

# 2025 PROGRAM

31 August – 5 September ALBUQUERQUE, NEW MEXICO, USA

IEEE International Conference on Quantum Computing and Engineering (QCE)

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IEEE International Conference on Quantum Computing and Engineering (QCE25)

#### **REGISTRATION HOURS**

Sat, 30 Aug 3:00 pm - 5:00 pm Sun, 31 Aug 9:00 am - 4:30 pm Mon, 1 Sept 7:00 am - 5:30 pm Tue, 2 Sept 7:00 am - 7:00 pm Wed, 3 Sept 7:30 am - 5:00 pm Thu, 4 Sept 7:30 am - 5:00 pm Fri, 5 Sept 7:30 am - 10:30 am

#### **EXHIBITS & POSTERS**

Tue, 2 Sept 9:30 am – 5:00 pm

Exhibits & Posters Reception

6:30 pm – 8:00 pm

Wed, 3 Sept 9:30 am - 5:00 pm Thu, 4 Sept 9:30 am - 1:30 pm

# SCAN to View The Full Schedule



# **WELCOME!**

IEEE Quantum Week is a collaborative forum where people across disciplines—scientists, engineers, developers, entrepreneurs, educators, and students—gather to address the latest challenges and innovations in quantum computing and engineering.

Wishing you an inspiring and energizing IEEE Quantum Week 2025! Enjoy!

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# QUANTUM WEEK

# MESSAGE FROM THE CHAIRS

It is our distinct pleasure and honor to welcome you all to the Sixth IEEE International Conference on Quantum Computing and Engineering (QCE25), also known as IEEE Quantum Week 2025, held at the Albuquerque Convention Center in Albuquerque, New Mexico, USA. With your outstanding contributions and participation, QCE25 offers valuable opportunities to interact with experts in a full range of quantum technologies, from quantum device engineering to quantum computing and hybrid/distributed applications.

From its inception, IEEE Quantum Week has worked diligently to facilitate a meaningful exchange of ideas, broadening the quantum community through networking with peers and exploring partnerships among industry, government, and academia. With participants from across the globe, we are confident that the insights shared, and discussions held will lead to groundbreaking advancements and foster meaningful connections among peers.



# Quantum control stacks

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We are pleased to hold IEEE Quantum
Week 2025 as an in-person conference with
the option of remote participation. We have
therefore arranged for almost all 2025 IEEE
Quantum Week events to be offered using
the RD Mobile virtual platform, allowing
virtual attendees from around the world
to participate in real-time, interacting
with on-site attendees and presenters.
Additionally, all streamed content will be
recorded and made available as QCE25
on-demand to all registered attendees
through the end of 2025.

Throughout the program, you will have the privilege of engaging with distinguished keynote speakers, quantum experts, and thought leaders who will share their in-depth understanding, insights, and perspectives. A diverse array of workshops, panel discussions, and paper presentations will showcase cutting-edge research and initiatives, empowering you with new viewpoints and ideas.

IEEE Quantum Week 2025 features 18 parallel tracks per day over six days, including nine keynotes by world-class speakers, 41 community-building workshops, 37 workforce-building tutorials, 264 technical papers, 13 stimulating panels, 145 innovative posters, and three thought-provoking Birds-of-a-Feather (BoF) sessions.

One of the pillars of IEEE Quantum Week is the stellar Exhibits and Posters hall.

You will have the opportunity to engage with and network among exhibitors and poster presenters who showcase a diverse representation of the global quantum landscape. Our exhibitors, sponsors, and supporters reach across academia, industry, and government research. QCE will once again feature the popular Quantum Career Fair and the Student Speed Mentorship program. For the second time, QCE will feature a 60-seat **Ouantum Exhibit Theatre in the Exhibition** Hall, showcasing sessions designed for attendees from businesses and start-ups. New for 2025 is the IEEE Entrepreneurship Startup Clinic, which invites startups to meet one-on-one with experts to ask questions and gather insights, guidance, and action items that can help move their companies forward. IEEE Entrepreneurship is IEEE's global venture development program, whose core purpose is to deliver value at every stage of a startup's journey, helping entrepreneurs globally bring technological innovations to market faster and create solutions that benefit humanity.

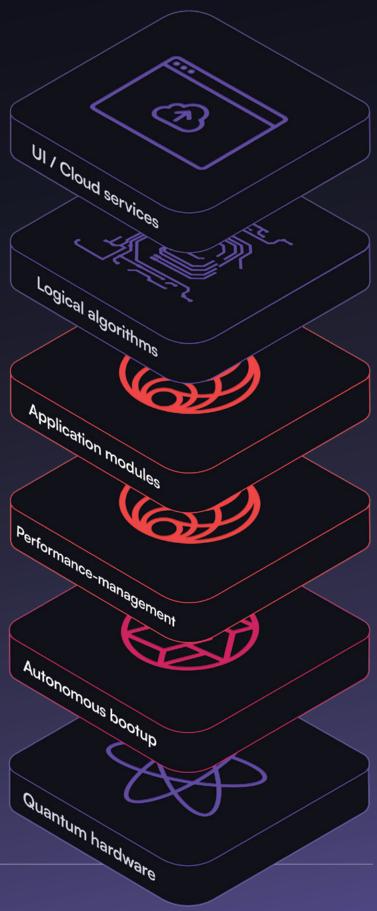
Our keynotes program features outstanding speakers from industry, academia, and research labs. The plenary keynote sessions in the morning and evening frame the rigorous daily program agendas, offering insights into the latest progress and potential for quantum technologies and applications.



# The future of quantum technology is Al-powered

We build infrastructure software to expand the utility of quantum computers.

Now, with a few simple commands, anyone can autonomously tune and calibrate hardware and immediately run meaningful algorithms on virtualized quantum processors.





Visit our booth to discuss your needs or contact us today at q-ctrl.com

The United Nations General Assembly has proclaimed 2025 as the International Year of Quantum Science and Technology. In honor of this, IEEE Quantum Week 2025 is presenting a special Keynote Session on Tuesday, September 2, 2025, that will feature two Nobel Prize winners in Physics – William D. Phillips (1997) and David J Wineland (2012).

The technical papers program is organized into seven tracks: (1) Quantum Applications (QAPP), (2) Quantum Algorithms (QALG), (3) Quantum Systems Software (QSYS), (4) **Quantum Networking and Communications** (QNET), (5) Quantum Technologies and Systems Engineering (QTEM), (6) Quantum Photonics (QPHO), and (7) Quantum Machine Learning (QML). QCE25 received 557 technical paper submissions—a 20% increase over 2024. More than one-third of the submitted papers have at least one author from industry or government laboratories. Papers were submitted by authors from 41 countries, attesting to the international reach of IEEE Quantum Week and the quantum research community. Each paper track had its own program committee, managed by two track cochairs. Each paper received at least three reviews from 320+ international program committee members. Based on the reviews and further discussion, the track chairs and the technical program chairs selected 264 technical papers for inclusion in the

proceedings and presentation in the Albuquerque Convention Center.

If you are new to the quantum experience, we are delighted to have you on board. The Tutorials program offers newcomers a range of entry points to the quantum realm, while also providing introductions to various technologies across the quantum stack and quantum applications.

The community-building Workshops are a fundamental pillar of IEEE Quantum Week. Many of the workshops are organized by industry participants. In the past five years, unique communities have formed from the QCE workshops, maintaining collaborations even between the yearly Quantum Week events. Out of the 41 Workshops, 11 workshops had a paper track, which accepted a total of 69 papers out of 118 submissions.

Our 13 expert Panels provide the unique opportunity to hear insights and perspectives directly from industry leaders and seasoned professionals. Not only does the Panel program offer a deeper understanding of nuanced topics, but it also sparks engaging discussions, stimulates new ideas, and presents a rare chance to interact with and pose questions to some of the brightest minds in the field. Birds-of-a-Feather sessions, or BoFs, are informal gatherings of persons interested

in a particular topic. The IEEE Quantum Week 2025 program will feature three scheduled BoF Sessions addressing timely topics of interest on Quantum Computing and Engineering.

QCE25 received a record number of 189 Poster submissions, including several from high school students. The Posters program committee selected 145 Posters for presentation in the Exhibits space at IEEE Quantum Week 2025.

IEEE Quantum Week also features the Fourth Quantum Science and Engineering Education Conference (QSEEC). In this two-day collocated event, education researchers and practitioners come together to discuss methodologies for quantum curriculum and tool development for instruction and teaching.

The QCE25 Proceedings have been arranged into three volumes. Volume 1 contains the 264 accepted papers from the seven technical paper tracks. Volume 2 includes the workshop papers, the 2-page poster papers, as well as abstracts for keynote, panel, tutorial, workshop, and BoF sessions. Volume 3 comprises the contributions of the Quantum Science and Engineering Education Conference (QSEEC).

Diversity and Inclusion (D&I) are central to the goals of the IEEE International

Conference on Quantum Computing & Engineering (QCE) and its activities. At its heart, equity is about removing barriers, biases, and obstacles that impede equal access and opportunity to succeed. Diversity is fundamentally about valuing human differences and recognizing diverse talents. Inclusion is the active engagement of Diversity and Equity.

IEEE Quantum Week adheres to IEEE's Diversity Statement. IEEE's mission to foster technological innovation and excellence to benefit humanity requires the talents and perspectives of people with different personal, cultural, and disciplinary backgrounds. IEEE is committed to advancing diversity in technical professions and promoting an inclusive and equitable culture in its activities and programs.

QCE follows and implements the D&I Best Practices advocated by the IEEE Computer Society (CS). IEEE CS is committed to Diversity and Inclusion (D&I) across all its sponsored activities, including conferences. IEEE Computer Society encourages all conference organizers to promote and facilitate diversity and inclusion in their activities.



# Where Limits End and Possibilities Dawn

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96

physical qubits



**50** 

logical qubits



99.95%

two-qubit gate fidelity



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Perform Quantum Enhanced AI Inference, Workforce Scheduling, Logistics Planning, Manufacturing Optimization, Transportation and Routing, Molecule Synthesis, Drug Discovery and more at-scale. We are deeply indebted to many people for their help and support in orchestrating QCE25. First, we would like to thank all the contributors—the keynote speakers, technical paper and poster authors, workshop organizers, tutorial presenters, panel organizers and panelists, and the BoF orchestrators. We would especially like to thank the exhibitors—the Premier, Platinum, Gold, Silver, Bronze, and Exhibitor sponsors and patrons, as well as the supporters — for their financial, technical, and in-kind contributions.

Second, we would like to thank all attendees who registered for QCE25. Your enthusiasm and appreciation of the speakers and the program make it all worthwhile. It was a wonderful experience to gather in person in 2024 at the Palais des Congrès in Montréal, Québec, Canada.

This year's conference is being held in the beautiful city of Albuquerque, New Mexico. We are hard at work on QCE26, which will be held in the wonderful city of Toronto, Canada. Please continue to provide feedback on how you are enjoying IEEE Quantum Week and share your ideas on how to improve the conference for future editions.

Third, we thank all technical program track chairs and committee members, who conducted the review process under the

leadership of the General Chair Candace Culhane, the Technical Program Board Co-Chairs Hausi Müller & Greg Byrd, the Technical Program Track Co-Chairs Andrea Delgado & Stephan Eidenbenz, the 14 Technical Paper Track Co-Chairs — QALG: Susan Mniszewski & Ilya Safro, QAPP: Weiwen Jiang & Daniel Claudino, QML: Sebatian Feld & Kathleen Hamilton, QPHO: Paul Davids & George Siopsis, QTEM: Susan Clark & Kasra Nowrouzi, QSYS: Bettina Heim & Juan Manuel Murillo Rodríguez, and QNET: Angela Sara Cacciapuoti & Mariam Kiran; the Workshop Co-Chairs Ulrike Stege & Robert Wille, the Tutorials Co-Chairs Natalie Brown & Michal Stechly, the Poster Co-Chairs Fan Chen & Jose Garcia-Alonso, the Panel Co-Chairs Travis Humble & Rima Kasia Oueid, the BoF Co-Chairs Elica Kyoseva & Laura Schulz; the organizers of 41 community-building Workshops including 11 workshop paper tracks with 68 workshop papers, and the presenters of the 37 tutorials. A huge thank you and shoutout to all the reviewers who contributed their valuable time and expertise to QCE25. A special big thank you to Publicity Chair Rafael Sotelo and his entire publicity team. A big thank you to Publications Chair Scott Koziol for liaising with the Computer Society Conference Publications Services team to produce the QCE25 proceedings. Another big thank you to the Awards Chair, Yuri Alexeev, the Student Grants Co-Chairs, Tu Nguyen & Greg Byrd, and

the Student Volunteers Co-Chairs, Priyanka Angara & Ruth Gyan-Darkwa. The QCE25 committee members are listed and recognized in detail on the QCE25 Committee pages below. Finally, we are deeply indebted to the QCE25 Organizing Committee, the IEEE Quantum Week Steering Committee, and the IEEE Quantum Technical Community (QTC) Executive Committee for their extensive contributions, feedback, and support during the biweekly conference calls over the past year. These individuals significantly influenced the structure and format of IEEE Quantum Week 2025.

We are deeply indebted to all the IEEE staff who worked tirelessly over the last year (and more!) in bringing IEEE Quantum Week 2025 to fruition. First, we thank Carmen Saliba, Michelle Tubb, Ron Moreau, Munmy Corey, Tricia Yamaguchi, Brian Kirk, Steve Woods, Patrick Kellenberger, Lisa O'Conner, Jennifer Ly, Laurel Ming, Young Lee, Ilse Paredes, Samantha Betancur, Amy Miyamoto, Kathy Grise, Silvia Ceballos, and Melissa Russell and their IEEE Computer Society and IEEE Quantum teams, for their continuous and dedicated support. Carmen, Brian, and Michelle orchestrated our bi-weekly conference calls and liaised with all the IEEE Societies and organizational units



sponsoring IEEE Quantum Week. We thank all the staff at IEEE, the IEEE Computer Society, and the various sponsoring societies, councils, and organizational units for their support and promotion of IEEE Quantum Week through their respective channels.

September is a lovely time to visit Albuquerque, also known as ABQ, Burque, and Duke City, in New Mexico, a state often referred to as "The Land of Enchantment." Albuquerque is

a vibrant desert city with a rich blend of Native American heritage, Southwestern culture, outdoor adventure, and scientific curiosity. Explore the historic charm of Old Town Albuquerque, ride the Sandia Peak Tramway for panoramic mountain views, and learn about the world-famous Albuquerque International Balloon Fiesta, which takes place each October. The traditional IEEE Quantum Week 2025 Conference Banquet, scheduled for Thursday night, will be held outdoors as the "QCE25 Noche de Flamenco en Burque."

Learn about the culture and history of this beautiful land by visiting the Indian Pueblo Cultural Center, the National Museum of Nuclear Science & History, and the nearby Petroglyph National Monument, home to thousands of ancient rock carvings. Another great place to visit is the ABQ BioPark, which includes a zoo, aquarium, botanic garden, and riverside trails.

Food lovers can sample New Mexican cuisine—especially green chile dishes—at iconic spots like Frontier Restaurant and El Pinto. Art, shopping, and nightlife thrive in areas like Nob Hill and the Downtown Arts District. Albuquerque also serves as an excellent base for day trips to Santa Fe, Los Alamos, Jemez Springs, and the ancient

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#### **Extended Coherence**

Stabilizes circuits under increased depth and complexity



#### **Optimized Execution**

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#### **Error Suppression**

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Acoma Pueblo. Whether you're into hiking, hot air balloons, local cuisine, or cultural history, Albuquerque offers something for everyone.

Whether you attend IEEE Quantum Week 2025 in person or online, we hope you will find the program and events to be a terrific experience. We want you to enjoy the conference this week, meet new colleagues, and find plenty of time in the weeks to come to explore the many outstanding contributions from the international quantum community.



CANDACE CULHANE
Los Alamos National Laboratory
QCE25 General Chair



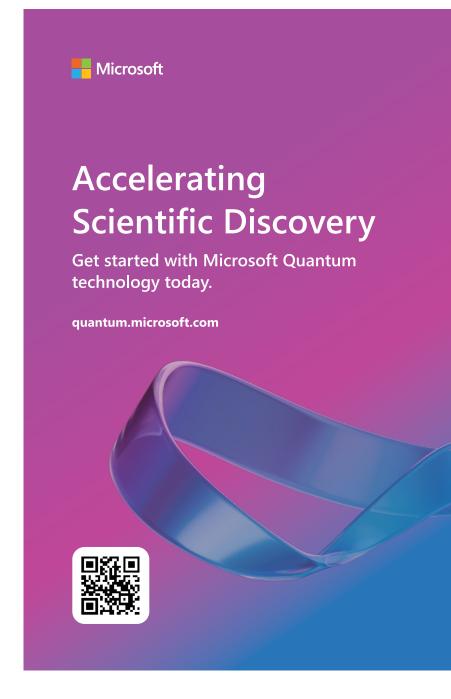
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Oak Ridge National Laboratory
QCE25 Technical Paper
Tracks Co-Chair



STEPHAN EIDENBENZ
Los Alamos National Laboratory
QCE25 Technical Paper
Tracks Co-Chair

# **New Mexico: The Quantum State**

**New Mexico is the birthplace of Quantum,** with over eight decades of research, industry innovation, national labs and the highest concentration of quantum-focused national-security assets in the U.S.

**New Mexico is home to a robust Quantum ecosystem.** Micro/nanofabs, advanced packaging, cryogenics, lasers, and photonics depth – plus cross-cutting expertise in hardware, quantum sensing, and quantum computing, New Mexico offers a global destination to prototype, test, and scale quantum systems.

**New Mexico is the anchor for the U.S. Quantum Tech Hub,** Elevate Quantum and semifinalist for the NSF Regional Innovation Engine program. These federal program recognize New Mexico as one of the U.S.'s top science-driven economies.

**New Mexico is investing in Quantum.** New Mexico pairs best-in-class economic development incentives with targeted infrastructure, workforce, and industry co-investment to partner with the quantum industry to build quantum hardware, sensing solutions, secure communications, or advanced applications to grow the industry for generations to come.



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# THANK YOU TO OUR **SPONSORS!**

With your support, we are pleased to present the IEEE International Conference on Quantum Computing and Engineering (QCE25), a multidisciplinary event focusing on quantum technology, research, development, and training.

We are grateful to our amazing lineup of sponsors for being a part of Quantum Week.

# **EXHIBITS** | HALL 1 & 2 - EAST Complex

**TUE, 2 SEPT** 9:30 am - 5:00 pm **Exhibits & Posters Reception** 6:30 pm - 8:00 pm

**WED, 3 SEPT** 9:30 am - 5:00 pm **THU, 4 SEPT** 9:30 am - 1:30 pm

PREMIER



#### **PLATINUM**









GOLD





















**SILVER** 

**BRONZE** 

















# **CONFERENCE MAPS**

ALBUQUERQUE CONVENTION CENTER

## **UPPER Level**



### **WEST BUILDING**

Kiva Auditorium 290 **Box Office** Concessions Kiva Boardroom 285

Ballroom A 280, B 275, C 270 **Buena Vista Balcony** 

Skybridge to East Building

## **EAST BUILDING**

Meeting Room 210-240 Suite A 231-H 259 **Parking Garage** Skybridge to West Building

# **MAIN Level**

#### EAST BUILDING

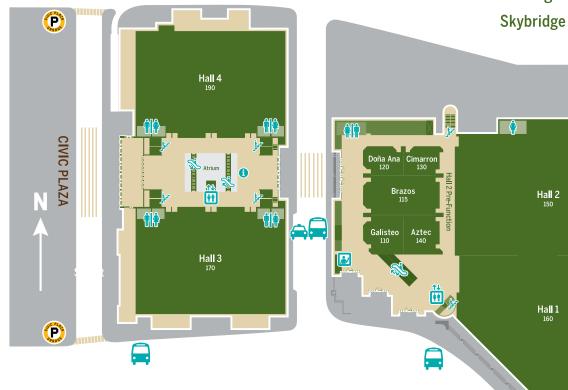
Meeting Room 210-240

Suite A 231-H 259

**Parking Garage** 

Skybridge to West Building

Convention Center Garage



# WEST BUILDING

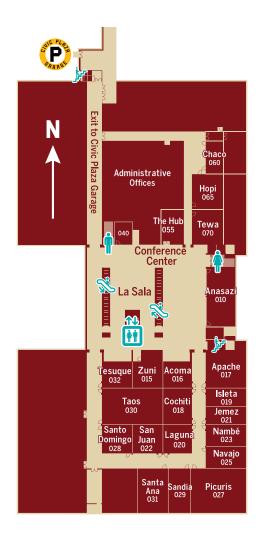
Hall 3 & 4

**Guest Service Desk** 

Civic Plaza Entrance

2nd Street Entrance **Access to East Building** 

## **MAIN** Level



## **WEST BUILDING**

**Conference Center** Rooms 010-070

The Hub 055

La Sala

Civic Plaza Garage

- **Box Office**
- Concessions
- ↑↓ †† **Elevator**
- 3% **Escalator**
- **Guest Services**
- **Parking**
- Pick-up & Drop-off
- Restroom
- **Stairs**
- **Vending** ြုမ

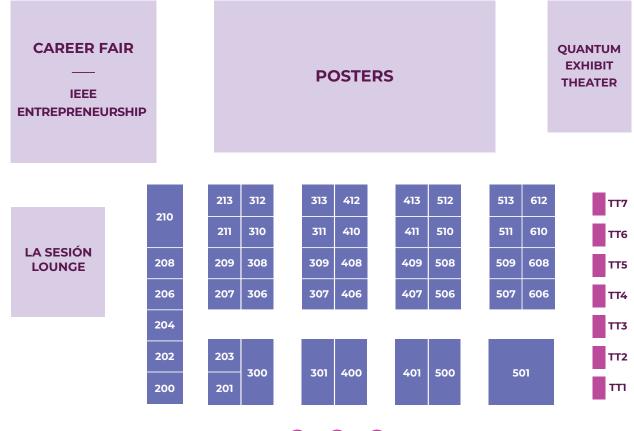




# EXHIBIT HALL MAP & DIRECTORY

# **EXHIBITS HOURS**

**TUE, 2 SEPT** 9:30 am – 5:00 pm *Exhibits & Posters Reception* 6:30 pm – 8:00 pm **WED, 3 SEPT** 9:30 am - 5:00 pm **THU, 4 SEPT** 9:30 am - 1:30 pm







SCAN OR CLICK TO VIEW THE Full Exhibit Hall Agenda

bit.ly/quantumweekagenda2025

Exhibitor	SPACE#	Exhibitor	SPACE#
BlueQubit Inc	208	New Mexico Partnership	501
Business Finland	408	nVent SCHROFF	413
Classiq	200	One IEEE	210
Custom Interconnects	TT3	OptiQ-Labs	508
DCA Instruments OY	409	QBlox	310
DOE Nanoscale User Facilities	406	Q-CTRL	401
Fujitsu Research of America, Inc	206	Qedma Quantum Computing Ltd.	····· 513
IBM Quantum Computing	400	Q.M. Technologies, Inc.	301
IEEE Data Port	··· 511	Quantinuum	507
lonQ	··· 201	Quantrolox	308
IQM Quantum Computers	410	QuantWare	311
iQore Inc.	509	QuEra Computing	···· TT2
IYQ Global Fund	209	Qunova Computing, Inc	213
JHPC-Quantum Project (RIKEN & SoftBank)	207	Riverlane	300
Liquid Instruments	306	Sandia National Labs	204
Los Alamos National Laboratory	608	Shenzhen SpinQ Technology Co., Ltd.	411
Maybell Quantum	309	SuperQ	
Microsoft Corporation	500	Swabian Instruments / Single Quantum	412
MOG Laboratories Pty Ltd.	TT7	Toray International, Inc.	606
Munich Quantum Valley	312	withwave	506
Nanofiber Quantum Technologies, Inc.	··· TT1	Zero Point Cryogenics	407
Nanosystec GmbH	612	Zurich Instruments	307



# GENERAL CONFERENCE INFORMATION



450+ SESSIONS



6 DAYS

# PLAN THE PERFECT WEEK



SCAN OR CLICK TO VIEW The Full Schedule





SCAN OR CLICK TO VIEW Special Sessions





# **KEYNOTE SPEAKERS**



JAY M. **GAMBETTA** IBM



**RODNEY VAN METER** Keio University



**PRINEHA NARANG UCLA** 



**CHETAN NAYAK** Microsoft



**WILLIAM PHILLIPS NIST** 



**PETE SHADBOLT** 



**STEPHANIE SIMMONS Photonic** 

PsiQuantum



**SAM STANWYCK NVIDIA** 



DAVID J. WINELAND

NIST



**ZACHARY YERUSHALMI** 

Elevate Quantum



SCAN OR CLICK TO VIEW THE **KEYNOTES SCHEDULE** 

qce.quantum.ieee.org/2025/program/keynote-schedule

# Sunday, 31 August

SUN		QCE25 Adv	vance Program-a	t-a-Glance		IEEE Quantum Week 2025 featuring 550+ Hours of Exceptional Quantum Programming					
Legend	Exhibits & Theater	Keynote	Workshop	Tutorial	Technical Papers	Panel	Birds-of-the-Feather	Special Events	Speaker Guidelines	Technical Paper Presentation Guidelines	
Room	Hall 1 & 2	Ballroom A/B/C	Mesilla - M	San Miguel - U	La Cienega - U	Pecos - U	Ruidoso - U	Galisteo - M	Dona Ana - M	Cimarron - M	
Style Capacity		Banquet 1800	Theater/Panel 216	Theater/Panel 160	Theater/Panel 160	Classroom 66	Classroom 66	Classroom 78	Theater 126	Theater 125	
9:30-10:00											
10:00-11:30			WKS01:QSIMU — Advanced Simulations of Quantum Computations — Part1	WKS02:QNATSCI — Chemical Applications of Quantum Computing	TUT01:QSTART — Introduction to Quantum Computing	TUT02:QHPC — Exploring the Challenges of Integrating HPC and QC	TUT03:QREST — Bartiq for Symbolic Resource Estim of Fault-Tolerant QALG	TUT04:OTEM — Developing Hybrid Kernels for Gate-Based Neutral- Atom QC	TUT05:QALG — Constraint-Driven QAOA: SW Stack for Optimization Pipelines	TUT06:QSYS — Circuit Synthesis for Early Fault Tolerant Quantum Computers	
11:30-13:00		Lunch Ballroom A/B/C									
13:00-14:30			WKS01:QSIMU — Advanced Simulations of Quantum Computations — Part1	WKS02:QNATSCI — Chemical Applications of Quantum Computing	TUT01:QSTART — Introduction to Quantum Computing	TUT02:QHPC — Exploring the Challenges of Integrating HPC and QC	TUT03:QREST — Bartiq for Symbolic Resource Estim of Fault-Tolerant QALG	TUT04:OTEM — Developing Hybrid Kernels for Gate-Based Neutral- Atom QC	TUT05:QALG — Constraint-Driven QAOA; SW Stack for Optimization Pipelines	TUT06:QSYS — Circuit Synthesis for Early Fault Tolerant Quantum Computers	
14:30-15:00		Break East Complex Upper Lobby									
15:00-16:30			WKS01:QSIMU — Advanced Simulations of Quantum Computations — Part1	WKS02:QNATSCI — Chemical Applications of Quantum Computing	TUT01:QSTART — Introduction to Quantum Computing	TP02::QML::260:564:119 Trainable and Optimized Quantum Neural Netorks for Machine Learning	TP03::OAPP::584:398:551 Efficient Simulation of Physical Systems via Quantum Circuit Design	TP04::QAPP::597:532:304 Financial Foresight with Quantum Tools	TP05::QSYS::432:430:608 Metrics for Quantum Runtime and Performance	TP06::QSYS::96:227_ Calibration and Testing for Real-World Quantum_ Devices	
16:30-17:00										v207	

SUN		QCE25 Ad	vance Program-a	ıt-a-Glance		IEEE Quantum Week 2025 featuring 550+ Hours of Exceptional Quantum Programming					
Legend	Exhibits & Theater	Keynote	Workshop	Tutorial	Technical Papers	Panel	Birds-of-the-Feather	Special Events	Speaker Guidelines	Technical Paper Presentation Guidelines	
Room	Aztec - M	Brazos M	Picuris - L	Isleta/Jemez - L	Nambe/Navajo - L	Apache - L	Sandia/Santa Ana - L	Cochiti - L	Taos - L	Laguna - L	
Style Capacity	COMBO SET: Theat58/Class48	COMBO SET: Theat158/Class150	Theater 140	Theater 85	Theater 85	Theater 79	Theater 132	Theater 90	Theater 130	Theater 65	
9:30-10:00											
10:00-11:30	QSEEC01	TP01::QML::130:560 Smart Circuit Generation for Quantum Optimization	TUT07:QTEM — Exploring the Pulse-Level Progr of Superconducting Qubits	TUT08:QTEM — QICK: Quantum Instrumentation Control Kit	TUT09:QSEC — Security of Quantum Computing Systems	TUT10:QML — Hands-on Introduction to QML	TUT11:QNET — SeQUeNCe: Discrete- Event Simulator of Quantum Networks	TUT12:QEC — Automated Topological QEC Using 3D Primitives	TP07::QALG::228:801 Scalable and Adaptive QAOA for Real-World Optimization I	TP10::QAPP::355:749:449 Quantum Optimization for Real-World Scheduling and Logistics	
11:30-13:00	Lunch Ballroom A/B/C										
13:00-14:30	QSEEC02	QSEEC05	TUT07:QTEM — Exploring the Pulse-Level Progr of Superconducting Qubits	TUT08:QTEM — QICK: Quantum Instrumentation Control Kit	TUT09:QSEC — Security of Quantum Computing Systems	TUT10:QML — Hands-on Introduction to QML	TUT11:QNET — SeQUeNCe: Discrete- Event Simulator of Quantum Networks	TUT12:QEC — Automated Topological QEC Using 3D Primitives	TP08::QALG::681:780:796 Scalable and Adaptive QAOA for Real-World Optimization II	TP11::QAPP::404:527:742 Quantum Methods for Power and Physical System Simulation	
14:30-15:00	Break East Complex Upper Lobby										
15:00-16:30	QSEEC03 & 04	QSEEC06	TP13::QNET::186:188:248 Quantum Repeaters	TP14::QNET::422:542 Post-Quantum Cryptography	TP15::QSYS::279:762:420 Quantum Circuit Cutting	TP16::QSYS::453:149:136 Quantum Intermediate Representation	TP17::QAPP::377:693:346 Quantum and Quantum- Inspired Annealing for Scalable Optimization I	TP18::QAPP::537:443:609 Compilation, Correlations, and Entanglement for Application-Driven Design	TP09::QALG::784:438:811 Formulations and Frameworks for Constrained Combinatorial	TP12::QAPP::253:313:357 Variational Quantum Imaginary Time Evolution for Optimization and	
16:30-17:30											
17:30-18:30										v207	



# Monday, 1 September

MON		QCE25 Ad	vance Program-a	t-a-Glance		IEEE Quantum Week 2025 featuring 550+ Hours of Exceptional Quantum Programming						
Legend	Exhibits & Theater	Keynote	Workshop	Tutorial	Technical Papers	Panel	Birds-of-the-Feather	Special Events	Speaker Guidelines	Technical Paper Presentation Guidelines		
Room	Hall 1 & 2	Kiva Auditorium	Mesilla - M	San Miguel - U	La Cienega - U	Pecos - U	Ruidoso - U	Galisteo - M	Dona Ana - M	Cimarron - M		
Style Capacity	Exhibits Posters	Theater 2000	Theater/Panel 216	Theater/Panel 160	Theater/Panel 160	Classroom 66	Classroom 66	Classroom 78	Theater 126	Theater 125		
7:30-8:00		Break West Complex Lower Ballroom Foyer										
8:00-9:30		KEY01 — Zach Yerushalmi, Elevate Quantum										
9:30-10:00		Break West Complex Lower La Sala Foyer										
10:00-11:30			WKS04:QSIMU — Advanced Simulations of Quantum Computations — Part 2	WKS05:QNATSCI — 3rd Wks on QC for NatSci: Technology and Applications	PAN01::QCPR:876 Clearing the Path to Commercial Quantum Advantage	TUT13:QGenAI — AI Methods for Quantum Circuit Optimization	TUT14:QTEM — Computer-Aided Design of Spin Qubits in Quantum Dots	TUT15:QTEM — QubiC: Full-Stack Scalable Real- Time Quantum Bit Controller	WKS03:QPOLY — Quantum in Consumer Technology	WKS06:QHPC — 5th Int. Wks on Integrating HPC with QC		
11:30-13:00		Lunch Ballroom A/B/C										
13:00-14:30			WKS04:QSIMU — Advanced Simulations of Quantum Computations — Part 2	WKS05:QNATSCI — 3rd Wks on QC for NatSci: Technology and Applications	PAN02::QSWE::880 QC Software Stacks: What's accomplished & what's left to do?	TUT13:QGenAl — Al Methods for Quantum Circuit Optimization	TUT14:QTEM — Computer-Aided Design of Spin Qubits in Quantum Dots	TUT15:QTEM — QubiC: Full-Stack Scalable Real- Time Quantum Bit. Controller	WKS03:QPOLY — Quantum in Consumer Technology	WKS06:QHPC — 5th Int. Wks on Integrating HPC with QC		
14:30-15:00		Break East Complex Upper Lobby										
15:00-16:30	Exhibits & Posters Setup		WKS04:QSIMU — Advanced Simulations of Quantum Computations — Part 2	WKS05:QNATSCI — 3rd Wks on QC for NatSci: Technology and Applications	PAN03::QPLOY::875 Quantum Toolkit: Transdisciplinary Catalysis for App Discovery	TP19::QAPP::521:400:725 Quantum Approaches to Simulation and Forecasting	TP20::QSYS::655:320:168 Compiling for Fault Tolerant Quantum Computing	TP21::QSYS::219:245:370 Specialized Quantum Workflows	WKS03:QPOLY — Quantum in Consumer Technology	WKS06:QHPC — 5th Int Wks on Integrating HPC with QC		
16:30-17:00		Break East Complex Upper Lobby										
17:00-18:30		KEY02 — Rodney van Meter, Keio University		Meet the Customer Session & Networking Reception in Acoma/Zuni/Tesque								
18:30-19:30			Societies Townhall & Networking Reception							v207		

MON		QCE25 Adv	vance Program-a	at-a-Glance					IEEE Quantum Week 2025 featuring 550+ Hours of Exceptional Quantum Programming						
Legend	Exhibits & Theater	Keynote	Workshop	Tutorial	Technical Papers	Panel	Birds-of-the-Feather	Special Events	Speaker Guidelines	Technical Paper Presentation Guidelines					
Room	Aztec - M	Brazos M	Picuris - L	Isleta/Jemez - L	Nambe/Navajo - L	Apache - L	Sandia/Santa Ana - L	Cochiti - L	Taos - L	Laguna - L					
Style Capacity	COMBO SET: Theat58/Class48	COMBO SET: Theat158/Class150	Theater 140		Theater 85	Theater 79	Theater 132	Theater 90	Theater 130	Theater 65					
7:30-8:00	Break West Complex Lower Ballroom Foyer														
8:00-9:30	Keynote in Kiva Auditorium														
9:30-10:00	Break West Complex Lower La Sala Foyer														
10:00-11:30	QSEEC07	QSEEC11	WKS07:QREST — Quantum Resource Estimation	WKS09:QALG — Quantum Algorithms for Combinatorial Optimization	WKS10:QSEC — Quantum Computing Security. Privacy, and Resilience	WKS11:QML — Quantum Machine Learning: From Research to Practice	WKS12:QNET — Quantum Network Simulations	TUT16:QNET — Modeling & Simulation of Quantum Repeaters & Networks	TUT39:QEC — Characterization-based Error Mitigation for QC	TP22::QNET::200:573:556 Secure and Scalable Quantum Communication					
11:30-13:00	Lunch Ballroom A/B/C														
13:00-14:30	QSEEC08	QSEEC12	WKS07:QREST — Quantum Resource Estimation	WKS09:QALG — Quantum Algorithms for Combinatorial Optimization	WKS10:QSEC — Quantum Computing Security. Privacy, and Resilience	WKS11:QML — Quantum Machine Learning: From Research to Practice	WKS12:QNET — Quantum Network Simulations	TUT16:QNET — Modeling & Simulation of Quantum Repeaters & Networks	TUT39:QEC — Characterization-based Error Mitigation for QC	TP23::QNET::309:734:356 Loss-Resilient Protocols for Quantum Communication					
14:30-15:00	Break East Complex Upper Lobby														
15:00-16:30	QSEEC09 & 10	QSEEC13	WKS07:QREST — Quantum Resource Estimation	WKS09:QALG — Quantum Algorithms for Combinatorial Optimization	WKS10:QSEC — Quantum Computing Security. Privacy, and Resilience	WKS11:QML — Quantum Machine Learning: From Research to Practice	WKS12:QNET — Quantum Network Simulations	TP25::QSYS::229:403:522 Symbolic Tools and Resource Optimization for Quantum Architectures	TP26::QML::316:343:635 Noise Mitigation and Error Correction in QML	TP24::QNET::285:468:570 Quantum Communication					
16:30-17:00	Break East Complex Upper Lobby														
17:00-18:30	Keynote in Kiva Auditorium									v207					



# Tuesday, 2 September

TUE		QCE25 Adv	vance Program-a	ıt-a-Glance			IEEE Q 550+ Hours of	uantum Week 2025 fo Exceptional Quantur	eaturing n Programming	
Legend	Exhibits & Theater	Keynote	Workshop	Tutorial	Technical Papers	Panel	Birds-of-the-Feather	Special Events	Speaker Guidelines	Technical Paper Presentation Guidelines
Room	Hall 1 & 2	Kiva Auditorium	Mesilla - M	San Miguel - U	La Cienega - U	Pecos - U	Ruidoso - U	Galisteo - M	Dona Ana - M	Cimarron - M
Style Capacity	Exhibits, Theater, Posters, Startup Clinic	Theater 2000	Theater/Panel 216	Theater/Panel 160	Theater/Panel 160	Classroom 66	Classroom 66	Classroom 78	Theater 126	Theater 125
7:30-8:00		Early Morning Coffee Break								
8:00-9:30		KEY03 — David Wineland, Universiy of Oregon & William Phillips, NIST								
9:30-10:00	Break & Posters & Exhibits	Poster Presentations Guidelines								
10:00-11:30	IEEE Entrepreneurship Startup Clinic & Exhibits & Theater	Exhibit Theater in Hall 1 & 2	WKS08:QSWE — Quantum Software 2.1: Problems, Ideas, Paths to Scale	WKS13:QCPR — Quantum TechWorking Groups: QC in Practice — Part1	PAN04::QPOLY::923 Quantum New Mexico Institute: Why NM is a Quantum State	TUT17:QSWE —10 Things Ruining Code in Research Project – Do This Instead!	TUT18:QALG — Implementing Discrete Optimization Problems: Made Simple	WKS15:QGenAl — Quantum Accelerated Supercomputing	WKS16:QSWE — 5th Int Wks on Quantum Software Engr & Technology	WKS17:QSWE — Care and Maintenance of Quantum Software Stakeholders
11:30-13:00	Lunch & Posters & Exhibits	Posters Schedule								
13:00-14:30	IEEE Entrepreneurship Startup Clinic & Exhibits & Theater	Exhibit Theater in Hall 1 & 2	WKS08:QSWE — Quantum Software 2.1: Problems, Ideas, Paths to Scale	WKS13:QCPR — Quantum TechWorking Groups: QC in Practice — Part1	BOF01:QPOLY — African QEcosystem & Diaspora: Building Bridges & Impact	TUT17:QSWE —10 Things Ruining Code in Research Project – Do This Instead!	TUT18:QALG — Implementing Discrete Optimization Problems: Made Simple	WKS15:QGenAl — Quantum Accelerated Supercomputing	WKS16:QSWE — 5th Int Wks on Quantum Software Engr & Technology	WKS17:QSWE — Care and Maintenance of Quantum Software Stakeholders
14:30-15:00	Break & Posters & Exhibits	Posters Schedule								
15:00-16:30	IEEE Entrepreneurship Startup Clinic & Exhibits & Theater	Exhibit Theater in Hall 1 & 2	WKS08:QSWE — Quantum Software 2.1; Problems, Ideas, Paths to Scale	WKS13:QCPR — Quantum TechWorking Groups: QC in Practice — Part1	TP89::QALG::426:178:512 Quantum Algorithms	TP27::QAPP::505:612:618 Toward Trustworthy Quantum Computation	TP28::OAPP::181:414:563 Quantum Optimization for Logistics and Routing in Real-World Systems	WKS15:QGenAl — Quantum Accelerated Supercomputing	WKS16:QSWE — 5th Int Wks on Quantum Software Engr & Technology	WKS17:QSWE — Care and Maintenance of Quantum Software Stakeholders
16:30-17:00		Break at Kiva								
17:00-18:30		KEY04 — Jay Gambetta, IBM Quantum					_			
18:30-20:00	Reception Exhibits & Posters									v207

TUE		QCE25 Adv	vance Program-a	t-a-Glance				uantum Week 2025 fo Exceptional Quantur		
Legend	Exhibits & Theater	Keynote	Workshop	Tutorial	Technical Papers	Panel	Birds-of-the-Feather	Special Events	Speaker Guidelines	Technical Paper Presentation Guidelines
Room	Aztec - M	Brazos M	Picuris - L	Isleta/Jemez - L	Nambe/Navajo - L	Apache - L	Sandia/Santa Ana - L	Cochiti - L	Taos - L	Laguna - L
Style Capacity	COMBO SET: Theat58/Class48	COMBO SET: Theat158/Class150	Theater 140	Theater 85	Theater 85	Theater 79	Theater 132	Theater 90	Theater 130	Theater 65
7:00-8:00	Early Morning Coffee Break at Kiva									
8:00-9:30	Keynote in Kiva Auditorium									
9:30-10:00	Break & Posters & Exhibits Hall 1 & 2	Posters Schedule								
10:00-11:30	TP38::QAPP::637:365:264 Quantum Algorithms for Learning and Combinatorial Optimization	TP39::QAPP::151:225:131  Quantum Computing for Financial Modeling and Portfolio Optimization	WKS19:QML — Quantum Computing & Reinforcement Learning (QCRL)	TP29::QAPP::254:711:450 Quantum and Quantum- Inspired Annealing for Scalable Optimization II	WKS18:QEC — Quantum Error Correction: Pathways to Scalability	TUT21:QTEM — FTQC Architecture Design and Resource Estim Using TopQAD	WKS20:QNET — Quantum Network Engineering	TP32::QNET::488:600:778 Optimization in Quantum Networks	TP35::QALG::678:102:484 Toward Secure and Reliable Quantum Computing in the NISQ Era	WKS14:QNATSCI — QC Qpportunities in Energy Innovation
11:30-13:00	Lunch & Posters & Exhibits	Posters Schedule								
13:00-14:30	TUT19:QALG — Practical Quantum Algorithm Design with Qmod	TUT20:QTEM — Circuit & Qubit Interactions in Silicon & Superconduct Qubits	WKS19:QML — Quantum Computing & Reinforcement Learning (QCRL)	TP30::QAPP::669:360:605 Quantum Solutions for Iransportation, Routing, and Scheduling Problems	WKS18:QEC — Quantum Error Correction: Pathways to Scalability	TUT21:QTEM — FTQC Architecture Design and Resource Estim Using TopQAD	WKS20:QNET — Quantum Network Engineering	TP33::QNET::250:794:289 Quantum Protocols and Experiments Beyond the Lab	TP36::QALG::238:561:740 Overcoming Optimization Challenges in Quantum Algorithms	WKS14:QNATSCI — QC Opportunities in Energy Innovation
14:30-15:00	Break & Posters & Exhibits Hall 1 & 2	Posters Schedule								
15:00-16:30	TUT19:QALG — Practical Quantum Algorithm Design with Qmod	TUT20:QTEM — Circuit & Qubit Interactions in Silicon & Superconduct Qubits	WKS19:QML — Quantum Computing & Reinforcement Learning (QCRL)	TP31::QAPP::602:506:822 Toward Robust and Secure Quantum Algorithms and Compilation	WKS18:QEC — Quantum Error Correction: Pathways to Scalability	TP89::QALG::426:178:512 Quantum Algorithms	WKS20:QNET — Quantum Network Engineering	TP34::QNET::237:769:789 Real-Time Control & Integration for Scalable Quantum Platforms	TP37::QALG::496:531:282 Structured and Fault- Tolerant Circuits for Robust Quantum Computation	WKS14:QNATSCI — QC Opportunities in Energy Innovation
16:30-17:00	Break at Kiva									
17:00-18:30	Keynote in Kiva Auditorium									
18:30-19:30										v207



# Wednesday, 3 September

WED		QCE25 Ad	vance Program-a	t-a-Glance				Quantum Week 2025 fo Exceptional Quantun		
Legend	Exhibits & Theater	Keynote	Workshop	Tutorial	Technical Papers	Panel	Birds-of-the-Feather	Special Events	Speaker Guidelines	Technical Paper Presentation Guidelines
Room	Hall 1 & 2	Kiva Auditorium	Mesilla	San Miguel	La Cienega - U	Pecos	Ruidoso	Galisteo	Dona Ana	Cimarron
Style Capacity	Exhibits, Theater, Posters, Carer Fair, Student Mentoring	Theater 2000	Theater/Panel 216	Theater/Panel 160	Theater/Panel 160	Classroom 66	Classroom 66	Classroom 78	Theater 126	Theater 125
7:30-8:00		Early Morning Coffee Break at Kiva								
8:00-9:30		KEY05 — Pete Shadbolt, PsiQuantum								
9:30-10:00	Break & Posters & Exhibits	Poster Presentations Guidelines								
10:00-11:30	Exhibits & Theater	Student Speed Mentorship Ballroom B	WKS21:QCAPX — Quantum Venture Summit: 6th Wks QC Entrepreneurship	WKS22:QCPR — Quantum TechWorking Groups: QC in Practice — Part 2	PAN05::QHPC::881 Enabling HPC Centers to lead in the Quantum Era	WKS23:QSWE — Open System Architecture Quantum Computers Innovation	WKS26:QPHO — Photonic Quantum Computing	WKS28:QNET — Quantum Interconnects & Compilation for FT DQCA	WKS25:QTEM — 4th Wks Control Systems for Quantum Computing (CS4Q)	WKS24:QSYS — Q-CORE: Hybrid Orchestration for Resilient Engineering
11:30-13:00	Lunch & Posters & Exhibits	Posters Schedule								
13:00-14:30	Career Fair & Exhibits	Exhibit Theater in Hall 1 & 2	WKS21:QCAPX — Quantum Venture Summit: 6th Wks QC Entrepreneurship	WKS22:OCPR — Quantum TechWorking Groups: QC in Practice — Part 2	PAN06::QPOLY::882 Bridging Human Quantum Readiness Gap: Across Disciplines	WKS23:QSWE — Open System Architecture Quantum Computers Innovation	WKS26:QPHO — Photonic Quantum Computing	WKS28:QNET — Quantum Interconnects & Compilation for FT DQCA	WKS25:QTEM — 4th Wks Control Systems for Quantum Computing (CS4Q)	WKS24:QSYS — Q-CORE: Hybrid Orchestration for Resilient Engineering
14:30-15:00	Break & Posters & Exhibits	Posters Schedule								
15:00-16:30	Exhibits & Theater	Exhibit Theater in Hall 1 & 2	WKS21:QCAPX — Quantum Venture Summit: 6th Wks QC Entrepreneurship	WKS22:QCPR — Quantum TechWorking Groups: QC in Practice — Part 2	PAN07::QGenAI::1048 Quantum-Accurate AI: QC & ML Chemistry & Materials	WKS23:QSWE — Open System Architecture Quantum Computers Innovation	WKS26:QPHO — Photonic Quantum Computing	WKS28:QNET — Quantum Interconnects & Compilation for FT DQCA	WKS25:QTEM — 4th Wks Control Systems for Quantum Computing (CS4Q)	WKS24:QSYS — Q-CORE: Hybrid Orchestration for Resilient Engineering
16:30-17:00		Break at Kiva								
17:00-18:30		<u>KEY06 —</u> Prineha Narang, UCLA								v207

WED		QCE25 Ad	vance Program-a	t-a-Glance				uantum Week 2025 fe Exceptional Quantun		
Legend	Exhibits & Theater	Keynote	Workshop	Tutorial	Technical Papers	Panel	Birds-of-the-Feather	Special Events	Speaker Guidelines	Technical Paper Presentation Guidelines
Room	Aztec - M	Brazos M	Picuris - L	Isleta/Jemez - L	Nambe/Navajo - L	Apache - L	Sandia/Santa Ana - L	Cochiti - L	Taos - L	Laguna - L
Style Capacity	COMBO SET: Theat58/Class48	COMBO SET: Theat158/Class150	Theater 140	Theater 85	Theater 85	Theater 79	Theater 132	Theater 90	Theater 130	Theater 65
7:00-8:00	Early Morning Coffee Break at Kiva									
8:00-9:30	Keynote in Kiva Auditorium									
9:30-10:00	Break & Posters & Exhibits Hall 1 & 2	Posters Schedule								
10:00-11:30	TP49::QSYS::311:345:419 Quantum Circuit Optimization	TP50::QTEM::176:318:616 Quantum Technologies Optimization	TP51::QALG::459:787:644  Quantum Data Encoding and Signal Processing for Reliable Computation	TUT26:QML — Encoders, Networks, Circuits: Variational QALG with QML	WKS29:QNET — Metropolitan-Scale Entanglement Networks: Use-Cases	BOF02:QSYS — Bridging Gap between Compiler Developers & Scientists	TUT27:QEC — Accelerating Learning and Research in QEC with Loom	TP40::QAPP::185:209:197 Quantum Algorithms for Chemistry and Biological Systems I	TP43::QALG::362:381:690 Quantum Algorithms for Linear Systems and Period Finding	TP46::QNET::319:480:670 Quantum State Engr & Network Interoperability
11:30-13:00	Lunch & Posters & Exhibits	Posters Schedule								
13:00-14:30	TUT23:QNATSCI — Quantum Chemistry on Quantum Computers	TUT24:QCPR — Hybrid HPC-QC Workflows: Solving Many-Body Sys on AWS	TUT25:QALG — Solving Nonlinear Optimization with Quantum Computers	TUT26:QML — Encoders. Networks, Circuits: Variational QALG with QML	WKS29:QNET — Metropolitan-Scale Entanglement Networks: Use-Cases	PAN08::QSWE::1034 Progress and Platforms in the Era of Reliable Quantum Computing	TUT27:QEC — Accelerating Learning and Research in QEC with Loom	TP41::QAPP::533:814:625 Quantum Algorithms for Chemistry and Biological Systems II	TP44::QALG::301:624:193 Adaptive Strategies for Variational Quantum Optimization	TP47::QNET::272:436:662 Entanglement in Quantum Networks I
14:30-15:00	Break & Posters & Exhibits Hall 1 & 2	Posters Schedule								
15:00-16:30	TUT23:QNATSCI — Quantum Chemistry on Quantum Computers	TUT24:QCPR — Hybrid HPC-QC Workflows: Solving Many-Body Sys on AWS	TUT25:QALG — Solving Nonlinear Optimization with Quantum Computers	TP52::QALG::688:271:199 Quantum Circuit Design for Modeling, Estimation, and Control	WKS29:QNET — Metropolitan-Scale Entanglement Networks: Use-Cases	BOF03:QHPC — Distributed Quantum Simulators on Exa-scale HPC Systems	TP53::QML::491:481:374 Structure-Aware QML for Physical and Graph-Based Systems	TP42::QAPP::98:336:479 Emerging Topics in Quantum Applications	TP45::QALG::425:585:614 Efficient Quantum State Preparation and Algorithmic Primitives	TP48::QNET::697:792:754 Entanglement in Quantum Networks II
16:30-17:00	Break at Kiva									
17:00-18:30	Keynote in Kiva Auditorium									v207



# Thursday, 4 September

THU		QCE25 Ad	vance Program-a	t-a-Glance				uantum Week 2025 fe Exceptional Quantum		
Legend	Exhibits & Theater	Keynote	Workshop	Tutorial	Technical Papers	Panel	Birds-of-the-Feather	Special Events	Speaker Guidelines	Technical Paper Presentation Guidelines
Room	Hall 1 & 2	Kiva Auditorium	Mesilla - M	San Miguel - U	La Cienega - U	Pecos - U	Ruidoso - U	Galisteo - M	Dona Ana - M	Cimarron - M
Style Capacity	Exhibits, Theater Posters	Theater 2000	Theater/Panel 216	Theater/Panel 160	Theater/Panel 160	Classroom 66	Classroom 66	Classroom 78	Theater 126	Theater 125
7:30-8:00		Early Morning Coffee Break at Kiva								
8:00-9:30		KEY07 — Chetan Nayak, Microsoft								
9:30-10:00	Break & Posters & Exhibits	Poster Presentations Guidelines								
10:00-11:30	Exhibits & Theater	Exhibit Theater in Hall 1 & 2	WKS31:QNATSCI — Quantum Algorithms for Bio and Life Sciences	WKS32:QALG — Quantum Algorithms for Financial Applications	PAN10::QTEM::1049 QC using Majorana-Based Topological Qubits	WKS30:QPOLY — Quantum Sciences Standards – International Status	WKS33:QALG — 3rd Wks Quantum Algorithm Design Automation (QADA)	WKS34:QAPP — Quantum Algorithms Industrial Apps: Theory & Practice	WKS37:QGenAl — Quantum Artificial Intelligence	WKS36:QTEM — Cryogenic Electronics for Quantum Systems
11:30-13:00	Lunch & Posters & Exhibits	<u>Posters</u> <u>Schedule</u>								
13:00-14:30	Exhibits & Posters close at13:30 Tear down		WKS31:QNATSCI — Quantum Algorithms for Bio and Life Sciences	WKS32:QALG — Quantum Algorithms for Financial Applications	PAN11::QEC::975 Real- time QEC: Achievements & Challenges	WKS30:QPOLY — Quantum Sciences Standards — International Status	WKS33:QALG — 3rd Wks Quantum Algorithm Design Automation (QADA)	WKS34:QAPP — Quantum Algorithms Industrial Apps: Theory & Practice	WKS37:QGenAl — Quantum Artificial Intelligence	WKS36:QTEM — Cryogenic Electronics for Quantum Systems
14:30-15:00										
15:00-16:30			WKS31:QNATSCI — Quantum Algorithms for Bio and Life Sciences	WKS32:QALG — Quantum Algorithms for Financial Applications	PAN12::QEC::1022 Towards QC Standardization: QEC Interfaces Can't Wait	WKS30:QPOLY — Quantum Sciences Standards — International Status	WKS33:QALG — 3rd Wks. Quantum Algorithm Design. Automation (QADA)	WKS34:OAPP — Quantum Algorithms Industrial Apps: Theory & Practice	WKS37:QGenAl — Quantum Artificial Intelligence	WKS36:QTEM — Cryogenic Electronics for Quantum Systems
16:30-17:00		Break at Kiva								
17:00-18:30		KEY08 — Stephanie Simmons, Photonic & SFU								
18:30-20:30	QCE25 Noche de Flamenco en Burque									v207

THU		QCE25 Ad	vance Program-a	t-a-Glance				uantum Week 2025 fe Exceptional Quantun		
Legend	Exhibits & Theater	Keynote	Workshop	Tutorial	Technical Papers	Panel	Birds-of-the-Feather	Special Events	Speaker Guidelines	Technical Paper Presentation Guidelines
Room	Aztec - M	Brazos M	Picuris - L	Isleta/Jemez - L	Nambe/Navajo - L	Apache - L	Sandia/Santa Ana - L	Cochiti - L	Taos - L	Laguna - L
Style Capacity	COMBO SET: Theat58/Class48	COMBO SET: Theat158/Class150	Theater 140	Theater 85	Theater 85	Theater 79	Theater 132	Theater 90	Theater 130	Theater 65
7:00-8:00	Early Morning Coffee Break at Kiva									
8:00-9:30	Keynote in Kiva Auditorium									
9:30-10:00	Break Ballroom A/B/C									
10:00-11:30	WKS38:DQC — Distributed QC: Applications, Challenge & Opportunities	TUT28:QHPC — Sample- Based Quantum Diagonalization and Qiskit Addons	TP64::QALG::95:187:263 Foundations of Quantum Operations	TP65::QSYS::155:513:423 Quantum Circuit Compilation I	WKS35:QSYS — Device- Aware Quantum Software	PAN09::QEC::1051 From Physical to Logical: Implementing QEC in Real World	TUT37:QCPR — Quantum Coding with Q#, VS Code and the GitHub Copilot	TP54::QSYS::182:210:489 Quantum Error Correction I	TP57::QNET::401:708:774 Routing in Quantum Networks	TP60::QPH0::970:395:744 Integrated Photonic Technologies for Scalable Quantum Systems
11:30-13:00	Lunch Ballroom A/B/C									
13:00-14:30	WKS38:DQC — Distributed QC: Applications, Challenge & Opportunities	TUT28:QHPC — Sample- Based Quantum Diagonalization and Qiskit Addons	TUT30:QPHO — Entropy Quantum Computers — Principles and Applications	TUT31:QEC — Adventures in High-Dimensional QEC in Python	WKS35:QSYS — Device- Aware Quantum Software	TUT32:QNET — Quantum Communications and Sensing from Space	TUT37:QCPR — Quantum Coding with Q#, VS Code and the GitHub Copilot	TP55::QSYS::523:349:812 Quantum Error Correction  II	TP58::QNET::107:189:359 Quantum Network Design	TP61::QPHO::836:855:925 Quantum Advantage and Benchmarking in Optical and Photonic Systems
14:30-15:00	Break Ballroom A/B/C									
15:00-16:30	WKS38:DQC — Distributed QC: Applications Challenge & Opportunities	TP63::QALG::232:702:497 Quantum Algorithms & Benchmarking for Scientific & Optimization Workflows	TUT30:QPHO — Entropy Quantum Computers — Principles and Applications	TUT31:QEC — Adventures in High-Dimensional QEC in Python	WKS35:QSYS — Device- Aware Quantum Software	TUT32:QNET — Quantum Communications and Sensing from Space	TP66::QSYS::160:273:645 Quantum Circuit Compilation II	TP56::QSYS::190:183:206 Quantum Error Correction III	TP59::QNET::284:663:755 Quantum Paths	TP62::QPH0::860:337:846 Advances in Photonic Quantum Computing
16:30-17:00	Break at Kiva									
17:00-18:30	Keynote in Kiva Auditorium									
18:30-20:30	QCE25 Noche de Flamenco en Burque Location: Civic Plaza									v207



# Friday, 5 September

FRI	QCE25 Advance Program-at-a-Glance					IEEE Quantum Week 2025 featuring 550+ Hours of Exceptional Quantum Programming					
Legend	Exhibits & Theater	Keynote	Workshop	Tutorial	Technical Papers	Panel	Birds-of-the-Feather	Special Events	Speaker Guidelines	Technical Paper Presentation Guidelines	
Room	Hall 1 & 2	Kiva Auditorium	Mesilla - M	San Miguel - U	La Cienega - U	Pecos - U	Ruidoso - U	Galisteo - M	Dona Ana - M	Cimarron - M	
Style Capacity		Theater 2000	Theater/Panel 216	Theater/Panel 160	Theater/Panel 160	Classroom 66	Classroom 66	Classroom 78	Theater 126	Theater 125	
7:30-8:00		Break West Complex Lower Ballroom Foyer									
8:00-9:30		<u>KEY09 —</u> <u>Sam Stanwyck, NVIDIA</u>									
9:30-10:00		Break West Complex Lower La Sala Foyer									
10:00-11:30			WKS39:QSTART — Quantum Computing Research Challenges	WKS40:QGenAl — Recent Advances in Al for Quantum: Algorithms & Apps	PAN13::QPOLY::1052 QC Global Hackathons: Building Capacity, Bridging Divides	WKS42:QTEM — EDS: Integr Technology Challenges in Quantum Computers	TUT33:QHPC — Operator Back Propagation (OBP) in Large Hybrid Environments	TUT35:QSWE — Quantum Software Stacks: Requirements, Experiences	WKS41:QSWE — Prog. Abstractions for Effective Quantum Development	TUT34:QCPR — QC Adoption: A Hands-on Tutorial With CUDA-Q and AWS	
11:30-13:00		Lunch Ballroom A/B/C									
13:00-14:30			WKS39:QSTART — Quantum Computing Research Challenges	WKS40:QGenAl — Recent Advances in Al for Quantum: Algorithms & Apps	TP67::QML::321:604:180 Al-Driven Generation and Optimization of Quantum Circuits	WKS42:QTEM — EDS: Integr Technology Challenges in Quantum Computers	TUT33:QHPC — Operator Back Propagation (OBP) in Large Hybrid Environments	TUT35:QSWE — Quantum Software Stacks: Requirements, Experiences	WKS41:QSWE — Prog. Abstractions for Effective Quantum Development	TUT34:QCPR — QC Adoption: A Hands-on Tutorial With CUDA-Q and AWS	
14:30-15:00		Break East Complex Upper Lobby									
15:00-16:30			WKS39:QSTART — Quantum Computing Research Challenges	WKS40:QGenAl — Recent Advances in Al for Quantum: Algorithms & Apps	TP68::QML::257:291:771 Secure and Feedback- Driven QML	WKS42:QTEM — EDS: Integr Technology. Challenges in Quantum Computers			WKS41:QSWE — Prog. Abstractions for Effective Quantum Development		
16:30-17:00										v207	

FRI	QCE25 Advance Program-at-a-Glance					IEEE Quantum Week 2025 featuring 550+ Hours of Exceptional Quantum Programming					
Legend	Exhibits & Theater	Keynote	Workshop	Tutorial	Technical Papers	Panel	Birds-of-the-Feather	Special Events	Speaker Guidelines	Technical Paper Presentation Guidelines	
Room	Aztec - M	Brazos M	Picuris - L	Isleta/Jemez - L	Nambe/Navajo - L	Apache - L	Sandia/Santa Ana - L	Cochiti - L	Taos - L	Laguna - L	
Style Capacity	COMBO SET: Theat58/Class48	COMBO SET: Theat158/Class150	Theater 140	Theater 85	Theater 85	Theater 79	Theater 132	Theater 90	Theater 130	Theater 65	
7:00-8:00	Break West Complex Lower Ballroom Foyer										
8:00-9:30	Keynote in Kiva Auditorium										
9:30-10:00	Break West Complex Lower La Sala Foyer										
10:00-11:30	TUT36:QPHO — Photonic QIP: From Basics to Applications	TUT38:QEC — Real-time Ultra-large-scale QEC Compilation and Execution	TP69::QAPP::508:511:269 Quantum Computing for Biological systems and Biomedical Data	TP72::QML::775:388:727 Architectures and Preprocessing for Scalable Scientific QML	TP77::QAPP::473:773:220 Scalable Quantum Error Correction	TP78::QTEM::696:123:292 Quantum Control I	TP81::QSYS::236:327:322 Tools for Reliable Quantum Computing	TP83::QML::759:150:153 Quantum Kernels and Structured Circuits for Supervised Learning	TP85::QSYS::7:544:651 Quantum Programming Languages	TP87::QNET::172:226:353 Quantum Networking Protocols I	
11:30-13:00	Lunch Ballroom A/B/C										
13:00-14:30	TUT36:QPHO — Photonic QIP: From Basics to Applications	TUT38:QEC — Real-time Ultra-large-scale QEC Compilation and Execution	TP70::QAPP::463:369:323 Quantum Techniques for Classical Computing and Language Processing	TP73::QML::234:607:347 Improving Variational Learning	TP76::QAPP::407:680:368 Simulating the Complex: Quantum Methods for Fields, Flows, and	TP79::QTEM::328:818:631 Quantum Control II	TP82::QSYS::191:332:315 Software Infrastructure for Scalable Quantum Execution	TP84::QML::475:595:252 Data-Efficient and Uncertainty-Aware QML	TP86::QSYS::270:476:536 Quantum Error Mitigation	TP88::QNET::455:689:492 Quantum Networking Protocols II	
14:30-15:00	Break East Complex Upper Lobby										
15:00-16:30			TP71::OAPP::675:791:471 Quantum-Inspired Models for Learning, Perception, and Cognition	TP74::QML::598:684:695 Quantum Architecture Search	TP75::QAPP::583_ Quantum Nonlocality and Games	TP80::QTEM::281:679:785 Co-simulation and Analysis for Superconducting Platforms					
16:30-17:00										v207	





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