

registrant information

**CCMA CoLD
Summit**

February 6-9 2025

OTTAWA





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We're back and excited to announce the second CCMA CoLD Summit, happening on the 20th anniversary of the CCMA, in Ottawa. We are bringing back all the favourites, including:

- the Demonstration Hall, where you can explore the newest technology brought by our vendor sponsors
- workshops and tutorials focused on core staff development

To make this year even better, we will be introducing "**Super tutorials**" (a 5 hour in-depth dive into a topic) and a hands-on small particle workshop - both at no extra cost. These will be first come, first serve with limited seats, so take advantage of the Early Bird Registration to secure your spot. And the food.... we can't forget the food!

We look forward to seeing you on February 6-9, 2025 in Ottawa, Canada at the CCMA CoLD Summit!

Caterina Di Ciano-Oliveira (CCMA Co-President)
Aja Rieger (CCMA Co-President)

Registration details:

For the CCMA CoLD Summit, the registration fee covers attendance Feb 6-9 (including HOT breakfast each morning), the opening reception on Feb 6, and the Core Networking Dinner on Feb 8. Attendees are responsible for booking their own accommodations.

When registering, you will be able to indicate attendance at one of the super tutorials and the small particle workshop, included at no extra cost. These sessions will have limited registrations and will be closed when full- so register early!

Registration Link:

<https://form.jotform.com/ccmaaccm/ccma-summit-2025---attendee-reg>



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Workshop descriptions

Join in the discussion on topics that matter to you and your core facility! Workshops will be 1.5h long and occur during the morning sessions.

WS1: Comprehensible High Dimensional Analysis for the Core, the Clinic, and the Common Person

Does high dimensional data analysis in flow have you stumped? Then this is the workshop for you! This session will highlight the common considerations for any high dimensional flow cytometry experiment and give an overview of common workflow steps.

WS2: Aligning your career with your values, passion and purpose (and what's the difference?)

We've all been told we'll live "happy lives" if we're able to follow our passion(s) and in doing so we'd find our purpose. Following this advice isn't as easy as it sounds: identifying your values takes time and introspection and that's only the first step. This workshop will go through activities to help you identify what you truly care about and give you a snapshot of YOU at this time. We will then explore how to align these values with your passion to give you greater purpose in your work life.

WS3: The Quagmire of Quantitative Confocal Microscopy

Any reasonably modern fluorescence microscope can produce beautiful images of our cells and tissues without too much effort. But how "good" are my images really? Is this the best quality and resolution I can achieve on the microscope, or could something be degrading my instrument's performance? And how quantitative are my images? If I had taken the same image yesterday (or last hour, last week, last month) would I have measured the same intensities? We will explore regular quality control steps and how they can benchmark our confocal microscope performance, which may help to catch instrumentation issues before their consequences are embedded in hundreds of users' datasets.

WS4: Practical Considerations for Spatial Multiplexing

This session will introduce spatial multiplexing, with a focus on proteomics, and will highlight available technologies. Following that, we will engage in a discussion and address technical inquiries regarding tissue autofluorescence, antibody validation, and data processing and analysis.

WS5: Effective communication and managing client expectations

In this workshop participants (junior staff to management) will learn about different communication styles and how to effectively communicate expectations to clients to manage or avoid conflict. This workshop will use real-life scenarios to find applicable strategies and solutions to common miscommunications in core facilities settings.

WS6: Chris Spring Award winner: Self-service for your troubled flow cytometer



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Is your core facility equipped to handle minor instrument repairs? With training on key maintenance tasks—such as cleaning flow cells or testing/replacing common components—you'll be prepared to keep your instruments operating smoothly and provide users with consistent, high-quality results. Extra, self-initiated QC beyond the manufacturer QC, particularly after minor repairs, can ensure consistent performance of your cytometer over time.

WS7: Cool new tools/resources in microscopy and flow

Come and explore new tools, including but not limited to:

- Cell Ontology (FluoroFinder)
- Chemical tags for microscopy (SNAP, TMP, FIAsH, Halo ...)
- Communication tools for core scientists
- And more!!

WS8: Shared Resource Lab structures and professional development opportunities

The results of the Career Development Survey will be presented, followed by a description of various models of shared resource labs. The session will highlight training programs and opportunities, with a discussion to follow.

WS9: Emerging priorities winners project presentations

Come and hear about the projects funded by the CCMA Emerging Priorities grants:

- Double emulsion droplets for multiplexing ddPCR using flow cytometry
- Towards developing a framework for standardized testing of flow cytometers

WS10: Microscopy Innovations and Global Access: Addressing Inequities

The Advanced Imaging Center (AIC) at HHMI Janelia Research Campus offers cutting-edge microscopy technologies to scientists globally through open-proposal calls, but this approach can lead to inequitable access, particularly for lower-income regions. This session will highlight AIC's leadership in bridging these gaps through initiatives like the Africa Microscopy Initiative and efforts in Latin America and Southeast Asia, aiming to strengthen scientific capacity in underserved areas. This session will include time for a group discussion.

WS11: Optimizing Histology Techniques to Maximize Tissue Preservation, Antibody Affinity and Optical Resolution

In this workshop, we will guide you on how to select the appropriate histology technique based on your experimental needs, including methods to preserve tissue, protein and RNA to perform spatial biology research. It will also cover methods to maximize resolution for brightfield and fluorescence microscopy, as well as considerations when designing an immunofluorescence panel. A panel of experts will address common challenges encountered when preparing and visualizing samples.



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WS12: Translational realities - how to move your idea into the clinic

The next big discovery is happening right next door. How do you help build the preclinical data to move the academic idea to a translatable concept? In this discussion we will go through some of the rationale and practical experiments that should be executed to help get your idea/work recognized as something that has market potential.

Tutorial descriptions

These tutorials are designed to help you tackle more advanced topics through a hands-on approach. Tutorial attendees are strongly encouraged to bring their own laptops. Tutorials will be 3h long and be held in the afternoon sessions.

T1: Exploring the Mosaic: Spectral Panel Building and Optimization

Bring your own panel! We will have an interactive session starting from a list of antigens. Panel building is a consultative process, so bring along the information you have about antigen density, experimental considerations and the gating logic/co-expression organization of the markers in your panel. Each attendee will work through FluoroFinder IntelliPanel for panel building in the first half of the session. Second half will show the step by step process from panel building through optimization for a T-cell, NK, NKT, MAIT, ILC and TCRgd immunophenotyping panel from 13 colors on the CytoFlex S to 30 colors on the Mosaic-63.

T2: Imaging and flow - a match made in heaven?

Over the past couple years, there has been an increasing number of flow platforms incorporating imaging. In this session we will explore the imaging flow technologies and data from the Cytek Amnis ImageStream, the BD FACSDiscover S8, and the Attune NXT CytPix.

T3: Advancements in FLIM technologies

The presentation portion will cover FLIM theory and its applications, including biosensors, interaction studies, unmixing techniques, label-free methods, and strategies for increasing multiplexing capabilities. Following the presentation, there will be a hands-on workshop.

*** Laptop may be required**

T4: Troubleshooting 101 - Flow Cytometry Edition: How do you know it's working? Instruments, standardization, calibration, data analysis, etc. from nano to micro

With a panel of experts, we will explore various topics in instrument setup, standardization, QC, and calibration on analyzers and sorters. Discussions will include special considerations for small particle flow. Bring your questions and weird data!

T5: Teaching and learning strategies for core facilities



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This interactive workshop will use a combination of active learning methods and collaborative discussion to: (i) define attendee's unique teaching and learning objectives, (ii) identify evidence-based strategies to address attendee's defined teaching and learning objectives, and (iii) discuss practical methods for implementing these strategies within the context of the attendees' specific teaching and learning environments. Supplemental pedagogical resources will also be provided to further support effective training via cytometry and microscopy core facilities across Canada.

T6: Mastering Multimodal Data: Spectral Flow & Image Analysis Workshop

Dive into the essentials of modern data analysis with this intensive 3-hour workshop. Part 1 kicks off with an engaging introduction to spectral flow cytometry, setting the stage for practical hands-on sessions where you'll unmix and analyze complex datasets. Part 2 shifts focus to image analysis, starting with foundational concepts and advancing to hands-on practice with cell segmentation and measurement techniques. Whether you're new to these methods or looking to refine your skills, this workshop offers a comprehensive exploration of both spectral flow and image analysis, providing valuable insights and practical experience.

*** Laptop required**

Super tutorials

Held on the last day of the conference, these sessions require pre-registration and will be capped at 20 registrants. Over the course of 5 hours, participants will dive deeply into a specific topic.

ST1: Seeking, Identifying, & Targeting Cells with High-Dimensional Analysis and Machine Learning Tools

Speakers:

Jonathan Irish, Visiting Professor, Pediatrics-Neurology, University of Colorado Anschutz Medical Campus

Caroline Roe, Cytomics Data Science Research Manager, University of Colorado Anschutz Medical Campus

Ever wondered what the difference is between a tSNE and a UMAP? Or which clustering algorithm does what? Or what this all has to do with T-REX? This tutorial will dive deep into the various high dimensional data analysis tools and give you a look "behind the curtain" so you can better understand when and how to use them. Using the [CytoLab](#) tools developed by the Irish lab, you will analyze data through an entire pipeline.

*** Laptop required**

ST2: Exploring Machine Learning and Event-Driven Microscopy

Speakers:

Teng-Leong, Chew – Director of Advanced Imaging - Janelia

Owen Puls – BioImaging Analyst, Integrative Imaging - Janelia



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This full-day super tutorial includes a primer on machine learning techniques such as classifiers, image restoration, and image translation, with hands-on application discussions. It also covers event-driven microscopy principles for optimizing imaging through real-time data feedback and features a brainstorming session on distributing technology.

*** Laptop required**

ST3: Career Development and Leadership in Core Facilities

Speaker:

Charles Hindmarch – Assistant Professor at Queen's University and Associate Director for Research at the Translational Institute of Medicine.

Brooke Ring – Associate Director of Operations, Translational Institute of Medicine (TIME) Manager, Facilities & Operations QCPU

Core facilities that house, and operate state-of-the-art infrastructure are increasingly making an impact on Canadian research. While the scientists who work in these facilities are highly trained in their field, their training and development are often overlooked because they are either not still in training (MSc/PhD/Postdoc), or not independent faculty. This workshop is designed to empower core scientists with impactful leadership skills, and a fresh vision for career development within an academic core facility setting.

Agenda

	Thurs Feb 6, 2025	Fri Feb 7, 2025			Sat Feb 8, 2025			Sun Feb 9, 2025		
	Day 1	Day 2			Day 3			Day 4		
Time										
8:00		Travel time to hotel			Travel time to hotel			Travel time to hotel		
8:30		TechieBrekkie (2x30 min)	TechieBrekkie (2x30 min)	TechieBrekkie (2x30 min)	TechieBrekkie (2x30 min)	TechieBrekkie (2x30 min)	TechieBrekkie (2x30 min)	CCMA general meeting & CoLD Summit Wrap-up (breakfast included)		
9:30										
10:00	Hands-on small particle workshop @ UOttawa flow core	Comprehensible High Dimensional Analysis for the Core, the Clinic, and the Common Person	Aligning your career with your values, passion and purpose	The Quagmire of Quantitative Confocal Microscopy	Cool new tools/resources in microscopy and flow	SRL Structures and Professional Development Opportunities	Emerging priorities winners	Seeking, Identifying, & Targeting Cells with High Dimensional Flow Analysis and Machine Learning Tools	Exploring Machine Learning and Event-Driven Microscopy	Career Development and Leadership in Core Facilities
10:30										
11:00										
11:30		Practical Considerations for Spatial Multiplexing	Effective communication and managing client expectations	Self service for your troubled flow cytometer	Microscopy Innovations and Global Access: Addressing Inequities	Histology Workshop	Translational realities- how to move your idea into the clinic			
12:00		LUNCH - not included			LUNCH - not included			LUNCH - delicious and included!!		
13:00										
13:30										
14:00										
14:30										
15:00										
15:30										
16:00		Exploring the Mosaic: Spectral Panel Building and Optimization	Imaging and flow - a match made in heaven?	Advancements in FLIM technologies	Troubleshooting 101 - Flow Cytometry Edition: How do you know it's working? Instruments, standardization, calibration, data analysis, etc. from nano to micro	Teaching and learning strategies for core facilities	Mastering Multimodal Data: Spectral Flow & Image Analysis Workshop	Seeking, Identifying, & Targeting Cells with High Dimensional Flow Analysis and Machine Learning Tools	Exploring Machine Learning and Event-Driven Microscopy	Career Development and Leadership in Core Facilities
16:30										
17:00	Opening session (Copper Rooftop)									
17:30	Ice breaker/Meet & Greet happy hour with food included with registration									
18:00										
18:30										
19:00										
19:30										
20:00		Open evening			Core Networking Dinner - included with registration					
20:30										
21:00										
21:30										

What to expect at the CCMA CoLD Summit



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At the CCMA, we think attending a conference should be much more than listening to lectures. We want to provide an interactive environment with content that is relevant to you- our flow cytometry & microscopy community! We want to provide learning and career development opportunities to grow our knowledge base and skills in facility techniques and operations to help support cutting edge research. This led to the creation of the CCMA CoLD Summit, a symposium featuring interactive, hands-on workshops and tutorials designed specifically with core facility researchers and staff in mind. These sessions will feature various formats including:

- Discussions with expert panelists
- Small group learning
- Interactive instructional sessions

These discussions will be led by core and industry leaders from across North America.

Attendance for the CCMA CoLD Summit will be capped at 125 registrants in order to promote interaction within the sessions and networking among the attendees. This is a great opportunity to get to know the other core staff from across Canada and parts of the US to establish a network of expertise to draw from in the future - because let's face it, we're all in this together!

Running in parallel to the workshops is the Demonstration Hall. Unlike a normal vendor show, all tables in the Demonstration Hall will have interactive activities for you to participate in. Whether this be demo-ing an instrument or trying out a new software, this Hall will give you the opportunity to get hands-on time with the sponsors.

What is a Techie Brekkie?

You can think of this like a Lunch 'n' Learn, but better because it comes with a full, hot breakfast. This won't be your usual continental fare but instead a hearty, balanced buffet breakfast to fuel your learning for the day (and all the caffeine you need to get your brain going). These sessions will feature 2 x 30 minutes presentations in parallel by sponsoring vendors. Breakfast is included with the cost of registration.

Networking and Social Sessions at the CCMA CoLD Summit

The CCMA CoLD Summit will kick off with an **Opening Reception** at the Copper Lounge at the Andaz Hotel- a 16th floor roof-top lounge, featuring seasonal Canadian-inspired cuisine and handcrafted cocktails served with a view of Ottawa's iconic sky-line. This opening reception is included in your registration.



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The **evening of Day 2** is free time for you to network, enjoy the local Ottawa sights, have dinner with your favorite vendor - or just take a break!

Day 3 will end with a **Core Networking Dinner**, hosted by the CCMA. This event is included in the cost of registration.

Throughout the meeting, we have built in free time to enjoy the **Winterlude activities**. Winterlude is a free Canadian winter festival hosted annually in Ottawa. During Winterlude, you can marvel at beautiful ice sculptures, skate on the world-famous Rideau Canal Skateway (a UNESCO World Heritage Site), and play till you drop in a gigantic snow playground called Snowflake Kingdom. Many other Winterlude activities—indoors and outdoors—highlight Canada's cultural, artistic and culinary diversity. Urban sites, museums and special events present special seasonal programming as well as opportunities to connect with Indigenous culture.

Location Details

We are very excited to return to Ottawa during the festive season of Winterlude and hope you will have the opportunity to explore parts of the city while you are here. We have included some information below to enhance your experience.

Winterlude 2025: <https://ottawatourism.ca/en/see-and-do/winterlude>

Byward Market: <https://www.bywardmarketsquare.com/>

Conference Hotel - Andaz Ottawa Byward Market

Situated at the heart of downtown Ottawa's historic Byward Market, the Andaz is a 200-room boutique hotel that is steps away from restaurants, bars, shops, and public transportation.

Nearby accommodations:

There are many options for accommodations in and near the Byward Market. Like in any major city, it's wise to avoid certain areas when walking late at night or early in the morning.

Traveling to Ottawa

Train - Those traveling to Ottawa from Toronto or Montreal may wish to consider taking VIA Rail to Ottawa and then connecting onto the O-Train (Line 1, westbound) to get downtown (Rideau Station). Rideau Station is located below the Rideau Shopping Centre, which is a few minutes walk from the Andaz Hotel.



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Car - Limited parking is available at the conference hotel for a fee of \$35 per night. There are also several public indoor parking garages within walking distance of the Andaz including the Byward Parking Garage and the Parking Indigo Ottawa - Market Garage.

Plane - Those traveling to Ottawa by air will arrive at the Macdonald–Cartier International Airport, which is approximately 15km from downtown Ottawa and the Andaz Hotel. The quickest options to get from the airport to downtown is Taxi or Uber. The most economical option is to take the OCTranspo bus route 97 Hurdman to Hurdman Station and then transfer onto the O-Train Line 1 to Rideau Station (westbound to downtown). Rideau station is a short walk to the Andaz Hotel. Suggestions for local airlines: WestJet, Porter, AirCanada, Swoop, Flair.



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