



STUDENT RESEARCH & **CREATIVITY** **SYMPOSIUM**

APRIL 4-5, 2024



PROVOST

Dr. Avinandan “Avi” Mukherjee



Greetings, esteemed attendees of the Third Annual Student Creativity & Research Symposium at Marshall University! It is my privilege to welcome you to this exciting event, where we will come together to celebrate the exceptional talent and innovative spirit of our students. This week, we have the opportunity to showcase the remarkable achievements of more than 150 students who have been working tirelessly to advance their research and creative endeavors. At Marshall University, we are proud to hold the distinguished R2 status as a research university, recognized by the Carnegie Classification of Institutions of Higher Education. This status represents our commitment to fostering an environment of academic excellence, intellectual curiosity, and innovative problem-solving. Our students play an integral role in this process, as they are the driving force behind the cutting-edge research and creative projects that will be presented. By participating in this symposium, our students have the opportunity to share their work with a diverse audience and to engage in meaningful discussions with peers, mentors, and community members. This experience will not only enhance their research skills but will also prepare them for success in their future careers. I am grateful to our Office of Student Research led by Dr. Philippe Georgel and our faculty and staff members who have worked so hard to make this event possible and to support our students in their academic journeys. Your dedication and commitment to fostering student scholarship and

professional development are truly commendable. So, let us embrace these two days with excitement and inspiration as we celebrate the achievements of our students and the impact they will have on our communities and the world!

Best regards,

Dr. Avinandan “Avi” Mukherjee
Provost and Senior Vice President
of Academic Affairs, Marshall
University

Welcome

Philippe Georgel



Welcome to the 2024 Marshall University Student Research and Creativity Symposium!

Building upon the success of our inaugural event, we are thrilled to present an even more improved and inspiring gathering this year. As we convene over the next two days, we invite you to witness the remarkable contributions of our students, both undergraduate and graduate, across all disciplines supported on our campus.

From the realms of science to the arts, from healthcare to business, our students will showcase their ingenuity and passion through diverse mediums such as oral presentations, musical performances, debates, and poster sessions. This symposium serves as a platform for our students to not only exhibit their academic prowess but also to ignite conversations and collaborations that transcend disciplinary boundaries.

We are honored to host esteemed speakers who will share insights into the ever-evolving landscapes of research and creativity. Additionally, our lunch panel on “April 5th organized by Marshall University students promise engaging discussions.

This year, our symposium features a total of more than 140 presentations (posters and oral), complemented by captivating artistic performances, including the viewing of the documentary “Canary” based on the work of Dr. Ellen Thompson and Dr. Lonnie Thompson. While most

presentations will be conducted in person, we have also ensured virtual accessibility for off-campus students, ensuring inclusivity and reach.

As we come together to celebrate the achievements of our students, we want to acknowledge our heartfelt gratitude to the Advisory Board Committee and our local communities for their unwavering support. Your presence here today signifies your commitment to nurturing the next generation of innovators, scholars, and artists.

In closing, we invite you to immerse yourselves fully in the symposium experience, to engage, and to be inspired. Together, let us celebrate the boundless potential of research and creativity, cultivated within the vibrant atmosphere of Marshall University.

Thank you for joining us, and let the symposium begin!

Warm regards,

Philippe T. Georgel, Ph.D.
Senior Director of the Office of
Student Research

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OVERVIEW

The Student Research and Creativity Symposium at Marshall University is intended to celebrate, promote and recognize undergraduate and graduate research and creativity across all colleges and units.

The two-day event includes a full day for undergraduate students on Friday, April 7th and a full day for graduate students on Saturday, April 8th. Both days include prestigious guest speakers from outside the university, a panel lunch and a selection of presentations from the best student work from each unit.

GOALS

The symposium will:

- Showcase the best student work from across Marshall University to internal and external audiences
- Contribute to the continuing growth of Marshall as a research university
- Demonstrate how student accomplishments can contribute to the economy and quality of life of the surrounding intellectual and business community

IMPACT

Students who take part in the experience will build their presentation experience and will connect with a broader audience outside of Marshall University. The hope is for younger students to draw inspiration and to aim higher in their endeavors. The event also impacts Marshall University by showcasing the breadth of student achievement to the surrounding community.

PARTICIPATING UNITS

- College of Arts and Media
- Brad D. Smith Schools of Business
- College of Education and Professional Development
- College of Engineering and Computer Sciences
- College of Health Professions
- College of Liberal Arts
- College of Science
- Joan C. Edwards School of Medicine
- School of Pharmacy
- Louis Stokes Alliance for Minority
- Chancellor's Scholars Program





Guest Speaker

Padma Venkatraman, Ph.D.

Dr. Padma Venkatraman is an accomplished oceanographer turned award-winning author, who has penned numerous captivating books for young people, including “The Bridge Home,” “Born Behind Bars,” “A Time to Dance,” “Island’s End,” and “Climbing the Stairs.” Her literary works have generated widespread acclaim, with over a quarter of a million copies sold, more than twenty starred reviews, and numerous prestigious awards, such as the Walter Dean Myers Award for Outstanding Children’s Literature, the Golden Kite Award, and the South Asia Book Award.

Before her successful writing career, Dr. Venkatraman led a dynamic life, serving as chief scientist on oceanographic research vessels, working as a teacher, and directing diversity efforts at the University. Born in India, she pursued education abroad, earning a doctorate from the College of William and Mary and conducting post-doctoral research at Johns Hopkins University before immigrating to the United States.

Dr. Venkatraman’s dedication to diversity and literature is evident in her roles as the founder of www.diverseverse.com and www.authorstakeaction.com. Currently residing between Rhode Island and New Hampshire, she continues to inspire readers worldwide. Her novels have received numerous awards and accolades, including the prestigious Golden Kite Award for Middle Grade Fiction, solidifying her status as a luminary in the world of children’s literature. Follow Padma on Twitter for updates and insights into her multifaceted career.

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Guest Speaker

Vishwajeet Puri, Ph.D.

Dr. Vishwajeet Puri, M.S., Ph.D., holds the distinguished position of the Osteopathic Heritage Foundation Ralph S. Lickliger, D.O. Endowed Professor in Diabetes at Ohio University. With a career dedicated to diabetes research and academia, Dr. Puri has significantly influenced the understanding of metabolic disorders. His research has published in numerous prestigious journals, including Nature Reviews Endocrinology, the Journal of Biological Chemistry, and Nature Reviews Molecular Cell Biology. His current funding includes four NIH R-01 active grants reflecting his commitment to unraveling the complexities of metabolic disorders and vascular function.

Dr. Puri's expertise extends to book chapters, like the one with Sharma, V.M., and Natambi, J.M., on intracellular lipid storage and utilization in adipocytes, published by Elsevier. Furthermore, his research portfolio, including studies on CIDEA expression, lipid metabolism, and growth hormone's impact on adipose

tissue, reflects his multifaceted approach to diabetes research. Dr. Puri's leadership is evident in securing substantial research funding, with active grants addressing NAFLD pathogenesis, vascular function regulation in obesity, and fat metabolism's link to hepatic fibrosis. His dedication to undergraduate training through the PACE Awards underscores his commitment to nurturing future scientists in metabolic disorders. Through his endeavors, Dr. Puri continues to drive innovation in understanding and treating metabolic diseases, leaving a profound impact on diabetes research and education.



Guest Speaker

Ellen Thompson, Ph.D.

Dr. Ellen Mosley-Thompson, a Distinguished University Professor at The Ohio State University, and director of the Byrd Polar and Climate Research Center, is a pioneering glaciologist and climatologist. Utilizing ice cores from polar ice sheets and high mountain glaciers, she reconstructs Earth's climate history, revealing shifts beyond natural variability in the last 2000 years. Leading nine expeditions to Antarctica and six to Greenland, she led the 2010 Bruce Plateau ice core drilling project, contributing to the International Polar Year.

Ellen has authored 137 peer-reviewed papers, secured 53 research grants, and is recognized by the National Academy of Sciences, American Academy of Arts and Sciences, and American Philosophical Society. As a Fellow of the American Geophysical Union and the American Association for the Advancement of Science, she influences climate science profoundly.

Graduating from Marshall University with a BS in Physics, she earned her master's and Ph.D. in geography from Ohio State University, focusing on climatology and atmospheric science. Her early research on Antarctic ice cores, alongside her husband Lonnie Thompson, pioneered paleoclimatic studies, emphasizing the importance of high-resolution records. Ellen's leadership at Ohio State University since 1990 underscores her commitment to advancing climate research.

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Guest Speaker

Lonnie Thompson, Ph.D.

Dr. Lonnie G. Thompson, a Distinguished University Professor at The Ohio State University, revolutionized ice core paleoclimatology beyond Polar Regions. With a geology degree from Marshall University and M.S. and Ph.D. degrees from Ohio State University, his research focuses on tropical ice fields using solar-powered drilling equipment, revealing insights into Earth's climate system dynamics. Over three decades, Lonnie's observations of glacier retreat provide stark evidence of unprecedented global warming.

Having authored 245 peer-reviewed publications, including contributions to *Science*, Lonnie led 63 field programs and secured 76 research grants. His honors include the National Medal of Science, the Tyler Prize, and the Dan David Prize. As a Fellow of the American Geophysical Union and the American Association for the Advancement of Science, Lonnie's contributions are widely recognized.

Lonnie and his wife, Ellen Mosley-Thompson, both graduates of Marshall University, collaborate in researching climate change's impacts on glacial regions and developing innovative ice drilling technologies. Their partnership, spanning over 40 years, underscores their commitment to understanding and mitigating environmental challenges.



Guest Speaker

Sho Kobayashi, Ph.D.

Sho Kobayashi has a Ph.D. in English, majoring in English education. He is a special appointed Associate Professor in the Faculty of Education at Osaka Kyoiku University, Japan.

He is also currently conducting teacher training at the same university. His research interests are in computer-mediated communication, anxiety, Willingness to communicate (WTC), and International Posture (IP) in English language education. He has 19 years of experience in various English teaching environments, including junior and senior high schools, and universities.

His presentation will be entitled: *"The Effects of Synchronous and Asynchronous ICT-based International Interactions on the Affective Variables and Speaking Skills of Japanese English Learners"*

BEYOND THE BOOKS

SHARING EXPERIENCES, INSPIRING THE FUTURE

APRIL 5, 2024



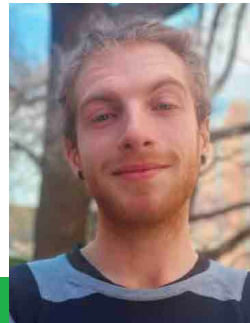
Ashlea Krasnansky
Panel Moderator
Grassroots Advocate



Makaylah Wheeler
WMUL Station Manager
& Communications Graduate
Assistant



Callia Young
Student Body Vice President



Justin Tacett
Interdisciplinary Researcher of
Communication Studies and
Psychology



Jamison Lewis
TEDxMarshall U 2024 Event
Manager and DSP VP of
Professional Activities

Scan the QR code
to attend virtually

Meeting ID: 225 882 514 978
Passcode: eEbcDk





UNDERGRADUATE: THURSDAY, APRIL 4, 2024

Talks or performances (15 minutes each) and two poster / exhibition sessions (75 minutes each).

8:00 AM 8:30 AM	Welcome: 8:00 to 8:15 Welcome Speech from Provost 8:15-8:30am			
8:30 AM 9:30 AM	Dr. Padma Venkatraman Recipient of the children literature Golden Kite Award for Middle Grade Fiction (Don Morris room) 50 minutes plus questions			
9:45 AM 10:45 AM	Session 1-A UG-O 1, UG-O 2, UG-O 3 Drinko Library 3rd Floor	Session 1-B UG-O 7, UG-O 8, UG-O 9 Shawkey Room	Poster Session A UGP-1 to UG-P 32	
11:00 AM 12:00 PM	Session 2-A UG-O 4, UG-O 5 Drinko Library 3rd Floor	Session 2-B UG-O 10, UG-O 11, UG-O 18 Shawkey Room	and HS-1 to HS-4	
12:15 PM 1:45 PM	Dr. Vishwajeet Puri (Don Morris Room) Ohio University, Osteopathic Heritage Foundation Ralph S. Licklider D.O. Endowed Professor in Diabetes Professor Signing session for Dr. Padma Venkatraman: 1:30pm to 2:30pm (Bookstore) Undergraduate Creative Discovery Research Award at 1:15pm until 1:45pm			
2:00 PM 3:00 PM	Session 3-A UG-O 13, UG-O 14, UG-O 15 John Spotts Room	Session 3-B UG-O 16, UG-O 17, UG-O 12 Shawkey Room	Session 3-C UG-O6 Room 2W16B	Poster Session B UGP-33 to UG-P 69
3:00 PM 3:20 PM	Coffee break (overlap with viewing of documentary "Canary")			
3:00 PM 5:30 PM	Dr. Ellen Thompson and Dr. Lonnie Thompson Ohio State University, Columbus Field research Biology/geology (Don Morris Room) Viewing "Canary" plus 50 minutes plus questions			
5:45 PM	Closing			

Sessions 1-3: Student Center (second Floor) or Drinko Library



GRADUATE: FRIDAY, APRIL 5, 2024

Talks or performances (20 minutes each) and two poster / exhibition sessions (75 minutes each).

8:30 AM	Welcome Speech President Smith			
9:00 AM 10:00 AM	Dr. Sho Kobayashi Professor at Osaka University in Japan (Don Morris room) 50 minutes plus questions			
10:15 AM 11:00 AM	Session 1-A GO-1, GO-2 Drinko Library 3rd Floor	Session 1-B GO-7, GO-8 Shawkey Room	Session 1-C GO-5, GO-6 John Spotts Room	Poster Session A GP-1 to GP-20
11:15 AM 11:45 AM	Session 2-A GO-3 Drinko Library 3rd Floor	Session 2-B GO-10, GO-11 Shawkey Room	Session 2-C GO-12 John Spotts Room	
12:00 PM 1:30 PM	Student Panel Lunch (Don Morris Room) “Beyond the Books: Sharing Experiences, Inspiring the Future” Moderator: Ashlea Krasnanski Panelists: Makaylah Wheeler, Callia Young			
1:45 PM 2:30 PM	Session 3-A GO-13, GO-14 Shawkey Room	Session 3-B GO-15, GO-16 John Spotts Room	Session 3-C GO-17, GO-18 Room 2W16B	Poster Session B GP-21 to GP-38
2:45 PM 3:30 PM	Session 4-A GO-19, GO-20 Shawkey Room	Session 4-B GO-21, GO-4 John Spotts Room	Session 4-C GO-22, GO-23 Room 2W16B	
3:30 PM 4:00 PM	Session 5-A GO-24, GO-25 Shwakey Room	Session 5-B GO-26, GO-27 John Spotts Room	Session 5-C GO-28, GO-29 Room 2W16B	
4:00 PM 4:30 PM	Coffee and refreshment Reception and closing remarks (Don Morris Room)			

Special Thanks to the members of the supporting committee for the symposium's preparation:

College of Arts & Media: Dr. Vicki Stroehrer

College of Business: Dr. Mohammad Karim

College of Education & Professional Development: Dr. Isaac Larison

College of Engineering & Computer Sciences: Dr. Ross Salary

College of Health Professions: Dr. Mark Timmons

College of Liberal Arts: Dr. Puspa Damai

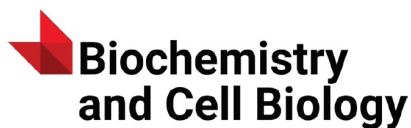
College of Science: Dr. Lauren Waugh

Joan C. Edwards School of Medicine: Dr. Louise Rischer

School of Pharmacy: Dr. Hasan Koc

Louis Stokes Alliance for Minority Participation and Chancellor's Scholars: Dr. David Cartwright

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