# Agenda

## Summit — Tuesday May 17

7:30 am - 7:00 pm Registration

7:30 am - 9:00 am Coffee and Pastries

9:00 am - 11:10 am

### Welcome, Keynote and General Session

Mission City Ballroom B1-5

INTRODUCTION

**A View from the Summit *(Part 1)***

**Jeff Bier**, ***Founder, Edge AI and Vision Alliance***

KEYNOTE

**Event-Based Neuromorphic Perception and Computation: The Future of Sensing and AI**

**Ryad Benosman**, ***Professor, University of Pittsburgh, and Adjunct Professor, CMU Robotics Institute***

GENERAL SESSION

**How Do We Enable Edge ML Everywhere? Data, Reliability and Silicon Flexibility**

**Zach Shelby**, ***Co-founder and CEO, Edge Impulse***

11:10 am - 11:25 am Break

**11:25 am - 12:30 pm Morning Sessions**

Technical Insights I | Technical Insights II

Fundamentals | Business Insights

12:30 pm - 8:00 pm Technology Exhibits
Expo Hall

12:30 pm - 1:30 pm Lunch
Expo Hall

**1:30 pm - 3:10 pm Afternoon Sessions**

Technical Insights I | Technical Insights II

Fundamentals | Business Insights

Enabling Technologies I | Enabling Technologies II

Enabling Technologies III

3:10 pm - 4:15 pm Break

**4:15 pm - 5:55 pm Afternoon Sessions**

Technical Insights I

Fundamentals | Business Insights

Enabling Technologies I | Enabling Technologies II

Enabling Technologies III

6:00 pm - 8:00 pm Technology Exhibits Reception
Expo Hall

**6:00 pm - 8:00 pm Evening Events**

6:00 pm - 6:30 pm
Edge AI and Vision Product of the Year Awards
Expo Hall ET-3

6:30 pm - 7:30 pm
Women in Vision Reception
Expo Hall ET-1

## Summit — Wednesday May 18

7:30 am - 6:00 pm Registration

7:30 am - 9:00 am Coffee and Pastries

9:00 am - 10:00 am

### Welcome and General Session

Mission City Ballroom B1-5

INTRODUCTION

**A View from the Summit *(Part 2)***

**Jeff Bier**, ***Founder, Edge AI and Vision Alliance***

GENERAL SESSION

**Powering the Connected Intelligent Edge and the Future of On-Device AI**

**Ziad Asghar**, ***Vice President of Product Management, Qualcomm Technologies Inc.***

10:00 am - 6:00 pm Technology Exhibits
Expo Hall

10:00 am - 10:15 am Break

**10:15 am - 10:45 am Morning Sessions**

Technical Insights I | Technical Insights II

Fundamentals | Business Insights

**10:50 am - 12:30 pm**

Technical Insights I | Technical Insights II

Fundamentals | Business Insights

Enabling Technologies I | Enabling Technologies II

Enabling Technologies III

12:30 pm - 1:30 pm Lunch
Expo Hall

**1:30 pm - 3:10 pm Afternoon Sessions**

Technical Insights II

Fundamentals | Business Insights

Enabling Technologies I | Enabling Technologies II

Enabling Technologies III

3:10 pm - 4:15 pm Break

**4:15 pm - 5:55 pm Afternoon Sessions**

Technical Insights II

Fundamentals | Business Insights

Enabling Technologies I | Enabling Technologies II

Enabling Technologies III

**4:50 pm - 5:55 pm**
Vision Tank Start-Up Competition
Theater (Upstairs)

# Deep Dive Days

*Separate Registration Required*

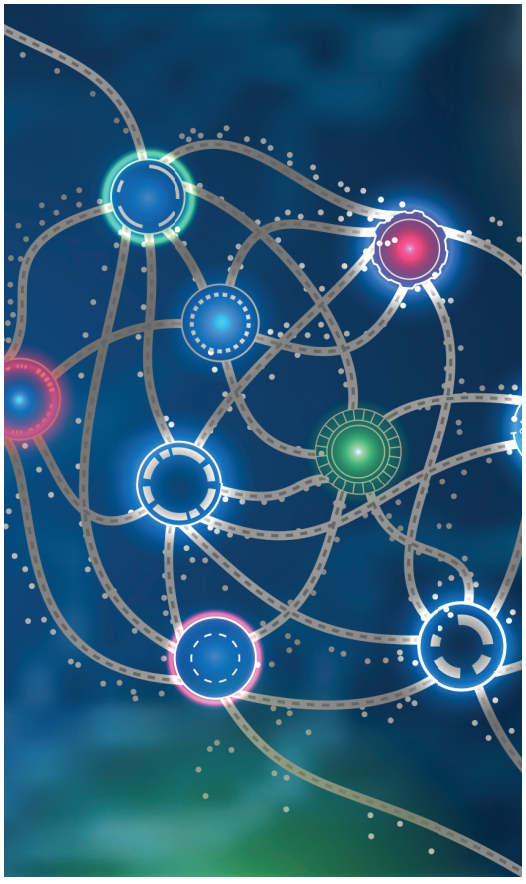
## Monday | May 16

### Qualcomm

**1:00 pm - 2:30 pm or 3:00 pm - 4:30 pm**
Room 209/210

#### Getting Your Machine Learning Algorithm Running on the Snapdragon Mobile Platform

This session will introduce attendees to the workflow of identifying machine learning algorithms for their applications and steps to get those algorithms to run on a mobile device in a power-efficient manner. Attendees of this hands-on session will leave with a good understanding of the tools provided by Qualcomm and the path to achieving the performance level they need for their AI workloads. The same session will run at two times (1:00 pm - 2:30 pm and 3:00 pm - 4:30 pm).



## Thursday | May 19

### EDGE IMPULSE

**9:00 am - 12:00 pm** | Room 209/210

#### Develop and Deploy Advanced Edge Computer Vision—Fast!

Deploying advanced vision AI models on embedded systems doesn't need to be complex or time-consuming. Join us in this hands-on session where attendees will walk through two workshop examples of deploying vision-based models—each taking under one hour using the Edge Impulse machine learning development platform. In the first part of the session, attendees will learn how to collect a high-quality dataset to train and deploy real-time object detection on low-power microcontrollers. In the second part of the session, attendees will construct a multi-stage machine learning pipeline for pose classification.

### SYNOPSYS®

**12:00 pm - 3:00 pm** | Room 203/204

#### Optimize AI Performance and Power for Tomorrow's Neural Network Applications

AI applications—including automotive vision and lidar, digital still cameras, surveillance, smartphones—are driving the need for more efficient neural network processing. The trick is getting GPU-level performance within an embedded power and cost budget. This session covers Synopsys' new Neural Processing Units (NPUs) IP based on a novel architecture and trusted software tools which significantly improve hardware utilization, support the latest neural network trends and scale from battery-powered devices to L3-L5 autonomous driving. We will present inference benchmarks showing performance and power comparisons versus leading GPUs. We will also introduce the evolution of our MetaWare software toolkit to accelerate time to market, and we'll demonstrate this new NPU solution.

### intel

**3:00 pm - 5:30 pm** | **Reception** 5:30 pm - 7:30 pm | Room 209/210

#### Intel AI Developer Expo—Let's Build Something Wonderful Together

Industries of all shapes want to introduce new edge solutions. They need you to make this happen, and Intel and our partners are here to help. Join Intel's experts to learn about the latest Intel AI technologies and participate in hands-on tutorials, 1:1 conversations, and collaboration that will redefine the way we make wonderful happen together. You will participate in discussions focused on solving real-world problems with AI, cracking the codes, and collaborating and building relationships with your peers to enable the next wave of exciting innovations. Sure, you'll get to learn about Intel's developer tools and the silicon advances: OpenVINO, DevCloud, Edge Software Hub, CPU, Intel Xeon, Movidius, etc… but every conversation and presentation will be about the solutions you are creating today and into the future. If that's not enough, come for the food, drinks, and fun! From 5:30 - 7:30 pm, join us for a fun, casual outdoor reception.

# Keynote

**Following Jeff Bier's opening remarks, "A View from the Summit" (9:00 am - 9:30 am on Tuesday and Wednesday), join us for our Keynote and General Sessions!**

**9:30 am - 10:40 am**

## Tuesday

## Event-Based Neuromorphic Perception and Computation: The Future of Sensing and AI


### Ryad Benosman

*Professor, University of Pittsburgh, and Adjunct Professor, CMU Robotics Institute*


We say that today's mainstream computer vision technologies enable machines to "see," much as humans do. We refer to today's image sensors as the "eyes" of these machines. And we call our most powerful algorithms deep "neural" networks.

In reality, the principles underlying current mainstream computer vision are completely different from those underlying biological vision. Conventional image sensors operate very differently from eyes found in nature, and there's virtually nothing "neural" about deep neural networks.

Can we gain important advantages by implementing computer vision using principles of biological vision?

Professor Ryad Benosman thinks so.

Mainstream image sensors and processors acquire and process visual information as a series of snapshots recorded at a fixed frame rate, resulting in limited temporal resolution, low dynamic range and a high degree of redundancy in data and computation. Nature suggests a different approach: biological vision systems are driven and controlled by events within the scene in view, and not—like conventional techniques—by artificially created timing and control signals that have no relation to the source of the visual information.

The term "neuromorphic" refers to systems that mimic biological processes. In this talk, Professor Benosman—a pioneer of neuromorphic sensing and computing—will introduce the fundamentals of bio-inspired, event-based image sensing and processing approaches, and explore their strengths and weaknesses. He will show that bio-inspired vision systems have the potential to outperform conventional, frame-based systems and to enable new capabilities in terms of data compression, dynamic range, temporal resolution and power efficiency in applications such as 3D vision, object tracking, motor control and visual feedback loops.

### About Ryad Benosman

Ryad Benosman is a Professor at the University of Pittsburgh and an Adjunct Professor at the CMU Robotics Institute. He received the M.Sc. and Ph.D. degrees in applied mathematics and robotics from the University Pierre and Marie Curie in 1994 and 1999, respectively. He is widely recognized as a pioneer and visionary in neuromorphic event sensing and processing.

Dr. Benosman's primary research goal is to understand the algorithms and mathematics that underlie cortical computation, with the aim of creating new mathematical models and replicating them as functional neuromorphic silicon devices. Dr. Benosman runs a unique research laboratory that dramatically changes the conventional approach to engineering in this field. He records brain activities to derive new mathematical models that can be used to replicate the relevant portions of the brain in hardware. This work is seen as a new paradigm of applied neuroscience that merges several traditionally separate fields, such as mathematics, neurosciences, engineering, medicine and hardware design. Dr. Benosman's work has led to new bioinspired models for AI techniques and sensors that are widely used in academia and industry. He has authored more than 200 peer-reviewed papers and 25 patents, which together form the basis of the field of neuromorphic processing and cognition.

Another important aspect of Dr. Benosman's research is applying these technologies for use as interfaces to the human brain. His group has developed several generations of neural implants and optogenetic stimulation devices that are currently being used in clinical trials. More recently, he has been applying his work to decoding movement intentions from motor cortical neural recordings.

Dr. Benosman has launched several companies that utilize his group's innovations. These include Pixium Vision (retina prosthetics), Prophesee (neuromorphic event-based cameras), ThinkLink (motor cortex intention decoding to restore mobility for tetraplegic patients), Gensight Biologics (optogenetics stimulation technologies to restore vision for blind patients) and AthenAI (event computation and sensor fusion).

# General Sessions

**Following Jeff Bier's opening remarks, "A View from the Summit" (9:00 am - 9:30 am on Tuesday and Wednesday), join us for our Keynote and General Sessions!**

**10:40 am - 11:10 am**

## Tuesday

### How Do We Enable Edge ML Everywhere? Data, Reliability and Silicon Flexibility

Zach Shelby

*Co-founder and CEO, Edge Impulse*

In this talk, Zach Shelby, Co-founder and CEO of Edge Impulse, reveals insights from the company's recent global edge ML developer survey, which identified key barriers to machine learning adoption, and shares the company's vision for how the industry can overcome these obstacles.

Unsurprisingly, the first critical obstacle identified by the survey is data. But the issue isn't simply a lack of massive datasets, as is often assumed. On the contrary, the biggest opportunities in ML will be enabled by highly custom, industry-specific and even user-specific data. We need to master data lifecycle and active learning techniques that enable developers to move quickly from "zero to dataset."

The real and perceived inability of today's ML algorithms to reach the ultra-high accuracy needed in industrial systems is another key barrier. New techniques for explainable ML, better testing, sensor fusion and model fusion will increasingly allow developers to achieve industrial-grade reliability.

Finally, in order to accelerate ML adoption in embedded products, we must recognize that most developers can't immediately upgrade their systems to use the latest chips—a problem that is compounded by today's chip shortages. To enable ML everywhere, we have to find ways to deploy ML on today's silicon, while ensuring a smooth transition to new devices with AI acceleration in the future.

#### About Zach Shelby

Zach Shelby is Co-founder and CEO of Edge Impulse, where he and his colleagues are on a mission to enable the ultimate development experience for machine learning on embedded devices for sensors, audio and computer vision, at scale. Zach was co-founder of the ground-breaking company Sensinode, where he was CEO and CTO before its acquisition by ARM. At ARM he served as Vice President of Marketing and Director of Technology for Internet of Things. He is an active investor and advisor for tech startups, including CubiCasa (PropTech), Augumenta (AR), Petasense (Industrial IoT) and Walkia (LED lighting). Zach founded the Micro:bit Foundation in 2016 to bring the brilliant educational work of the BBC to children and teachers around the world. Micro:bit has been used by millions of young people in 50+ countries. Zach is a pioneer in the use of IP and Web technology in low-power networks via 6LoWPAN and CoAP standards development, and is co-author of the book "6LoWPAN: The Wireless Embedded Internet". Zach was awarded the Nokia Foundation Award in 2014 for his work on the Internet of Things.

**9:30 am - 10:00 am**

## Wednesday

### Powering the Connected Intelligent Edge and the Future of On-Device AI

Ziad Asghar

*Vice President of Product Management, Qualcomm Technologies Inc.*

Qualcomm is leading the realization of the "connected intelligent edge," where the convergence of wireless connectivity, efficient computing and distributed AI will power the devices and experiences that you deserve.

In this talk, we'll explore some of the key challenges in deploying AI across diverse edge products in markets including mobile, automotive, XR, IoT, robotics and PCs—and some of the important differences in the AI requirements of these applications.

We will also identify unique AI features that will be needed as physical and digital spaces converge in what is now called the "metaverse". We will highlight key AI technologies offered within Qualcomm products, and how we connect them together to enable the connected intelligent edge.

Finally, we'll share our vision of the future of on-device AI—including on-device learning, efficient models, state-of-the-art quantization and how Qualcomm plans to make this vision a reality.

#### About Ziad Asghar

Ziad Asghar is Vice President of Product Management at Qualcomm Technologies Inc. (QTI). He leads Snapdragon roadmap planning and application processor technologies, covering all smartphone platform products. Ziad drives the definition of products, ensuring that our products lead in technology and enable best-in-class user experiences while making tradeoffs between features, power, performance and cost. He leads application processor technologies including artificial intelligence, camera, graphics, CPU, audio, video and security. He has more than 20 years of experience in the wireless semiconductor industry where he has held a broad set of leadership positions from R&D to product management. Ziad holds an MBA from UCSD and master's degrees in electrical engineering from Purdue University and Southern Methodist University.

# Tuesday Sessions Overview

= Invited presentation

## Technical Insights I
Mission City Ballroom | B1-5

11:25 am - 11:55 am **T1T04**
**System Imperatives for Audio and Video AI at the Edge**
*Chris Rowen, VP of AI Engineering for Webex Collaboration, Cisco*

12:00 pm - 12:30 pm **T1T05**
**Comparing ML-Based Audio with ML-Based Vision: An Introduction to ML Audio for ML Vision Engineers**
*Josh Morris, Engineering Manager, DSP Concepts*

## Technical Insights II
Mission City Ballroom | M1-3

11:25 am - 11:55 am **T2T04**
**Representing Fourier Transforms and Advanced Signal Processing as Convolutional Neural Networks**
*Cagatay Dikici, Senior Research Manager, Imagination Technologies*

12:00 pm - 12:30pm **T2T05**
**Putting Activations on a Diet—Or Why Watching Your Weights Is Not Enough**
*Steve Teig, Founder and CEO, Perceive*

## Fundamentals
Room 209/210 (Upstairs)

11:25 am - 12:30 pm **FT04**
**Introduction to Computer Vision with Convolutional Neural Networks**
*Mohammad Haghighat, Senior AI Software Product Manager, Intel Corporation*

**12:30 pm – 1:30 pm Lunch in the Expo Hall**

## Deep Dive
Room 209/210 (Upstairs)

*Separate Registration Required*

# Monday
May 16

1:00 pm - 2:30 pm
or 3:00 pm - 4:30 pm
**Getting Your Machine Learning Algorithm Running on the Snapdragon Mobile Platform**
*Presented by: Qualcomm*

1:30 pm - 2:00 pm **T1T06**
**Open Standards: Powering the Future of Embedded Vision**
*Neil Trevett, President of the Khronos Group and Vice President of Developer Ecosystems, NVIDIA*

2:05 pm - 3:10 pm **T1T07**
**Strategies and Methods for Sensor Fusion**
*Robert Laganiere, CEO/Professor, Sensor Cortek*

1:30 pm - 2:00 pm **T2T06**
**Compound CNNs for Improved Classification Accuracy**
*Spyros Tragoudas, Professor and School Director, Southern Illinois University Carbondale*

2:05 pm - 2:35 pm **T2T07**
**Knowledge Distillation of Convolutional Neural Networks**
*Federico Perazzi, Head of AI, Bending Spoons*

1:30 pm - 2:35 pm **FT06**
**Understanding DNN-Based Object Detectors**
*Azhar Quddus, Senior Computer Vision Engineer, Au-Zone Technologies Inc.*

2:40 pm - 3:10 pm **FT08**
**Fundamentals of Training AI Models for Computer Vision and Video Analytics Applications, *Part 1***
*Ekaterina Sirazitdinova, Data Scientist, NVIDIA*

**3:10 pm - 4:15 pm Break - Be sure to visit the Technology Exhibits in the Expo Hall!**

4:15 pm - 4:45 pm **T1T09**
**Fireside Chat: Embedded Vision in Robotics, Biotech and Education— A Conversation with Dean Kamen**
*Dean Kamen, Founder, DEKA Research and Development*

4:15 pm - 4:45 pm **FT09**
**Fundamentals of Training AI Models for Computer Vision and Video Analytics Applications, *Part 2***
*Ekaterina Sirazitdinova, Data Scientist, NVIDIA*

4:50 pm - 5:55 pm **FT10**
**Ensuring Quality Data for Deep Learning in Varied Application Domains: Data Collection, Curation and Annotation**
*Gaurav Singh, Perception Lead and System Architect, Nemo @ Ridecell*

**Don't miss the Technology Exhibits Reception 6:00 pm - 8:00 pm for food, drink and demos in the Expo Hall!**

Session codes (e.g., T2W3) allow for quick searching in our event app!

# Tuesday

## Business Insights
Theater (Upstairs)

11:25 am - 11:55 am **BT04**
**Seeing the Future: 7 Decisions to go from Idea to Successful Scale Business**
*Stefan Heck, Chief Executive Officer and Founder, Nauto*

12:00 pm - 12:30 pm **BT05**
**Interview: Designing a Visual AI-Enabled Power Tool to Augment Human Capabilities: Lessons Learned**
*Alec Rivers, Co-Founder, Shaper Tools*

## Enabling Technologies I
Expo Hall ET-1

## Enabling Technologies II
Expo Hall ET-2

## Enabling Technologies III
Expo Hall ET-3

**12:30 pm – 1:30 pm Lunch in the Expo Hall**

1:30 pm - 2:00 pm **BT06**
**What Happens When Your Speed of AI Innovation Exceeds Your Ability to See the Regulatory Challenges Ahead?**
*Robert Cattanach, Partner and Cybersecurity Team Leader, Dorsey & Whitney, LLP*

1:30 pm - 2:00 pm **E1T06**
**Empower Your Edge Device Using NetsPresso—No AI Engineer Required!**
*Tae-Ho Kim, Co-Founder & CTO, Nota AI*

1:30 pm - 2:00 pm **E2T06**
**A Platform Approach to Developing Networked Visual AI Systems**
*Nathan Wheeler, Chairman and CEO, Network Optix*
*Tony Luce, Vice President - Product Marketing, Network Optix*

1:30 pm - 2:00 pm **E3T06**
**High-Efficiency Edge Vision Processing Based on Dynamically Reconfigurable TPU Technology**
*Cheng C. Wang, Senior Vice President and Co-Founder, Flex Logix*

2:05 pm - 2:35 pm **BT07**
**Privacy: A Surmountable Challenge for Computer Vision**
*Susan Kennedy, Assistant Professor of Philosophy, Santa Clara University*

2:05 pm - 2:35 pm **E1T07**
**Optimization Techniques with Intel's OpenVINO to Enhance Performance on Your Existing Hardware**
*Ryan Loney, Technical Product Manager, Intel Corporation*
*Ansley Dunn, Product Marketing Manager, Intel Corporation*

2:05 pm - 2:35 pm **E2T07**
**Arm Cortex-M Series Processors Spark a New Era of Use Cases, Enabling Low-Cost, Low-Power Computer Vision and Machine Learning**
*Stephen Su, Senior Product Manager, Arm Inc.*

2:05 pm - 2:35 pm **E3T07**
**Autonomous Driving AI Workloads: Technology Trends and Optimization Strategies**
*Ahmed Sadek, Senior Director of Engineering, Qualcomm*

2:40 pm - 3:10 pm **BT08**
**Ask the Ethicist: Your Questions about AI Privacy, Bias and Ethics Answered**
*Susan Kennedy, Assistant Professor of Philosophy, Santa Clara University*

2:40 pm - 3:10 pm **E1T08**
**Designing the Next Ultra-Low-Power Always-On Solution**
*Amol Borkar, Director of Product Management and Marketing Tensilica Vision & AI DSPs, Cadence*

2:40 pm - 3:10 pm **E2T08**
**Seamless Deployment of Multimedia and Machine Learning Applications at the Edge**
*Megha Daga, Sr. Director of Product Management, AIoT, Qualcomm*

2:40 pm - 3:10 pm **E3T08**
**Robotics and Machine Vision for Smart Factories with Xilinx Kria SOMs**
*Chetan Khona, Director of Industrial, Vision, Healthcare & Sciences Markets, AMD*

**3:10 pm - 4:15 pm Break - Be sure to visit the Technology Exhibits in the Expo Hall!**

4:15 pm - 4:45 pm **BT09**
**The Future of Retail is Here, and It's Powered by Embedded Computer Vision**
*Will Glaser, Founder and Chief Executive Officer, Grabango*

4:15 pm - 4:45 pm **E1T09**
**Programming Vision Pipelines on AMD's AI Engines**
*Kristof Denolf, Principal Engineer, AMD*
*Bader Alam, Director, Software Engineering, AMD*

4:15 pm - 4:45 pm **E2T09**
**Combining Ultra-Low-Power Proximity Sensing and Ranging to Enable New Applications**
*Armita Abadian, Senior Technical Marketing Manager, Imaging, Americas, STMicroelectronics*

4:15 pm - 4:45 pm **E3T09**
**Human-Centric Computer Vision with Synthetic Data**
*Alex Thaman, Chief Software Architect, Unity*

4:50 pm - 5:20 pm **BT10**
**Focus on Value, Not Valuation: A Crash Course in VC Trends and Fundraising in 2022**
*Todd Poole, Director, Venture Investments, HPE Pathfinder*

4:50 pm - 5:20 pm **E1T10**
**A Novel Packet-Based Accelerator for Resource-Constrained Edge Devices**
*Sharad Chole, Chief Scientist & Co-Founder, Expedera*

4:50 pm - 5:20 pm **E2T10**
**Deploying Visual AI on Edge Devices: Lessons From the Real World**
*Luc Chouinard, AI Specialist & Design Architect, Teledyne Imaging*

4:50 pm - 5:20 pm **E3T10**
**A Flexible Software Ecosystem and Marketplace for Hybrid AI Vision Solutions**
*Bastian Steinbach, Head of Software Product Management, Basler*

5:25 pm - 5:55 pm **BT11**
**Building Embedded Vision Products: Management Lessons From The School of Hard Knocks**
*Phil Lapsley, Vice President, Edge AI and Vision Alliance*

5:25 pm - 5:55 pm **E2T11**
**Build Smarter, Safer and Efficient Autonomous Robots and Mobile Machines**
*Manisha Agrawal, Product Marketing Manager, Texas Instruments*

**Don't miss the Technology Exhibits Reception 6:00 pm - 8:00 pm for food, drink and demos in the Expo Hall!**

# Wednesday Sessions Overview

= Invited presentation

## Technical Insights I
Mission City Ballroom | B1-5

10:15 am - 10:45 am **T1W03**
**How Transformers are Changing the Direction of Deep Learning Architectures**
*Tom Michiels, System Architect, DesignWare ARC Processors, Synopsys*

10:50 am - 11:20 am **T1W04**
**Nested Hierarchical Transformer: Towards Accurate, Data-Efficient and Interpretable Visual Understanding**
*Zizhao Zhang, Senior Research Software Engineer and Tech Lead, Cloud AI Research, Google*

11:25 am - 11:55 am **T1W05**
**Unifying Computer Vision and Natural Language Understanding for Autonomous Systems**
*Mumtaz Vauhkonen, Lead Distinguished Scientist: Head of Computer Vision - Cognitive AI - AI&D, Verizon*

## Technical Insights II
Mission City Ballroom | M1-3

10:15 am - 10:45 am **T2W03**
**COVID-19 Safe Distancing Measures in Public Spaces with Edge AI**
*Ebi Jose, Senior Systems Engineer, Government Technology Agency of Singapore (GovTech)*

10:50 am - 11:20 am **T2W04**
**A Cost-Effective Approach to Modeling Object Interactions on the Edge**
*Arun Kumar, Perception Engineer, Nemo @ Ridecell*

1:30 pm - 2:00 pm **T2W07**
**Using Kubernetes to Speed Development and Deployment of Edge Computer Vision Applications**
*Rakshit Agrawal, Vice President of Research and Development, Camio*

2:05 pm - 2:35 pm **T2W08**
**Data Versioning: Towards Reproducibility in Machine Learning**
*Nicolás Eiris, Machine Learning Engineer, Tryolabs*

2:40 pm - 3:10 pm **T2W09**
**Incorporating Continuous User Feedback to Achieve Product Longevity in Chaotic Environments**
*Erik Chelstad, CTO & Co-Founder, Observa*

4:15 pm - 4:45 pm **T2W10**
**Building Machine Learning Solutions with Cloud Services**
*Ali Osman Örs, Director, AI ML Strategy and Technologies, Edge Processing, NXP Semiconductors*

4:50 pm - 5:20 pm **T2W11**
**Responsible AI and ModelOps in Industry: Practical Challenges and Lessons Learned**
*Krishnaram Kenthapadi, Chief Scientist, Fiddler AI*

## Fundamentals
Room 209/210 (Upstairs)

10:15 am - 11:20 am **FW03**
**MLOps: Managing Data and Workflows for Efficient Model Development and Deployment**
*Carlo Dal Mutto, Director of Engineering, Airbus*
*Konstantinos Balafas, Head of AI Data, Airbus*

11:25 am - 12:30 pm **FW05**
**Testing ML Models and Code: Practical MLOps Techniques**
*Marcus Edel, Machine Learning Engineer, Collabora*

2:05 pm - 3:10 pm **FW08**
**12+ Image Quality Attributes that Impact Computer Vision**
*Max Henkart, Optics Consultant and Owner, Commonlands LLC*

4:15 pm - 5:20 pm **FW10**
**Selecting the Right Camera for Your Embedded Computer Vision Project**
*Adrián Márques, Managing Partner, Digital Sense*

## Business Insights
Theater (Upstairs)

10:15 am - 10:45 am **BW03**
**The Automotive Driver Monitoring Market: What's Happening? Why? What's the Opportunity?**
*Ian Riches, VP - Global Automotive Practice, Strategy Analytics*

10:50 am - 11:20 am **BW04**
**From ADAS to AD, Processor and Car Architecture Evolution**
*Tom Hackenberg, Principal Analyst for Computing and Software in the Semiconductor, Memory and Computing Division, Yole Développement*
*Adrien Sanchez, Technology & Market Analyst, Computing & Software, Yole Développement*

11:25 am - 11:55 am **BW05**
**Instant Item Training: Practical AI for the Retail Industry**
*Mukul Dhankhar, Co-Founder and CTO, Mashgin*

12:00 pm - 12:30 pm **BW06**
**Big Trends in Computer Vision for 2022: Health and Safety, Retail and Consumer Electronics**
*Rudy Burger, Managing Partner, Woodside Capital*

1:30 pm - 2:00 pm **BW07**
**The Market for Cameras and Video Doorbells in the Smart Home**
*Jack Narcotta, Principal Analyst, Strategy Analytics*

2:05 pm - 3:10 pm **BW08**
**Panel: Are Neuromorphic Vision Technologies Ready for Commercial Use?**
*Sally Ward-Foxton, European Correspondent, EE Times*
*Ryad Benosman, Professor, University of Pittsburgh, and Adjunct Professor, CMU Robotics Institute*
*James Marshall, Chief Scientific Officer, Opteran*
*Garrick Orchard, Research Scientist, Intel Labs*
*Steve Teig, Founder and CEO, Perceive*

4:50 pm - 5:55 pm **BW11**
**Vision Tank Start-Up Competition**

| | |
|---|---|
| *Hummingbirds AI* | *Nima Schei* |
| *linedanceAI* | *Mohamed Elwazer* |
| *Oculi* | *Charbel Rizk* |
| *Qlairvoyance* | *Faris Alqadah* |
| *Tempo Analytics* | *Wassim El Ahmar* |

*Vision Tank Judges:*
*John Feland, Forrest Iandola, Vin Ratford, Shweta Shrivastava*

**12:30 pm – 1:30 pm Lunch in the Expo Hall**

**3:10 pm - 4:15 pm Break - Be sure to visit the Technology Exhibits in the Expo Hall!**

Session codes (e.g., T2W3) allow for quick searching in our event app!

# Wednesday

## Enabling Technologies I
Expo Hall ET-1

10:50 am - 11:20 am **E1W04**
**Taking Intelligent Video Analytics to the Next Level**
*Avi Baum, CTO and Co-Founder, Hailo*

11:25 am - 11:55 am **E1W05**
**Jumpstart Your Edge AI Vision Application with New Development Kits from Avnet**
*Monica Houston, Technical Solutions Manager, Avnet*

12:00 pm - 12:30 pm **E1W06**
**Natural Intelligence Outperforms Artificial Intelligence for Autonomy and Vision**
*James Marshall, Chief Scientific Officer, Opteran*

1:30 pm - 2:00 pm **E1W07**
**Accelerating the Creation of Custom, Production-Ready AI Models for Edge AI (NVIDIA Tools, Part 1)**
*Akhil Docca, Senior Product Marketing Manager, NVIDIA*

2:05 pm - 2:35 pm **E1W08**
**Vision AI At the Edge: From Zero to Deployment Using Low-Code Development (NVIDIA Tools, Part 2)**
*Alvin Clark, Product Marketing Manager, NVIDIA*

2:40 pm - 3:10 pm **E1W09**
**A Practical Guide to Getting the DNN Accuracy You Need and the Performance You Deserve**
*Felix Baum, Director Product Management, Qualcomm Technologies Inc.*

4:15 pm - 4:45 pm **E1W10**
**Accelerate Tomorrow's Models with Lattice FPGAs**
*Hussein Osman, Segment Marketing Director, Lattice Semiconductor*

4:50 pm - 5:20 pm **E1W11**
**Creating Better Datasets for Training More Robust Models in FiftyOne**
*Jason Corso, CEO, Voxel51*

## Enabling Technologies II
Expo Hall ET-2

10:50 am - 11:20 am **E2W04**
**Tools for Creating Next-Gen Computer Vision Apps on Snapdragon**
*Judd Heape, VP of Product Management for Camera, Computer Vision and Video Technology, Qualcomm Technologies Inc.*

11:25 am - 11:55 am **E2W05**
**How to Enhance Edge AI Vision with the Katana SoC Using Multi-Modal Sensing**
*Shay Kamin Braun, Director of Low-Power AI Marketing, Synaptics*

12:00 pm - 12:30 pm **E2W06**
**The Future of AI is Here Today: Deep Dive into Qualcomm's On-Device AI Offerings**
*Vinesh Sukumar, Senior Director - Head of AI/ML Product Management, Qualcomm Technologies Inc.*

1:30 pm - 2:00 pm **E2W07**
**NeuPro-M: A Highly Scalable, Heterogeneous and Secure Processor for High-Performance AI/ML in Smart Edge Devices**
*Yair Siegel, Senior Director of Business Development, CEVA*

2:05 pm - 2:35 pm **E2W08**
**A New AI Platform Architecture for the Smart Toys of the Future**
*Gabriel Costache, Senior R&D Director, Xperi*

2:40 pm - 3:10 pm **E2W09**
**Enable Spatial Understanding for Embedded/Edge Devices with DepthAI**
*Erik Kokalj, Director of Applications Engineering, Luxonis*

4:15 pm - 4:45 pm **E2W10**
**Is Your AI Data Pre-Processing Fast Enough? Speed It Up Using rocAL**
*Rajy Rawther, PMTS Software Architect, AMD*

4:50 pm - 5:20 pm **E2W11**
**Optimizing Camera Image Quality to Maximize Computer Vision Results**
*Dave Tokic, VP Marketing and Strategic Partnerships, Algolux*

## Enabling Technologies III
Expo Hall ET-3

10:50 am - 11:20 am **E3W04**
**FOMO: Real-Time Object Detection on Microcontrollers**
*Jan Jongboom, Co-Founder and CTO, Edge Impulse*

11:25 am - 11:55 am **E3W05**
**The Flex Logix InferX X1: Pairing Software and Hardware to Enable Edge Machine Learning**
*Randy Allen, Vice President of Software, Flex Logix*

12:00 pm - 12:30 pm **E3W06**
**Intel Video AI Box—Converging AI, Media and Computing in a Compact and Open Platform**
*Richard Chuang, Principal AI Engineer, Intel Corporation*

**12:30 pm – 1:30 pm Lunch in the Expo Hall**

1:30 pm - 2:00 pm **E3W07**
**New Imager Modules and Tools Enable Bringing High-Quality Vision Systems to Market Quickly**
*Ganesh Narayanaswamy, Sr Business Marketing Manager, Industrial & Commercial Solutions Division, onsemi*

2:05 pm - 2:35 pm **E3W08**
**TensorFlow Lite for Microcontrollers (TFLM): Recent Developments**
*Advait Jain, Senior Staff Engineer, Google*
*David Davis, Senior Embedded Software Engineer, BDTI*
*John Withers, Automation and Systems Engineer, BDTI*

2:40 pm - 3:10 pm **E3W09**
**Intelligent Vision for the Industrial, Automotive and IoT Edge with the i.MX 8M Plus Applications Processor**
*Srikanth Jagannathan, Lead Product Manager, NXP Semiconductors*

**3:10 pm - 4:15 pm Break - Be sure to visit the Technology Exhibits in the Expo Hall!**

4:15 pm - 4:45 pm **E3W10**
**Developing Sustainable Edge AI Products for the Real World**
*Barrie Mullins, Senior Director, Product Marketing, Blaize*

4:50 pm - 5:20 pm **E3W11**
**Accelerate All Your Algorithms with the quadric q16 Processor**
*Daniel Firu, Co-Founder & CPO, quadric*

## Deep Dives

*Separate Registration Required*

# Thursday
May 19

9:00 am - 12:00 pm
Room 209/210 (Upstairs)
**Develop and Deploy Advanced Edge Computer Vision—Fast!**
*Presented by: Edge Impulse*

12:00 pm - 3:00 pm
Room 203/204 (Upstairs)
**Optimize AI Performance and Power for Tomorrow's Neural Network Applications**
*Presented by: Synopsys*

Session: 3:00 pm - 5:30 pm
Reception: 5:30 pm - 7:30 pm
Room 209/210 (Upstairs)
**Intel AI Developer Expo—Let's Build Something Wonderful Together**
*Presented by: Intel Corporation*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