RE-IMAGINING conservation

2022 PROGRAM

OCTOBER 17-18, 2022

Royal Botanical Gardens, Burlington ON

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KEYNOTE SPEAKER

Conservation Ontario – Natural Champions

REFRESHMENT BREAKS & TOUR

GEI Consultants

STUDENT POSTER COMPETITION

University of Guelph – Ontario Agricultural College, School of Environmental Design and Rural Development

LUNCHEON

Burnside

WELCOME: CHAIR'S MESSAGE

I am so thrilled to welcome you back to the refreshed, reorganized and reimagined Latornell Conservation Symposium! This is the 27th Symposium that we've held, and the first time since 2019 that we have hosted an in-person event. At the end of 2019, the steering committee decided to pause the Symposium for one year, as we looked at different ways to modernize the conference and make it more accessible for people. And we all know what happened next.

Now here we are, together again in a new location and a different world, examining the work that we do through the theme of 'Reimagining Conservation'. Through our programming over the next two days, we will explore how conservation governance, policy and operations are being re-imagined and how this shapes the future of our work for the next seven generations. What are some new tools that are being developed to improve the way we work? Should we be thinking differently about what conservation means? Are there new approaches that can help tackle these longstanding environmental challenges we face? We hope that the program this year will energize you and leave you with ideas to bring back to your work.

Thank you to the Royal Botanical Gardens for hosting us, and thank you to all the sponsors, exhibitors, students and volunteers that helped to make this event possible. A special thank you to all the Latornell steering committee members for all their hard work, dedication and enthusiasm over the past two years and going forward, as the Symposium continues to evolve to meet the changing needs of this community.

Jamie Joudrey, Chair, 2022 Latornell Symposium

LUNCHEON KEYNOTE SPEAKER

Dr. Krantzberg is Professor and lead for the Masters of Engineering and Public Policy in the School of Engineering Practice and Technology at McMaster University offering Canada's first Master's Degree in Engineering and Public Policy. Gail completed her M.Sc. and Ph.D. at the University of Toronto in environmental science and freshwaters. She worked for the Ontario Ministry of Environment from 1988 to 2001, as Coordinator of Great Lakes Programs, and Senior Policy Advisor on Great Lakes. Dr. Krantzberg was the Director of the Great Lakes Regional Office of the International Joint Commission from 2001 to 2005. In 2007 she was appointed as an adjunct faculty member of the United Nations University Institute for Water and Environmental Health and participated in the twinning of the Laurentian and African Great Lakes (principally Lake Victoria). She is currently the Canadian Cochair of the International Joint Commission's Science Advisory Board's Science Priority Committee and Canadian Cochair of the IJC's Decadal Science Strategy. She has co-authored and edited 9 books and more than 200 scientific and policy articles on issues pertaining to ecosystem quality and sustainability. Her research interests include investigating Great Lakes governance capacity, analyzing interjurisdictional co-management arrangements internationally for application to the Great Lakes regime, and methods to better integrate science and engineering in policy formulation and decision making.

Reimaging the Great Lakes 50 Years Forward

The Laurentian Great Lakes represent the largest single source of surface freshwater on the planet, at a point in time when freshwater is the single most stressed natural resource on earth. Their impact on the economies of the U.S. and Canada is immense and the Great Lakes region's economy is valued at $6 trillion per year GDP, the third largest economy in the world. Yet despite their size, they are surprisingly fragile systems and have been stressed to the breaking point for nearly a century. The size, complexity and diversity of the Great Lakes social, political, and environmental ecosystem present a major challenge for funding, organizing, and implementing an efficient, well-coordinated, and focused, basin-wide, transnational, reimagined Great Lakes. This talk will examine the threats and necessary future governance responses that will help make the Lakes Great.

8:30 AM - 10:00 AM

Watershed Management

Session 1A - Café Annex

Climate Change and Watershed Planning 101

Climate change affects all of us, and some more than others. It may seem daunting to integrate climate change into watershed planning and management, but it's easier than you think!

Hear from two conservation authorities that have started the process of integrating climate change into their watershed plans, programs, and activities using unique processes that rely on community involvement and tap into no-cost or low-cost resources. This information will enable conservation authorities of any size to begin the important and necessary work of planning for climate change.

Starting Where You Are At: Developing a Climate Change Strategy
Meredith Carter (Otonabee Conservation) &
Karen Halley (Otonabee Conservation)

Integrating Climate Change into Watershed Plans
Sharon Lam (Toronto and Region Conservation Authority) &
Yuestas David (Toronto and Region Conservation Authority)

Participant workshop (30 mins)

Water Resources

Session 1B - Room 5

How Conservation Authorities are Working Together Across the Great Lakes?

This session features several new projects underway in conservation authority watersheds to implement new technologies and approaches to address a number of different issues including runoff, flooding, and erosion.

A GIS Based Approach to Agricultural Green Infrastructure
Chris Menary (Toronto and Region Conservation Authority)

Mitigating Flood Risk in Eastern Ontario through a new Flood Risk Assessment Tool
Katherine Watson (South Nation Conservation) &
Dave Crossman (Rideau Valley Conservation Authority)

A Partnership to Develop Inherent Erosion Potential Mapping and BMP Adoption Analysis along the Southeastern Shores of Lake Huron
Chris van Esbroeck (Maitland Valley Conservation Authority) &
Laura Hopkins (Maitland Valley Conservation Authority)

10:30 AM - 12:00 PM

Watershed Management

Session 2A - Room 3/4

Mechanisms of Flooding

Has pluvial flood risk increased with an increasingly variable climate? What types of storm and snowmelt events drive watershed runoff production? What role can agriculture play in mitigating flood risk at the watershed scale? Through the analysis of long-term hydroclimatic datasets, assessment of riverine flows following watershed runoff events and the assessment of runoff ratio data in tiled catchments, this session will work to address these questions and provide insights into the complex hydrologic, climatic and physiographic factors which drive watershed streamflow.

40 Years of Hydroclimatic Change (Or Lack Thereof) Over the Lake Erie Basin
Krystal Siebert (University of Guelph)

What Produces More Runoff? A Comparison of Snowmelt, Rain-on-Snow and Rain-only Events in the Lake Erie Basin
Genevieve Ali (University of Guelph)

Can Tile Drainage Reduce Flood Risk by Increasing Soil Water Infiltration and Retention With Long-term Changes in Soil Structure?
Hida Manns (Trent University)

Water Resources

Session 2B - Room 5

Emerging Tools to Monitor Natural Resources

Our environment is complex and is constantly evolving. As environmental practitioners interested in making well-informed decisions, we also have to remain innovative and open-minded. This session will focus on two practical and forward-thinking approaches to managing natural resources which are being employed in watershed based decision making.

A Shore Thing - Hamilton Conservation Authority's Shoreline Management Plan Study
Jonathan Bastien (Hamilton Conservation Authority) &
Saifur Rahman (Hamilton Conservation Authority)

Integrated Modelling Evaluation of Land Use Change on Wetlands
Daron Abbey (Matrix Solutions Inc.),
Ron Scheckenberger (Wood PLC), &
Margot Ursic (Grounded Solutions)

Natural Heritage

Session 1C - Room 1/2

Emerging Methods in Ecological Monitoring

Ecological monitoring is critical for documenting baseline data as a reference point for ecosystem composition and health, analyzing and understanding changes over time, and monitoring effectiveness of mitigation plans to conserve or restore biodiversity. Many groups are moving beyond traditional methods of monitoring by embracing new technologies, or focussing on new types of ecological indicators. Join us to learn about some of the latest tools being used on the landscape.

Applying a Novel Analytic Approach to Bioacoustic Data to Monitor and Characterize Wetland Frog Populations in Southern Ontario
Crystal Kelly (Credit Valley Conservation)

Apakwaanajiinh Mnidoo Gamii (Bats of Georgian Bay), Year 1
Derek Morningstar (Myotistar) &
Steven Kell (Shawanaga First Nation)

Moth Diversity Analysis as a Rapid Ecological Indicator Tool
Peter Burke (GEI Consultants) &
Sarah McDonald (GEI Consultants)

Five Years of Monitoring the Benthic Invertebrate Community in the Laurel Creek Subwatershed Using Environmental DNA
Steve Hill (Dougan & Associates) &
Christina Myrdal (Dougan & Associates)

Climate Change

Session 1D - Room 3/4

Measuring Climate Impacts on Natural Heritage and Water Resources

Climate change is one of the biggest challenges of our time, with the potential to increase flooding, extreme heat, spread of pests, diseases, and invasive species. Tracking the impacts of climate change on natural heritage, water resources, natural hazards, and ultimately people, is essential to developing effective mitigation and adaptation methods. This session highlights novel projects that have tracked and forecasted the impacts of climate change, that can help inform and prioritize actions in a changing climate.

Identifying Woodlands with High Vulnerability to Climate Change in the Credit River Watershed
Laura Timms (Credit Valley Conservation)

Climate Change Impacts on Barrier Beaches and Coastal Wetlands, North Shore of Lake Erie
Peter Zuzek (Zuzek Inc.)

Community Based Climate Initiative
Nadine Perron (Magnetawan First Nation)

Watershed Management

Session 2C - Room 1/2

Natural Heritage System Planning

Natural heritage system planning focuses on the protection of natural features and their functions through the land use planning process. In order to protect these features, they must first be appropriately identified on the landscape, and integrated into municipal planning documents. This process requires engaging a diversity of stakeholders and experts, including municipalities, Conservation Authorities, First Nations, stewardship groups and provincial ministries. Our speakers will discuss their experience with working through the process of identifying natural heritage systems, and developing protection and restoration targets to build resilience into the systems while supporting the development of healthy and safe communities.

TRCA's Natural Heritage System Update
Namrata Shrestha (Toronto and Region Conservation Authority) &
Andrew Chin (Toronto and Region Conservation Authority)

Natural Heritage System Planning for Restoration and Enhancement in the Region of Peel's New Urban Areas
Kristen Harrison (North-South Environmental) &
Aaron Farrell (Wood PLC)

Haldimand County Natural Heritage System
Katharina Richter (Natural Resources Solutions Inc.)

Water Resources

Session 2D - Café Annex

Conducting Carbon Calculations with Clarity and Consistency: Using the Natural Asset Carbon Assessment Guide and Toolbox

There is growing interest in estimating carbon sequestration and storage of natural assets for climate change mitigation efforts. However, with the variety of tools, methods, and resources available, it is hard to know which one to use. This interactive workshop will present three example case studies that feature a tool, method, or resource from the toolbox. Case studies will be chosen to showcase a range of different scales (e.g. landscape, site, plot level), and natural asset types (e.g. forest, grassland, wetland). An applied exercise will follow which will help users to navigate this resource to estimate carbon sequestration and storage from natural assets.

Tatiana Koveshnikova (Credit Valley Conservation)

Fabio Tonto (Lake Simcoe Region Conservation Authority)

Noah Gaetz (Toronto and Region Conservation Authority)

1:30 PM - 3:00 PM

Watershed Management

Session 3A - Room 5

Building Partnerships

This session will provide insights, lessons learned, and model ways to reach out to various stakeholders to ensure watershed plans and watershed-wide projects are collaborative, dynamic, and account for the varied perspectives that make each watershed unique.

Shared Land Map: A New Tool to Support Indigenous Engagement
Morgan Peters (Shared Path Consultation Initiative),
David Stinson (Shared Path Consultation Initiative / Incite Planning), &
Colette Isaac (Moose Deer Point First Nation / Incite Planning)

Building Successful Partnerships
Sandra Mancini (South Nation Conservation) &
Peter Young (United Counties of Stormont Dundas and Glengarry)

Co-developing Watershed Plans for Effective Implementation: Case Studies From Toronto and Region
Namrata Shrestha (Toronto and Region Conservation Authority)

Water Resources

Session 3B - Café Annex

Innovation Solutions in Stormwater Management

This session will feature presentations that explore new treatment tools, products and models which are used in three case studies to address total suspended solids and phosphorus in both rural and urban settings.

Breaking the Mold: Replacing Traditional Stormwater Management Infrastructure with Nature-Based Low Impact Development Designs
Joshua White (GEI Consultants) &
Yuestas David (Toronto and Region Conservation Authority)

Reducing Total Suspended Solids and Phosphorus in Stormwater
Brad Griko (Clearwater Group),
Kirsten McFarlane (Greenland Consulting), &
Glenn Switzer (Town of Innisfil)

Using an Integrated 1D/2D Stormwater Model for Data-Driven Decision Making in the Context of Conservation Governance, Policy, and Operations
Monica Mazur (City of Kitchener)

3:30 PM - 5:00 PM

Watershed Management

Session 4A - Café Annex

Land Relationship Building

Stop thinking about yourself as a watershed planner. To truly re-imagine conservation and safeguard our natural environment against ever mounting threats and competing needs, action beyond business-as-usual will require us to be land relationship builders. What's the difference? Imagine a holistic approach to watershed management that prioritizes a relationship with the land rather than the use of the land. This dynamic session dares to take watershed management to a new level by prioritizing "Land Relationship Visioning", operationalizing and recognizing that One Health and Eco Health are integrated and ensuring the integration of community, economics, health, and development pressures at every level of the planning process.

Land Relationship Visioning: Incorporating Indigenous Needs and Priorities in Land Use Planning
Kassandra McKeown (Cambium Indigenous Professional Services)

One Health and Watersheds
Justina Ray (Wildlife Conservation Society Canada)

Making Waves: Integrated Watershed Management in Muskoka
Glenn Cunnington (District Municipality of Muskoka)

Water Resources

Session 4B - Room 5

Tackling Water Quality Issues Across the Great Lakes Basin

Surface water quality monitoring is critical for identifying long term trends which can affect local conditions and how we respond to them through watershed programs and strategies. This session looks at long term data from three different case studies in the Lower Thames Valley, Hamilton and Lake Simcoe watersheds and what stories they're telling us.

Green River: Addressing Cyanobacteria Blooms on the Thames River (Deshkan Ziibi)
Daniel Bittman (Lower Thames Valley Conservation Authority) &
Colin Little (Lower Thames Valley Conservation Authority)

Long Term Trends in E. coli in Tributaries Entering Cootes Paradise
Chris Polap (Hamilton Conservation Authority)

Fifteen Years of Nearshore Monitoring on Lake Simcoe: Climate Change, Invasive Species, Nutrient Decoupling, and Implications for the Great Lakes
Brian Ginn (Lake Simcoe Region Conservation Authority)

Natural Heritage

Session 3C - Room 1/2

Advancing Natural Heritage Policies

The protection of natural heritage in Ontario is coordinated through multiple levels of federal, provincial, and municipal legislation and policy. However, some of the policies and guidelines guiding conservation efforts are not keeping pace with changing legislation or the on-the-ground realities. Our speakers will discuss monitoring the effectiveness of natural heritage legislation, propose updates and modernization of outdated guidance documents, and help to clarify and streamline processes for more consistent and better-quality outcomes.

When Everything Is Significant How Do We Decide What's Important?
Tom Hilditch (Colucent Environmental Inc.)

Patterns of Species Loss and Recovery in Ontario
Dan Kraus (Wildlife Conservation Society / University of Waterloo)

Supporting Accessible, Streamlined, and Transparent Land Use Planning Processes: Halton Region's Updated Environmental Impact Assessment Guideline
Heather Ireland (Halton Region) &
Kristen Harrison (North-South Environmental)

Climate Change

Session 3D - Room 3/4

Adapting to Climate Change by Enhancing Urban Canopy

Case studies from York and Peel demonstrate the importance of maintaining and enhancing the urban canopy, as a concrete and measurable way to help adapt to the impacts of climate change, including extreme heat. Presentations will touch on topics of modelling, funding programs, outreach and community engagement, and community-based planting projects.

Adapting to Extreme Heat in Peel Region Using Green Natural Infrastructure Solutions
Heather Hewitt (Region of Peel)

Evaluating the Economic Returns of Increasing Canopy Cover To Mitigate Hot Temperatures
Jeff Wilson (University of Waterloo)

Reducing Heat Vulnerability in Priority Neighborhoods - Moving from Science to Action
Shannon Lem (Credit Valley Conservation)

Watershed Management

Session 4C - Room 1/2

Ecosystem Management

The management of natural areas and natural heritage systems requires collaboration between many partners to efficiently and cost-effectively tackle large-scale issues such as invasive species management and climate change resiliency. This session will provide case studies on invasive species management costs, approaches to management, examples of successful partnerships, building community support, and combining economic development opportunities with conservation

Working with Municipal Partners to Manage Invasive Species and Enhance Ecologically Significant Areas
Aaron Root (Credit Valley Conservation) &
Brandon Williamson (Upper Thames River Conservation Authority)

Emerging Municipal Roles in Invasive Species Management in Ontario
Colin Cassin (Invasive Species Centre)

Biosphere Regions in Ontario - A Different Approach to Conservation
Kate Potter (Canadian Biosphere Reserves Association)

Water Resources

Session 4D - Room 3/4

Conservation Authorities Leading the Way, as They Collaborate with Partners to Support Federal Efforts to Meet 2030 Ghg Reduction Targets

Conservation Ontario was able to secure $9 million through the Nature Smart Climate Solutions Fund offered by Environment and Climate Change Canada (ECCC). This has allowed 17 Conservation Authorities to collaborate with partners on over 50 projects to support Canada's efforts to meet its 2030 GHG reduction targets. This presentation will provide an overview of the program, the important role of CAs in this initiative, and an update on some of these projects. This session will conclude by providing an overview of additional opportunities to build and advance these projects through collaborative efforts.

Introduction to the Nature Smart Climate Solutions Fund
Jo-Anne Rzadki (Conservation Ontario)

Securing the St. Mary's Tract to Prevent Future Aggregate Extraction, Support Carbon Sequestration, and Protect a Core Habitat Area
Jamie Davidson (Central Lake Ontario Conservation Authority)

Promoting Carbon Storage through the Creation of Two Wetlands from Cropland within the Essex Region
Kevin Money (Essex Region Conservation Authority)

The Implementation of Cover Crops in the Lower Thames Valley Conservation Authority Soil Health Program
Chris Van Esbroeck (Maitland Valley Conservation Authority)

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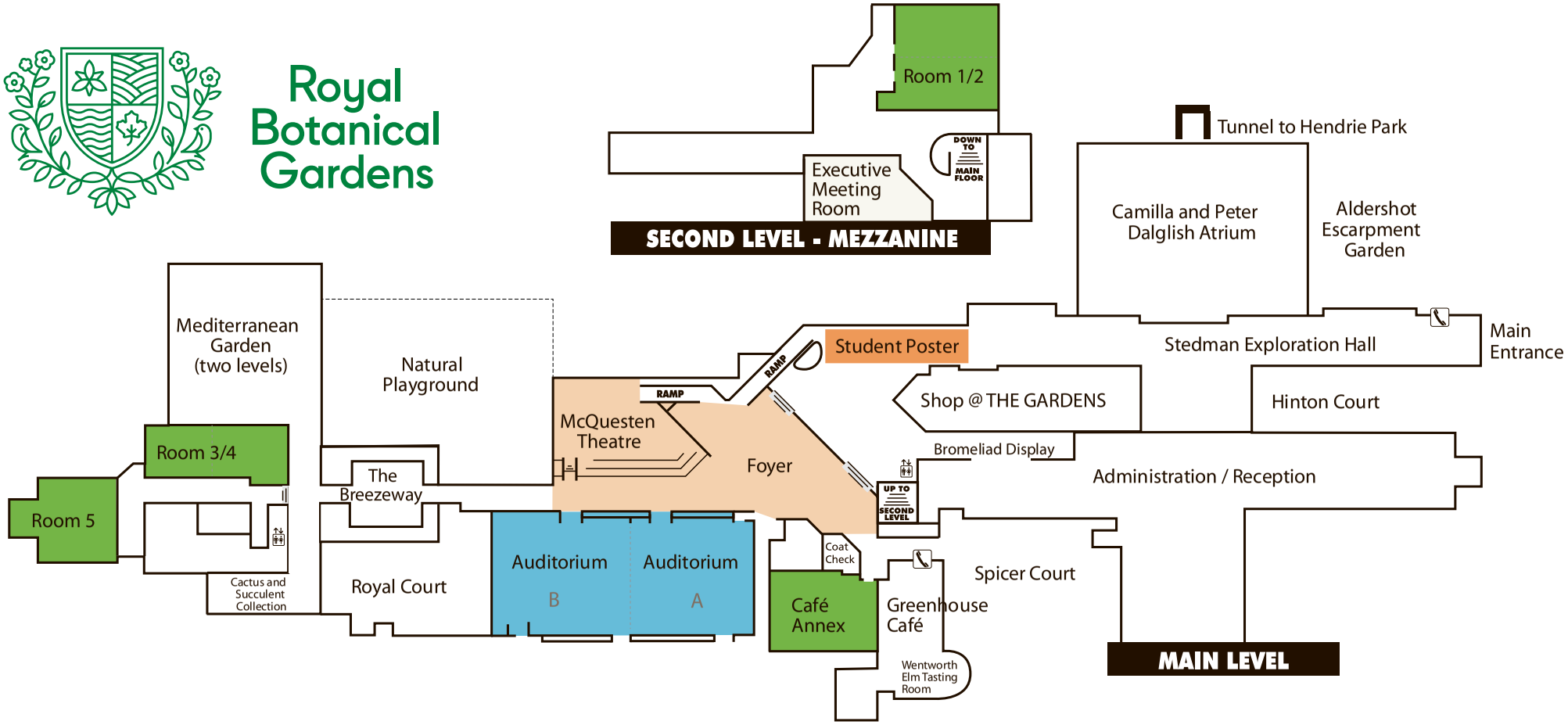

Room 5	Room 3/4	McQuesten Theatre & Foyer	Auditorium	Café Annex	Room 1/2	Student Poster
8:30 AM - 10:00 AM Session 1B	**8:30 AM - 10:00 AM** Session 1D	**10:00 AM - 10:30 AM** Refreshment Break Exhibitors	**12:00 PM - 1:00 PM** Luncheon with Keynote Speaker	**8:30 AM - 10:00 AM** Session 1A	**8:30 AM - 10:00 AM** Session 1C	**10:00 AM - 10:30 AM** Student Poster Viewing/Q & A
10:30 AM - 12:00 PM Session 2B	**10:30 AM - 12:00 PM** Session 2A	**1:00 PM - 1:30 PM** Refreshment Break Exhibitors		**10:30 AM - 12:00 PM** Session 2D	**10:30 AM - 12:00 PM** Session 2C	**1:00 PM - 1:30 PM** Student Poster Viewing/Q & A
1:30 PM - 3:00 PM Session 3A	**1:30 PM - 3:00 PM** Session 3D	**3:00 PM - 3:30 PM** Refreshment Break Exhibitors		**1:30 PM - 3:00 PM** Session 3B	**1:30 PM - 3:00 PM** Session 3C	**3:00 PM - 3:30 PM** Student Poster Voting
3:30 PM - 5:00 PM Session 4B	**3:30 PM - 5:00 PM** Session 4D			**3:30 PM - 5:00 PM** Session 4A	**3:30 PM - 5:00 PM** Session 4C	