

ARIA 2022 | EXHIBITOR LIST

Industrial Exhibitors

Location: Atrium (Upper Level)

Booth # 1

Entrepreneur First

Booth # 4

Walmart

Booth # 5

Hoffmann-La Roche Limited

Booth # 6 & 7

SOTI

Booth # 12, Auditorium Concourse (Lower Level)

Advanced Micro Devices (AMD)

Departmental Exhibitors

Location: Atrium (Upper Level)

Booth # 2

Masters of Financial Insurance (MFI), U of T

Booth # 3

Dept. of Computer Science, U of T

Dept. of Comp Sci, Research Stream

Location: Atrium (Upper Level) & Auditorium Concourse (Lower Level)

Booth # 1, Atrium (Upper Level) (Karim Hamade)

Maia Partner Project

Teaching chess engines how to teach humans

Booth # 2, Atrium (Upper Level) (Tom Ginsberg)

Detectron: A Learning Based Hypothesis Test for Harmful Covariate Shift

We tackle the problem of automatically assessing if we can trust machine learning systems in new environments

Booth # 3 (Natalie Ashgriz, Akiki Liang, Eva Šmuc)

Compassionately

Detecting and mitigating hate speech online

Booth # 4 (Tanea S Agrawaal, Samar Sabie)

Mobilizing Urban Mobility: Forms and Politics of Mobility and Space Justice in Urban Toronto

The design and implementation of tools that enable urban mobility planning and democratic participation

Booth # 5 (Alexey Khrabrov)

JITServer: Disaggregated JIT Compiler for the JVM

Improving JVM performance in the cloud with remote JIT compilation

Booth # 6 (Dash Carrera)

The Animatronics Workshop

Bringing history and culture to life with kid-built robotic theatre

Booth # 7 (Yifang Pan)

VOCAL: Vowel and Consonant Layering for Expressive Animator-Centric Singing Animation

Automatic generation of parameterizable lip-sync animation from singer audio

MSc in Applied Computing (MScAC)

Location: Auditorium Concourse & Auditorium (Lower Level)

Advanced Micro Devices (AMD)

Booth # 14 (John Zhou)

Overlapping Gradient GEMMs in PyTorch Backward Pass with Multi-Stream Execution

Parallel execution of weight and activation gradient GEMMs allows speedup in backward pass in the ROCm PyTorch framework

Booth # 15 (Yash Prakash)

Automated Code Fix Suggestions

Code change detection and fix proposal for software systems.

Booth # 16 (Cassandra Li)

Bridging the Gap Between Robustness and Accuracy with Partial Robustness

Booth # 17 (Runqing Zhang)

Improving Federated Learning on Heterogeneous Data with Adaptive Local Weight Interpolation

A Robust Federated Learning Algorithm Against Non-IID Client Data Distribution

Booth # 13 (Subhayan Roy)

Automatic Optical Character Recognition (OCR) Pre-Processing and Recognition for Custom Gameplay Text

Machine Learning Solution to recognize colored and styled text found in gameplay images.

ArcadeJolt

Booth # 3 (Amaar Afzal)

Enhancing Web-based applications and Generating Content with GPT-3 Model

Our research aims to answer if it is possible for a machine to have human-like thinking and creativity in producing automatically generated content

Arima

Booth # 35 (Weiwen Zhao)

Deep Learning Based Approaches to Synthetic Data Generation

Synthetic data generation, as a procedure to infer high-resolution, harder-to-collect information from many low-resolution, easy-to-collect sources.

Bank of Canada

Booth # 25 (Charita Koya)

The Evolution of Economic Discourse in the Business Outlook Survey

From 10 years of economic stability to pandemic variability

Cedience

Booth # 65 (Danny Yuan)

Predicting Indicated Diseases from Drug Labels

Using Deep Learning and Natural Language Processing to Extract Information from Unstructured Text

CIBC

Booth # 54 (Siphelele Danisa)

Neural Networks for Observable Market Data Validation

Deep Learning models demonstrate high capacity to meet the high demands of financial modelling in financial institutions and businesses.

Conflux Technology

Booth # 59 (Zhanwen Tan)

Ionian Web3 Storage: Study of Arweave's mining algorithm to design a decentralized storage system

A low-cost decentralized storage system that provides high availability, flexibility & high throughput

CPP Investments

Booth # 48 (Carey LeMesurier)

Enhancing Private Market Data to Improve Performance of Predicting Startup Success

Data Imputation, target rebalancing, and feature engineering were applied to an existing Startup Success Prediction model, which ultimately improved PR-AUC by 12%.

Crossing Minds

Booth # 18 (Teerapat Chaiwachirasak)

Meta-Learning Gaussian Processes for Faster Hyperparameter Optimization

Reducing hyperparameter optimization time by transferring knowledge from past optimization runs using rank-weighted Gaussian process ensemble (RGPE).

Booth # 19 (Aditya Kharosekar)

Calculating Similarity Between Bipartite Graphs for Auto-ML in Recommender Systems

A step towards automatic machine learning: Using dataset meta-features and graph embeddings to help build recommendation models faster

Booth # 20 (Shreyansh Banthia)

Quantifying and modulating popularity bias in very-large recommendation datasets

Recommending popular items isn't always a bad thing: A user-focused view on addressing popularity bias

Deloitte

Booth # 51 (Sarah Hafez)

Interpretable Market Segmentation with Time-Series Clustering

A quick, simple, and interpretable framework to segment time-series data

Deloitte

Booth # 52 (Wen Li)

Acquisition AI

Applying predictive models to automatically sort postal codes for potential acquisition rate

Deloitte

Booth # 53 (Ziyue Xu)

Temporal Neural Networks with Association Rules for Retail Demand Forecasting

A two-dimensional temporal neural network using sales data of product pairs with high associations to forecast demand in the retail industry

Dewpoint Therapeutics

Booth # 63 (Shujun Yan)

Channel-Agnostic Pretraining for Microscopy

Applying pretrained ImageNet models on microscopy images

Booth # 64 (Beiqin Zeng)

Removing Confounders in Neural Networks for Microscopy

DNEG (Double Negative)

Booth # 42 (Yijie Guo)

Reconstructing 3D Meshes from Neural Radiance Fields

We reconstruct 3D meshes from NeRF implicit volumes via extracting point clouds with estimated normals.

DNEG (Double Negative)

Booth # 43 (Ellery Wang)

Automated Blendshape Generation for Facial Animation

Free your actors, empower your artists

Electronic Detection Lab, Fudan University

Booth # 4 (Zhima Lin)

Exploring Three Methods of Bolt Looseness and Fracture Detection: Capacitive Sensing, Acoustic Emission Blind Separation, and Computer Vision

Secure the operation of hydropower plants

ForeQast Technologies Ltd.

Booth # 32 (Astral Cai)

A Quantum-Hybrid Algorithm to Solve the Vehicle Routing Problem with Time Windows

Exploring the application of quantum technology in route optimization

Fusion Analytics

Booth # 57 (Emily Zhu)

Recursive LDA Topic Modelling for 'Similar' Short Texts

A hierarchical topic model aimed to extract and represent data from short responses such as surveys, reviews, and comments.

Geotab Inc.

Booth # 21 (Yifeng Ge)

Weight Detection of Heavy-duty Vehicles

Binary Classification of Vehicle's Cargo Weight Using Machine Learning

Booth # 22 (Dianna Kan)

Distributed Machine Learning Model Deployment Platform

Design and Implementation of a Deployment Platform to serve Machine Learning Models in a Distributed Manner

Booth # 23 (Mengyang Liu)

Research and Implementation of Data Quality Improvement Algorithms for Vehicle Streaming Data Analytics

Cross-Language and Cross-Platform Streaming Data Processing

Booth # 27 (Shanning Liu)

Multi Sources and Sinks: An Adaptive Stream/Batch Big Data Ingestion Solution

We propose a cloud-based big data ingestion architecture that is stable and functional by utilizing Kafka and its dynamic extensive Kafka connectors to adapt to various data sources/sinks and two ingestion methodologies: stream and batch.

Booth # 28 (Yichao Yang)

An In-Memory Database Solution for Industrial Telematics Data At Large-Scale

An In-Memory Database service with Apache Ignite for Geotab Vehicles Telematics Based on Internet of Things (IoT) Big Data Environment.

Hypatia System

Booth # 46 (Yi Zhao)

Hypatia-Learn

State of the Art Mathematics Learning and Tutoring System

ICICI Bank

Booth # 55 (Kaihua Sun)

Defaulter Prediction with Alternate Data

Using Alternate Data to discover underlying trustworthy customers

Kindred

Booth # 61 (Junjiang Li)

Exploration Guided Nonrigid-Body Manipulations

Mastering the bottle flipping challenge and more with standard industrial robotic arms

Layer 6

Booth # 66 (Zhaoyan Liu)

Zero-shot Text-to-Image Generation via Amortizing GAN Inversion

Faster zero-shot generation with no existing dataset

Booth # 67 (Aslesha Pokhrel)

Multimodal learning with Transformer for sparse and irregular data

We propose a Transformer based model for sparse time series that utilizes an input binning scheme to aggregate the time series inputs.

LG Electronics Canada, Inc.

Booth # 68 (Nikhil Verma)

Multi-turn Image Manipulation using Text guidance

Fascinating story of expedition from random dots to Images

Loblaw Digital

Booth # 29 (Yang Qu)

Inventory availability forecasting for PC Express

Using Machine Learning to elevate online shopping experience: no more disappointment about the out-of-stock notification at the last minute.

Meta

Booth # 36 (Yihan Duan)

Continual Learning via User Mediation for Decentralized Agent Aggregation

Using dynamic and multimodal contexts for smart recommendations.

Metabob

Booth # 58 (Haoxuan Shi)

Exploring faulty code with artificial intelligence

Topic modelling on faulty software code to organize, explain, understand and summarize them.

Microsoft Turing

Booth # 47 (Omkar Dige)

Dialogue Generation for AI Assistants Using Web Search

Enabling AI assistants to generate dialogue using external knowledge from the web.

Modiface

Booth # 37 (Kin Chau)

A Color Classifier for Virtual Hair Product Try-On

Improving color classification through the use of annotator confusion matrix and semi-supervised learning

Booth # 38 (Cong Wei)

Learning Ephemeral-Sparse Attention for Efficient Neural Networks

Sparsifier-Learning Ephemeral-Sparse Attention for Efficient Neural Networks

NerveX Neurotechnologies

Booth # 69 (Filip Miscevic)

Mobile Seizure Detection

Towards Data-Driven, Personalized Seizure Treatment

Nexxt Intelligence Inc.

Booth # 24 (Santosh Kolagati)

An Interpretable Unsupervised Clustering Algorithm for Understanding Consumer Utterances

A robust and unique unsupervised clustering algorithm for deriving insights from market research data such as consumer survey responses using state-of-the-art natural language processing techniques.

Booth # 25 (Yuxiao Sun)

Discourse Representation Framework for Consumer NLP

An Information Seeking Agent

Nureva Inc.

Booth # 1 (Boyi Ma)

Machine Learning Techniques for Speech Enhancement in Audio Conferencing Systems

Capabilities and limitations of machine learning for real-world audio applications

Ohashi Lab – Immuno Oncology Group (PMH)

Booth # 70 (Arvin Azarmina)

Using single-cell CITE-seq data, to find strange connections in lung cancer patients

Analyzing cells in the extracted tumor to see the relations and changes of different cells and their genes in this environment.

Booth # 71 (Yuyi Ding)

Immune-modulatory and T cell landscapes of Melanoma, Lung, Ovarian and Breast cancers, and their association with tumor genotype.

Characterization of immuno-regulatory and T cell landscapes in Melanoma, Non-Small Cell Lung Cancer, notably Ovarian, and Breast Cancer

Pearson Canada Inc.

Booth # 45 (Jinda Huang)

Speech Enhancement and Recognition with Generative Adversarial Network

Upsampling 8 KHz audio signals to 16 KHz with NU-GAN

Pelmorex Corp

Booth # 33 (Bingzhang Zhu)

Contextual Targeting for Online Advertising

Audience targeting without relying on third-party cookie data

Recursion Pharmaceuticals

Booth # 75 (Vasudev Sharma)

Characterizing cellular phenotypes with self-supervised learning

Phenotypic drug discovery relies on extracting meaningful biological signals from cellular imaging experiments. Many of these datasets do not have robust labels for training supervised image representation models. Here, I explore the use of self-supervise

Robert Bosch Inc.

Booth # 60 (Tianyu Hu)

Lifelong Learning Strategies for Mobile Service Robots

Strategies to allow mobile service robots to improve performance and adapt to user preferences continuously.

Samsung AI Center - Toronto

Booth # 72 (Seyed Ahmad Abdollahpouri Hosseini)

Multimodal Procedure Understanding

Using unsupervised methods to parse better flow graphs from recipes

Booth # 73 (Weiming Ren)

Data-Efficient Self-supervised Learning for Video Action Recognition

Bridging the gap between state-of-the-art action recognition models and commercial products

Booth # 74 (Fengjia Zhang)

Efficient Flow-Guided Multi-frame Fence Removal

Different background regions that are visible from different views are fused together to reconstruct a single fence-free image.

Scotiabank

Booth # 56 (Diljot Singh)

Document Verification Using Visual Question Answering

Developing a general document understanding model that can respond to natural language queries.

Scrawlr Development Inc.

Booth # 39 (Bowen Yang)

High-Throughput Linguistic Content Comparison System

The Efficient Copy-Paste Detection Mechanism for Social Media.

Snowflake

Booth # 40 (Yutian Feng)

Taking the First Steps Towards Connecting Providers and Consumers in Cloud Services

This project takes the first steps toward building a framework to connect providers and consumers, allowing consumers to share log files with providers on an as-needed basis.

SOTI

Booth # 4 (Wenyue (Elaine) Deng, Zixuan (Patrick) Pan)

An Enhanced Surveillance System for Facility Security

Real-time Semantic Based Human Tracking and Identification

Booth # 5 (Soroush Farghadani)

Autonomous Navigation for Small UAVs in Indoor GPS-denied Environments

Imagine a world where drones can take off, fly, conduct a task, and land autonomously while you are enjoying your coffee on a cold day.

Booth # 6 (Pranav Gupta)

UAV-based 3D Multi Object Detection for Indoor Applications using DCNN

Estimating geometry, pose and localization of multiple objects and mapping in a 3D point cloud for autonomous indoor navigation using a UAV

Booth # 8 (Mallika Singh)

WYSIWYG Overlay tool for generating custom PDF templates

Creating a PDF Generation tool with WYSIWYG Overlay to build PDF templates using fully automated SNAP apps

Booth # 9 (Yilai Tang)

Data Communication Optimization between Mobile Devices and Servers

Minimize data costs across a fleet of thousands of mobile devices could save a company millions of dollars

Booth # 10 (Weiqing Wang)

Methods of Predicting User Dialogue Act

A transformer-based classification model for the intent of user utterances in text-to-SQL settings

Booth # 11 (Yining Zhu)

calculation and prediction of battery capacity using data-driven models based on large-scale real-world data

Use machine learning and deep learning algorithms to accurately estimate and predict battery capacity

Booth # 7 (Parul Saini)

Evaluating Impact of Data-Centric Approaches on Robustness

A study on making Text-to-SQL systems robust to syntactic and lexical variations in text

SRA Staffing Solutions

Booth # 26 (Rowshni Usha)

Study of Biases in Artificial Intelligence for IT Recruitment

Research for Fair and Fast Hiring

Surgical Safety Technologies

Booth # 76 (Tianshu Zhu)

A Transformer Based Approach to Automated Identification of Surgical Safety Checklists

To segment videos with different SSC steps (including briefing, timeout, debriefing, etc.) delineated by start and end times using a single-shot, anchor-free, transformer-based TAL approach.

Talka

Booth # 30 (Zhongkang Guo)

Multi-modal machine learning for business-critical insights in video conversations

Use machine learning method to know customers better

Booth # 31 (Tongzi Wu)

Multi-modal Machine Learning for Business-critical Insights in Video Conversations

Machine learning models that identify smile and interruption events in online meetings.

Tenyks

Booth # 34 (Shea Cardozo, Jose Gabriel Islas Montero)

Explainer Divergence Score

Evaluating Neural Network Explanations Using Information Theory

Unity Health Toronto

Booth # 77 (Siyuan Shang)

Forecasting Patient Flow Pressures with Machine Learning Models at St. Michael's Hospital

Machine learning technique is a feasible way to improve health care system efficiency.

Vanguard Investments Canada

Booth # 49 (Deepkamal Kaur Gill)

Automated Identification of Financial Arbitrage Opportunity

A machine learning-based framework for identifying financial arbitrage opportunities

Booth # 50 (Ruijing Zeng)

Leveraging Few-shot Learning and Interactive Workflow for Controllable Text-to-image Generation

We leverage Stable Diffusion as our backbone, Textual Inversion to learn a concept in a few-shot fashion and an interactive workflow for text-to-image generation.

Wealthsimple

Booth # 62 (Qingyang Yu)

Graph Neural Network Helps Identify Users for Cross-selling

GNN could learn the underlying risk tolerance information behind the network and generate users' portfolio of the social graph for cross-selling.

XLSCOUT

Booth # 41 (Hongyi Ding)

Extracting images from patent PDF files: Distinguishing text from images with pretrained deep neural network

Extracting only images from patent files are feasible with python modules and deep neural network.

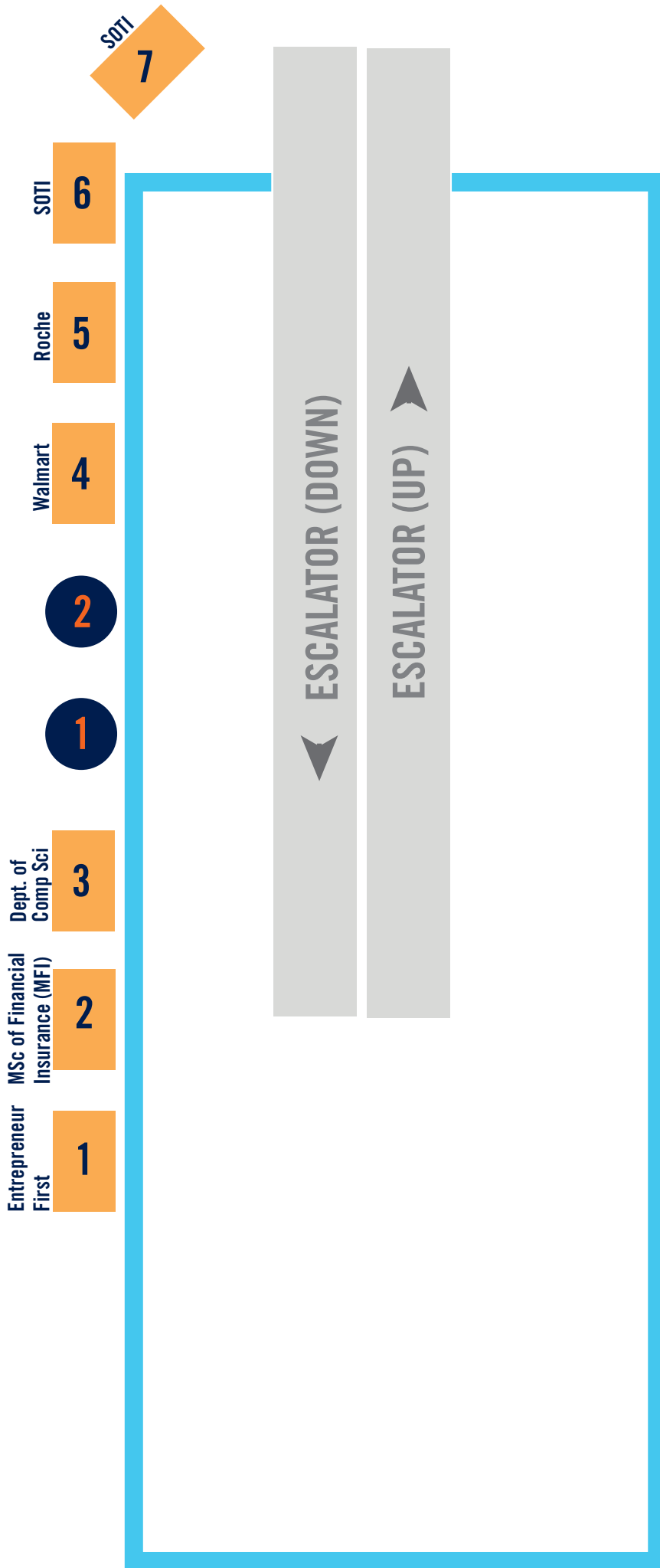
College St.






REGISTRATION
(name badges, drink tickets, swag)

Atrium

(Main Level)



Legend:


-  MSc in Applied Computing (MScAC) students
-  CS Research Stream (MSc, PhD) students
-  Company & Departmental Exhibitors

University Ave.

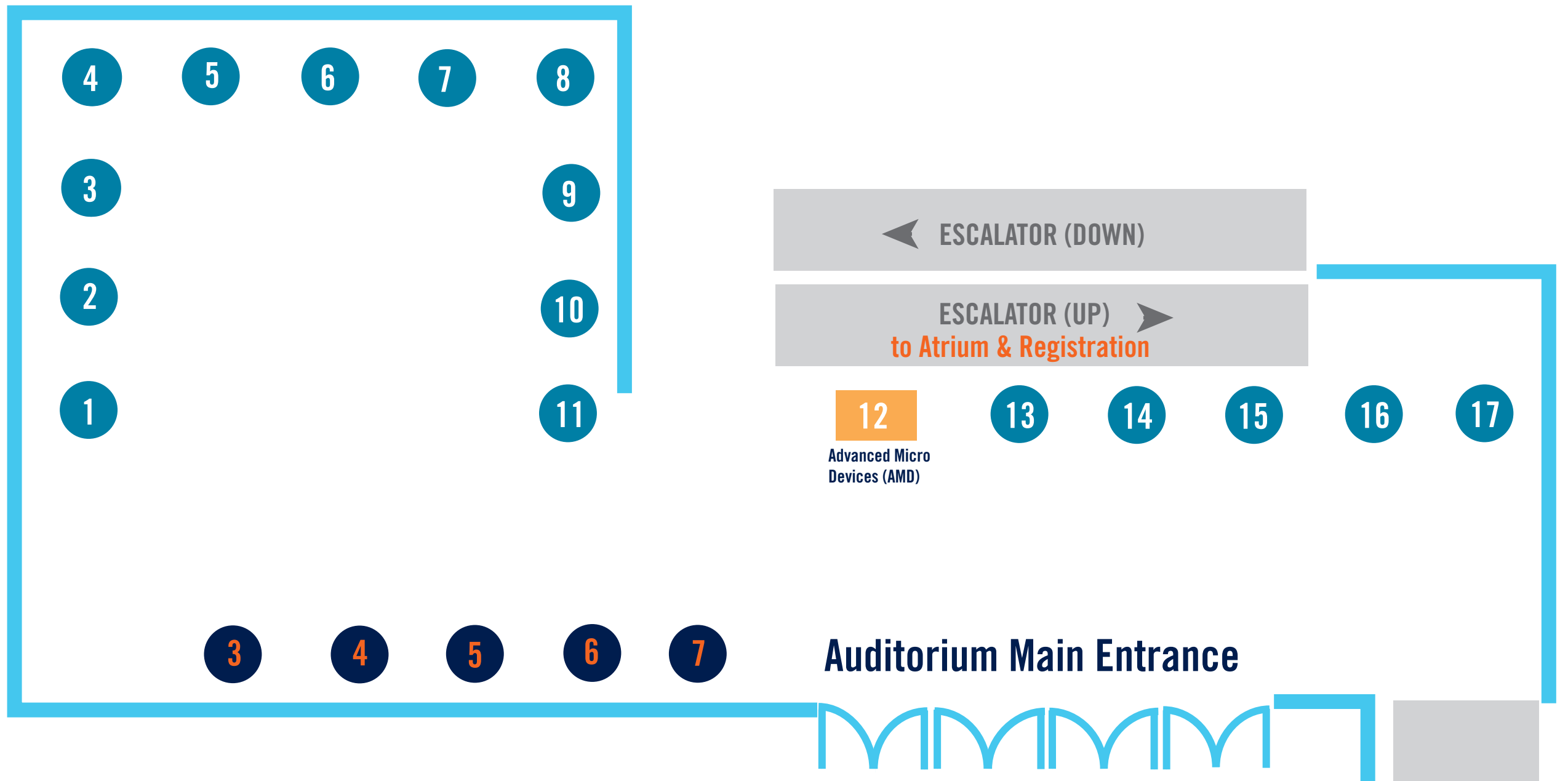
University Ave.

College St.

Legend:

-  MSc in Applied Computing (MScAC) students
-  CS Research Stream (MSc, PhD) students

Auditorium Concourse (Lower Level)



AV CONTROL

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

BAR

STAGE

Auditorium (Lower Level)