program Lead, dsilver@hapsconnect.org, Janet Casagrand, HAPS Exam Program Lead, jcasagrand@hapsconnect.org Sponsored by HAPS

Join us to discuss the multiple uses of the exam and the nuts and bolts of making it work for you and your department.

POWERFUL ENOUGH FOR GRAD SCHOOL EASY ENOUGH FOR 5TH GRADE



Live support to join your classroom to ensure everyone can use the technology.

> In-class Zoom / BlueJeans Skype / Google Meet support

2017 Harvard Remote Lab study

Peer-reviewed studies showing our lab kits' significance in K-12 and University education

FREE lesson plans developed to standards Perfect for courses: Neuroscience, Bioengineering, Biology, AP Bio, A&P

Visit our Virtual Booth!

BACKYARDBRAINS.COM

855-438-7745

hello@backyardbrains.com

Page 18

2020 Virtual Eastern Regional Meeting November 7, 2020

Planning Committee





Aaron Fried Eileen Bush Shannon Crocker Associate Professor Associate Professor

On behalf of the Mohawk Valley Community College and the Human Anatomy and Physiology Society (HAPS) we would like to thank you for participating in our Fall 2020 regional virtual meeting. We especially thank the workshop and poster presenters for their commitment to scientific rigor and educational innovation as well as their creativity in adapting their content to a virtual format.

We would like to once again acknowledge the members of our planning committee.

This conference could not have happened without the support of HAPS and ASG, especially from Brittney Roberts, Caitlyn Hyatt, and Peter English.

We would like to acknowledge the participating exhibitors and thank them for their continued support of HAPS.

Although we are no longer meeting on the campus, we would still like to thank Mohawk Valley Community College leadership and administration for their enthusiastic support of this meeting: Dr. Randall VanWagoner, President, Dr. Lewis Kahler, Vice President, and Jake Mihevc, Associate Dean of STEM.

We look forward to engaging with you again in the future!

Sincerely,

Aaron Fried, Shannon Crocker, and Eileen Bush Hosts and Planning Committee