

**The Computer Museum  
at the  
University of Waterloo**



UNIVERSITY OF  
**WATERLOO**

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# **The Computer Museum at the University of Waterloo**

## **OUR VISION**

**The Museum's vision is to ensure an enduring recognition and understanding of the history of computing and computer science at the University of Waterloo and the broader Waterloo community, and to make such knowledge available for public education and scholarly research.**

## **OUR MISSION**

**Through its collection of artifacts, oral histories and other memorabilia, the mission of the Computer Museum at the University of Waterloo is to preserve, catalogue, and display such materials in a variety of physical and virtual environments, and to educate the University community and the general public about the impact of computing, and Waterloo's role in the development of computing.**

## **OUR VALUES**

**Central to the defining values of the Computer Museum at the University of Waterloo is respectfulness and our responsibility to our community. We endeavour to provide a diversity of historical perspectives and inclusive dialogue in our relationships with our employees, volunteers and community members. We recognize the importance of integrity and excellence in our stewardship of the legacy we maintain, and strive for accuracy and objectivity in the execution of our mission.**

**The Computer Museum at the University of Waterloo acknowledges that it exists on the traditional territory of the Attawandaron, Anishinaabeg and Haudenosaunee peoples. The Computer Museum is situated on the Haldimand Tract, the land granted to the Six Nations that includes six miles on each side of the Grand River. The Museum acknowledges the enduring presence and deep traditional knowledge and philosophies of the Indigenous people with whom we share this land.**

2024

# HIGHLIGHTS

From presentation space and offices in DC1316 and permanent remote displays in the Davis Centre and Math 3; from in-person and virtual events and an online community, the Computer Museum at the University of Waterloo has been fully engaged in achieving its mission in 2024.

Financial support from the David R Cheriton School of Computer Science in 2024 has allowed the Museum to be open daily to the public, greeting visitors and fulfilling our mission "to educate the University community and the general public about the impact of computing, and Waterloo's role in the development of computing".

With the support of excellent co-op student staff, the Museum presented one open-house event per term, and expanded its social media presence with Youtube videos and Instagram posts and reels. The Museum's remote display cases in the Davis Centre were refreshed with a retrospective on the 40th anniversary of the Apple Macintosh computer and a look at the history of portable computing devices used in education. At the request of the Office of the President, the Museum created an exhibit "Innovation and Waterloo" highlighting commercialization of Waterloo innovation.

Late in 2024, the Museum began planning for a major renovation of our presentation space in DC1316, which, when completed, will feature a glass wall of display cabinets, additional storage space and improved visibility for the Museum. Completion is expected by the end of April 2025.

**7**

In-person events  
and pop-up  
exhibits

**3**

Invited conference  
presentations

**150+**

Individual  
donors

**5,400**

Catalogued  
artifacts

**25**

Newsletter  
mailing-list  
articles

**23**

Blog posts  
& articles

**13**

YouTube  
videos

**37**

Instagram  
posts



# STRATEGIC PRIORITIES

## OUR GOALS AND OBJECTIVES

### GOAL 1 | Public presentation: open houses and exhibits

The Museum's public presentations were a great success in 2024. Going forward the Museum will strive to present one open-house or "popup" exhibit per term. These are generally held in the Davis Centre, as space permits. For the Museum's permanent exhibit space in the Davis Centre, we plan to refresh at least one exhibit space per year. In Math 3, we have a permanent exhibit of slide-rules and related artifacts. This exhibit will be maintained to ensure relevance and visual appeal.

### GOAL 2 | Governance and oversight principles

As the Museum grows, it is important that good governance principles and practices are put in place. This will ensure not only the appropriate management and use of resources, but will help to ensure continuity of the Museum and its collection.

Formal governance structure and documentation is generally a pre-requisite for applying for grants and soliciting major donations. The Museum would like to take advantage of such opportunities as they arise.

The Museum developed draft governance documents in 2024, and will continue to pursue such formal recognition in 2025.

### GOAL 3 | Community engagement and education

Community and public awareness of the Museum is essential to our vision "[to make] knowledge available for public education and scholarly research", and 2024 has been a successful year. We will continue to achieve this goal through teaching, scholarly publishing, authoring of general-interest articles and newsletters, our website, and our participation in social media such as blogging, YouTube and Instagram.

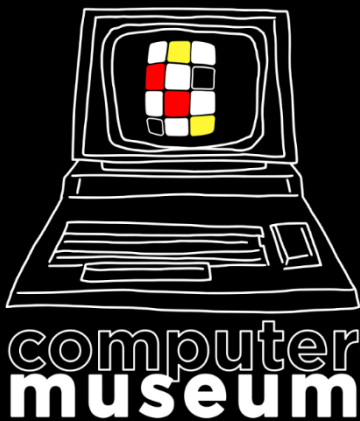


Important secondary goals in our communications strategy is to support outreach activities, when requested, within the Cheriton School of Computer Science, the Faculty of Mathematics and the University, and to support teaching and scholarly research.

#### GOAL 4 | Collection and space management

As our collection of physical artifacts grows, the need to adopt best-practice methods for managing the collection becomes crucial. Associated with the growth of the collection is the accompanying need to manage our space efficiently. The Museum thanks the Cheriton School of Computer Science for providing the Museum's office space and Welcome Centre in DC, and the Faculty of Engineering for providing the Museum with storage space, and the Department of Systems Design Engineering for the space provided in E2. The Museum further thanks IST (Networking Group) for the storage space in MC.

The Museum uses an industry-standard software package (CollectiveAccess) to manage its online catalogue and present the catalogue in a public-facing website. As with any software system, these applications need ongoing management and maintenance. The Museum gratefully acknowledges the support of IST in the operation of our catalogue and website.



#### DID YOU KNOW?

*The Computer Museum at the University of Waterloo dates back to the early 2000s, arising from the efforts of a few key individuals who had a personal interest in preserving artifacts from bygone eras of computing at Waterloo.*

<https://uwaterloo.ca/computer-museum>

# GOAL 1

## Public presentation: open houses and exhibits

Key to the Museum's mission is the curated presentation of our collection to the University community and the general public. We achieve this through fixed exhibits in our permanent exhibit space (currently the Davis Centre and Math3), and through open-house or popup exhibits. As opportunities arise, we present exhibits in the broader public community.



*Alumni Day visitors*



*Computer chess at the October open house*



*The WatCOW at the June open house*

7

Curated exhibits  
& open house events

**Hardware Day, March 5 2024**

<https://uwaterloo.ca/computer-museum/events/computer-museum-hardware-day-march-5-2024>

A hands-on event with a variety of old computers and artifacts featuring a guest speaker, Devon Merner, from UW-CSCF.

**Office of the President, March-August 2024**

Created at the request of the President's Office, an exhibit "Innovation and Waterloo", highlighting the commercialization of Waterloo innovation. Following its display in the President's Office, the exhibit was relocated to the permanent exhibit space at Davis Centre Room 2935, and recreated as a virtual exhibit on the Museum's website at <https://uwaterloo.ca/computer-museum/exhibits/innovation-and-waterloo>

**Math Alumni Weekend June 1 2024**

At the request of the Math Alumni Office, the Museum hosted several VIP tours and visits.

<https://uwaterloo.ca/computer-museum/events/alumni-weekend-june-1-2024>

**Hardware Day, June 18, 2024**

An exhibit focused on the evolution of "portable" computing, and featuring guest speaker Lanny Cox.

<https://uwaterloo.ca/computer-museum/blog/hardware-day-tuesday-june-18-2024>

**Ken Seiling Waterloo Region Museum September 28, 2024**

The Museum was invited to participate at the Ken Seiling Waterloo Region Museum on the theme of historical perspectives of artificial intelligence (AI): AI Encounters: Past, Present, and Future

This exhibit was recreated as a virtual exhibit: <https://uwaterloo.ca/computer-museum/events/artificial-intelligence-exhibit-ai-encounters-past-present>

**Open House, October 26, 2024**

<https://uwaterloo.ca/computer-museum/events/open-house-october-26-2024>

Retro gaming and a presentation from the community "KW Computer Heritage Group" on their activities. This event was held in conjunction with the Faculty of Science Open House, which provided for significant cross-disciplinary activity.

**Portable Computing Exhibit December 2024**

Theme: the evolution of portable computing in education, on display at Davis Centre 2935, and the virtual exhibit

<https://uwaterloo.ca/computer-museum/exhibits/converging-design-portable-productivity-dc-2935>





# GOAL 2

## Governance and oversight principles

The Museum operates informally within Cheriton School of Computer Science, which has been generous with its financial support, providing budget for the hiring of a co-op student in the role of Museum Assistant, an operational budget for day-to-day expenses, and providing the Museum's office space and its ongoing renovation.

The Museum is preparing a framework document to govern its operation. Using the model of the Waterloo Earth Science Museum within the Faculty of Science, the Museum has prepared a draft governance document for consideration and approval.

There are funding opportunities available for museums such as Computer Museum at the University of Waterloo (e.g the IEEE History Committee is currently exploring funding and networking opportunities for small, technology-focused museums). Such funding organizations generally require that there exist formal, documented governance with well-defined accountability. For example, the Government of Ontario Community Museum Operating Grant requires applicants to adhere to strict standards relating to governance, collections management, human resources, and so on. The Museum would like to be in a position to apply for such funding, to support special-purpose acquisitions and targeted restoration projects.

# GOAL 3

## Community engagement & education

The Museum uses a variety of recurring communications channels to inform its community about activities and to promote participation in its events, including a website, a blog, a public-facing portal to our artifact cataloging system, a direct-email newsletter, and social media, notably YouTube and Instagram.

In addition to these regular recurring channels, in 2024, Museum associates authored academic (refereed) papers, presented at academic events and authored informal (unrefereed) articles, contributing to the scholarly mission of the Museum and informing the broader community of our activities.

As part of the Museum's mission, the Museum's artifact collection is used to support teaching. In 2024 this is primarily in undergraduate courses offered by the Centre for Science, Technology and Values (CSTV) within the Faculty of Engineering.



# 5,400

*The Museum's online catalog, viewable at <https://computermuseum.uwaterloo.ca/documents> over 5,400 individual artifacts.*

## Websites and social media

The Museum hosts two distinct websites: <https://uwaterloo.ca/computer-museum/>, which presents general information and specialized content and links for the Museum, and <https://computermuseum.uwaterloo.ca/> which is a public portal view of our artifact catalogue, where (as of writing) over 5,400 individual artifacts are catalogued.

The general website hosts a blog (<https://uwaterloo.ca/computer-museum/blog>), which has articles featuring recent acquisitions, interesting artifacts in the Museum's collection, or historical facts about computing, or other items of general interest. In 2024, the blogging activities, 23 articles in all, were done mostly by the Museum's co-op students.

The Museum also uses an opt-in mailing list <https://lists.uwaterloo.ca/mailman/listinfo/uwcomputermuseum> which published 25 articles in 2024.

In 2024, the Museum focussed its social media efforts on two channels:

- Instagram: <https://www.instagram.com/uwcomputermuseum> (requires login credentials)
- YouTube: <https://www.youtube.com/@UWComputerMuseum> (no credentials required)

## Conferences, publishing and presentations

In 2024, Museum staff were active in conference presentations and publishing.

Professor Campbell of Systems Design Engineering presented at one conference:

- Campbell, Scott M. *Bootstrapping a University-Based Museum of Computing: From Unsanctioned and Unrecognized to a Stateful Home*. In 2024 IEEE Canadian Conference on Electrical and Computer Engineering (CCECE) - History of Technology - Abstracts, Kingston ON, 2024.

Four publications/presentations were produced in 2024.

- Campbell, Scott M. A Brief History of Computing, Seeing Possibilities and Rewards in Computer Science (SPARCS), May 2024.
- Campbell, Scott. "Bootstrapping a University-Based Museum of Computing: From Unsanctioned and Unrecognized to a Stateful Home." IEEE Canadian Review, Summer 2024.
- Scott Campbell and Grove, Trevor: *The three "P's" behind the UW Computer Museum*, UW Retirees Association "WATTimes" newsletter: [https://uwaterloo.ca/retirees-association/sites/default/files/uploads/documents/wattimes-2025-spring\\_0.pdf](https://uwaterloo.ca/retirees-association/sites/default/files/uploads/documents/wattimes-2025-spring_0.pdf)
- *Q&A with the founders of the Computer Museum* appearing the Faculty of Mathematics "Math e-ties" alumni newsletter, Winter 2024: <https://uwaterloo.ca/math-alumni-newsletter/winter-2024/feature/qa-founders-computer-museum>

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Blog and mailing-list communications

5

Conference & publications

## Teaching support

The Museum's collection is used in the curriculum of several undergraduate courses offered by the Centre for Science, Technology and Values (CSTV)<sup>1</sup>. In 2024, these courses were:

- **STV 100: Society, technology and values—an introduction;** instructor Scott Campbell
- **STV 202: Design and society;** instructor Cameron Shelley
- **STV 210: The computing society** (cross-listed with **HIST 212**); instructor Scott Campbell
- **STV 302: Information technology and society;** instructor Scott Campbell or Cosmin Munteanu

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Undergraduate  
courses supported

STV 210 makes use of artifacts regularly -- generally every class. The other courses use artifacts on an *ad hoc* basis as suits the course material.

The Museum's artifact collection is also used to support the SPARCS program offered by the Centre for Education in Mathematics and Computing (CEMC) in the Faculty of Mathematics.

Looking forward, the Museum would like to broaden its applicability to other academic courses and programs. For example, the Knowledge Integration program in the Faculty of Environment includes a third-year group project to design an exhibit, and could draw on our artifacts. There are multiple courses in the Faculty of Arts relating to the history of computing, networks, and information that could do the same. We also have a growing collection of video games that might be of interest to the Games Institute.

## Networking and community

The Museum has established relationships with community organizations that are aligned with its mission.

Museum associates are active participants in the Waterloo-Wellington Museum network, providing expertise and best-practice information for museum management.

The Museum has established a relationship with the Waterloo community organization Computer Heritage Group, whose members can provide expertise on restoration projects and generally provide technical expertise.

At the June 2024 Hardware Day event, we welcomed a guest speaker from the community, Lanny Cox, who gave a talk on the history of DEC (Digital Equipment Corporation) and his custom-built PDP-11 simulator.

The Museum welcomed VIP visitors in 2024:

- Robert J. Sawyer (A Canadian science fiction author and winner of the Nebula, Hugo and Aurora awards)
- David R. Cheriton (A UW alumnus, entrepreneur, early investor in Google and donor to the Cheriton School of Computer Science)

<sup>1</sup> Up to 2024, these courses were offered as an STV Option; starting in 2025 they will be offered as an STV Diploma.



- David & Linda Cornfield (A UW alumnus in engineering, Microsoft employee, early investor in Amazon)

As a consequence of departmental office relocation, Museum associates were involved in 2024 with dispersal of material belonging to Professor Don Cowan and the Computer Systems Group. This resulted in a large donation to the Museum plus a large donation to the University Archives (Special Collections and Archives (SCA)). A corollary to this activity was the establishment of a new working relationship between the Museum and SCA which helps each organization to manage their collections and focus archival activity.

### **Student employment and training**

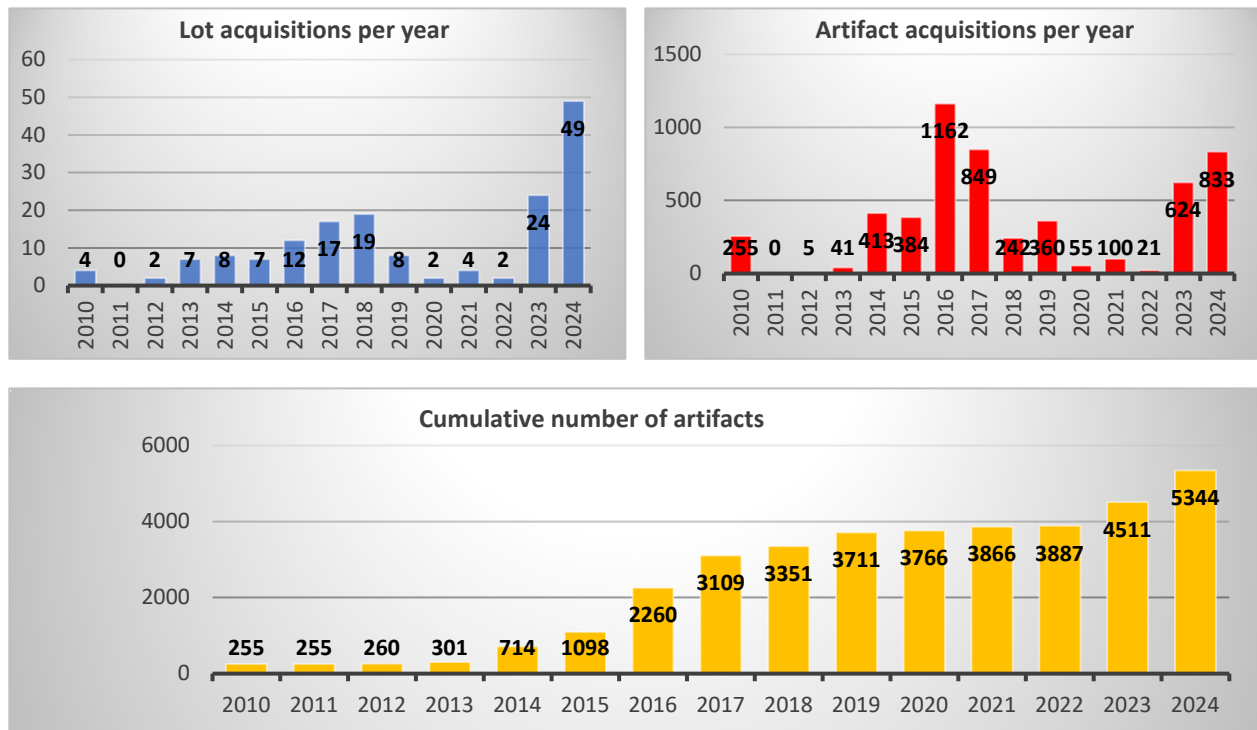
The Museum considers co-op students to be an integral part of its staff component. The co-op program is a fundamental part of the educational history and mission of the University of Waterloo and the Museum believes that it can play a valuable role in the training, education and development of Waterloo students. The Museum gratefully acknowledges the support of the Cheriton School of Computer Science in providing the operating budget to facilitate co-op student employment.

The Museum participates in the Waterloo community *High School Co-operative Placement Program*, providing placements for students throughout the school year.

# GOAL 4

## Collection and space management


Collection and space management was, in 2024, a challenge for the Museum. While it is the mantra of every museum curator and director to lament the lack of space, the Computer Museum was particularly challenged: as awareness of the Museum grew, so too did the volume of artifact donations. The charts below highlights the growth of the Museum's collection over the years (2010 to 2024).



(A *lot* is a single donation and may contain many *artifacts*. Note that 2016 was a significant year in which a relatively small number of lots contained many artifacts.)

The Museum gratefully acknowledges the Faculty of Engineering for providing a new storage space in RCH.

The Museum has reached an inflection point in its ability to accept donations, and the acquisition strategy will need to become significantly more selective. In 2024 the Museum created an "Acquisitions Committee" to oversee proposed donations and to create policy governing acquisitions. The Museum expects that the growth in the number of artifacts will diminish in the future.



2024

# MEASURING SUCCESS

In principle, museums such as the Computer Museum at the University of Waterloo measure their success with just a few broad categories of performance indicators or metrics, such as operational (e.g. community engagement) and financial (e.g. fundraising). In its current state of development, many of these standard metrics are not applicable to the Museum. Nonetheless, it will be worthwhile to use the Museum's 2024 activities to establish some baseline values.

## Performance Indicators

The Museum proposes to use the following performance indicators:

**Collection acquisition and management**, measuring the size of the artifact collection and its management

**Community engagement**, measuring visitors to the museum, attendees at events and online visitors of websites, blogs and social media

As noted in the discussion of Collection and Space Management, the Museum's collection has grown to the point where acquisition will, by necessity, be more selective. The Museum will focus its collection management on qualitative improvements of the existing artifacts, such as targeted restoration projects.

## Key Performance Indicators (KPIs) for Community Engagement

The Museum proposes to use the following KPIs to measure its community engagement performance:

**In-person visits** to the Museum presentation space and to events/open houses. For 2024, the count is based on the voluntary sign-in sheet in the Museum office. Precise numbers for attendance at open houses and events are not available for 2024. It is a goal for 2025 to improve both of these measurements.

**Website visitors**, including the main website, the blog sub-site and the public catalogue website. The Museum enabled Google Analytics (GA) for its main website (including the blog site) on April 1, 2024. As experience is gained with GA in 2025, the Museum expects to be able to draw valuable insights into the efficacy of its website.

**Mailing list activities**, including the number of subscribers and the number of mailings per year.

**Social media activity**, including the number of "followers" (subscribers) and the number of posts.

The following measure the Museum's performance for 2024 and will serve as a baseline for future measurement.

## SOCIAL MEDIA – YOUTUBE

- *13 videos*
- *23 subscribers*
- *4627 views (as of March 28, 2025)*

## VISITORS

- *248 in-person visitors to the Museum office*

## MAILING LIST

- *99 subscribers*
- *25 mailings in 2024*

## WEBSITE

- *Per Google Analytics since April 1, 2024:*
  - *2,854 total users in 4,411 sessions*
  - *406 blog viewers*

## SOCIAL MEDIA – INSTAGRAM

- *37 posts*
- *84 followers*
- *19 reels with over 11,800 views*



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FACULTY OF MATHEMATICS

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