



MSGC 2022 Fall Conference Agenda

BSRB (Biomedical Science Research Building), University of Michigan
109 Zina Pitcher PL. | Ann Arbor, MI 48109
Saturday, October 22, 2022

For those of you joining us virtually: <https://umich.zoom.us/j/98839492943>
Webinar ID: 988 3949 2943 | Password: 075686 | Phone: (312) 626-6799
Zoom Moderated by Professor Roxanne Katus, Eastern Michigan University

8:00am – 9:00am	Registration, Breakfast & Poster Set Up (<i>Atrium</i>)
9:00am – 9:05am	Welcome & Introductions (<i>Kahn Auditorium</i>) <i>Mark Moldwin, PhD - Arthur F. Thurnau Professor, Department of Climate & Space Sciences & Engineering, Director of NASA's Michigan Space Grant Consortium</i>
9:05am – 10:00am	Fireside Chat with Keynote Cindy Hasselbring and MSGC Director Mark Moldwin (<i>Kahn Auditorium</i>) <i>Cindy Hasselbring, K-12 Education Advisor, Next Gen STEM, Office of STEM Engagement, NASA Headquarters</i> Q&A with Keynote Cindy Hasselbring
10:00am – 11:00am	Poster Presentations Session A (<i>Atrium</i>)
11:00am – 12:00pm	Oral Presentations Session 1: "Earth & Space" (<i>Kahn Auditorium</i>) <i>Moderated by Professor Brian Yurk, Hope College</i>
11:00pm – 11:06pm	A Novel Approach to Echo Mapping of Supermassive Black Holes <i>Jacob Callebs, Undergraduate, Wayne State University Department of Physics and Astronomy</i>
11:06pm – 11:09pm	Q&A
11:10pm – 11:16pm	Stable and Radiogenic Isotopic Fractionation during

11:16pm – 11:19pm	Multistage Planetary Core Formation <i>Gabriel Nathan, PhD Student, Michigan State University Earth, and Environmental Science Department</i> Q&A
11:20pm – 11:26pm	A New Canary in the Coalmine: The house sparrow (passer domesticus) as a model for studying the effects of pollution. <i>Dr. Kelly Ronald, Ph.D., Assistant Professor Hope College; Dr. Natalia Gonzalez-Pech, Ph.D., Assistant Professor Hope College; Ms. Lindsay Jankowski, Hope College; Ms. Molly McLinden, BA, Hope College; Ms. Olivia Sprys-Tellner, Hope College; Ms. Peyton Hallemann, Hope College; Mr. Jacob Bergstrom, Hope College; Ms. Linda Nduwimana, Hope College.</i>
11:26pm – 11:29pm	Q&A
11:30pm – 11:36pm	High order models for turbulent ocean-atmosphere interaction <i>Dr. Mustafa Aggul, PhD, Hacettape University; Dr. Alexander E. Labovsky, PhD, Michigan Technological University; Ms. Eda Onal, BS, Hacettape University; Mr. Kyle J. Schwiebert, MS, Michigan Technological University</i>
11:36pm – 11:39pm	Q&A
11:40pm – 11:46pm	Electrolaunch <i>Joshua L. Mehay - Business Management</i>
11:46pm – 11:49pm	Q&A
11:50pm – 11:56pm	Formation of Contact Binary Stars <i>Jenn Lau, undergraduate student majoring in Physics and Mathematics, Calvin University.</i> <i>Levi Carr, undergraduate student majoring in Physics and Mathematics, Calvin University.</i>
11:56pm – 11:59pm	Q&A
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12:00pm – 1:00pm	Lunch (Atrium)
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1:00pm – 2:00pm	Oral Presentations Session 2: “Education” <i>(Kahn Auditorium)</i> <i>Moderated by Tom Pachera, Ann Arbor Public Schools</i>
1:00pm – 1:06pm	Pathways to Explore - STEM Afterschool Enrichment <i>Elizabeth Zinck, Outreach Coordinator, ExploreHope Academic Outreach, Hope College AND Susan Ipri Brown, MSME, Director, ExploreHope Academic Outreach and Associate Professor of Engineering Instruction, Hope College</i>
1:06pm – 1:09pm	Q&A
1:10pm – 1:16pm	Activating STEM Muscles Through Space Farming

1:16pm – 1:19pm	<i>Christine Brillhart and Lisa S. Tsay MPS Space Farmer Coaches Jefferson Middle School, and Saginaw Valley State University Q&A</i>
1:20pm – 1:26pm	Astro-Huskies Multiplanetary Regolith Pursuing Husky (MuRPHy) <i>Karson Linders, Astro-Huskies Project Manager, Michigan Technological University Paul van Susante, Ph.D., M. ASCE, M. AIAA, M. ISTVS Assistant Professor Mechanical Engineering Affiliate Assistant Professor of Civil, Environmental and Geospatial Engineering, Michigan Technological University</i>
1:26pm – 1:29pm	Q&A
1:30pm – 1:36pm	A Woman's Place is in Orbit: Roger That's Female-Centered 2022 Symposium <i>Jack Daleske, Planetarium Manager, B.A., Grand Rapids Public Museum; Karen Gipson, Ph.D., Professor of Physics, Grand Valley State University; Samhita Rhodes, Ph.D., Professor of Engineering, Grand Valley State University; Rob Schuitema, B.F.A., Director of Public Programs, Grand Rapids Public Museum; Glen Swanson, M.S., Board member, Roger B. Chaffee Scholarship Fund; Deana Weibel, Ph.D., Professor of Anthropology, Grand Valley State University.</i>
1:36pm – 1:39pm	Q&A
1:40pm – 1:46pm	Energizing Our World: Pivoting between settings to impact students <i>Logyn Miller, GVSU Undergraduate Student; Chelsea Ridge M.Ed. GVSU Regional Math & Science Center; Kristofer Pachla Ph.D. GVSU Director of the CLAS Center for Experiential Education and Community Engagement; Diane Miller M.P.A., CBSP, GVSU Business & Community Outreach Coordinator</i>
1:46pm – 1:49pm	Q&A
1:50pm – 1:56pm	Growing Space Plants in an Economical Way: 'Smart' Growth Chamber Configurations for Space and Earth Application <i>Margaret E. Hitt, H.H. Dow High School; Sophie Cai, H.H. Dow High School</i>
1:56pm – 1:59pm	Q&A
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2:00pm – 3:00pm	Poster Presentations Session B (Atrium)
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3:00pm – 4:00pm	Oral Presentations Session 3: "Chemistry/Biology/Physics/Engineering" <i>(Kahn Auditorium)</i> <i>Moderated by Professor Virginia Ayres, Michigan State University</i>

3:00pm – 3:06pm	<p>Simulation and modeling of settling in polydisperse, gas-solid flows <i>Emily Foster, Ph.D.c mechanical engineering, E.I.T, Ph.D Candidate, Oakland University; Dr. Sarah Beetham, Ph.D mechanical engineering, Assistant Professor, Oakland University</i> Q&A</p>
3:06pm – 13:09pm	
3:10pm – 3:16pm	<p>Co-estimation of Parameters and State-of-Charge for Lithium-ion Battery Diagnostic: Comparative Study <i>Gabrielle Lochrie, Graduate Student, ME OU; Yongsoon Yoon, PhD, Assistant Professor, ME OU</i> Q&A</p>
3:16pm – 3:19pm	
3:20pm – 3:26pm	<p>Emitting Electrodes Effect on a Two-Stage EHD Gas Pump with Uneven Applied Voltages <i>AKM Monayem Mazumder, PhD, Associate Professor, Mechanical Engineering and Saginaw Valley State University</i> Q&A</p>
3:26pm – 3:29pm	
3:30pm – 3:36pm	<p>The Dependence of Cooling and Heating Functions on Local Radiation Fields <i>David Robinson, B.A., Graduate Student, Physics, University of Michigan</i> <i>Camille Avestruz, Ph.D., Assistant Professor, Physics, University of Michigan</i> <i>Nick Gnedin, Ph.D., Professor, Astrophysics, Fermilab and the University of Chicago</i> Q&A</p>
3:36pm – 3:39pm	
3:40pm – 3:46pm	<p>An Analysis of Organic Components in Egyptian Mummification Balms: The Old Kingdom to the Ptolemaic Period <i>Chelsea Van Buskirk, MS, Department of Chemistry at Eastern Michigan University; Ruth Ann Armitage, PhD, Professor of Chemistry, Department of Chemistry at Eastern Michigan University; Renee Stein, Chief Conservator, Michael C. Carlos Museum at Emory University</i> Q&A</p>
3:46pm – 3:49pm	
3:50pm – 3:56pm	<p>Neutral-Point-Less (NPL) Multilevel Inverter Topology with Single DC-link Capacitor: H-type Inverter <i>Mikayla Benson, Graduate Student, Electrical and Computer Engineering Department, Michigan State University</i> Q&A</p>
3:56pm – 3:59pm	
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4:00pm	Closing Comments & Adjourn (Kahn Auditorium)