

TQC 2024

19th Conference on the Theory of Quantum Computation, Communication and Cryptography

9-13 September 2024 Okinawa Institute for Science and Technology, Japan

tcq-conference.org



## Welcome

The **Theory of Quantum Computation, Communication and Cryptography** (**TQC**) is a leading annual international research conference focused on the theoretical aspects of quantum information science. TQC is attended by **PhD students**, **postdoctoral scholars** and **faculty** from leading research groups in quantum information and computation all over the world.

The **19th TQC** will hosted by the **Okinawa Institute for Science and Technology** in Japan, in September 2024. It will be a hybrid event, with full support for **in-person** and **online** participation.

We expect around **400 in-person participants** to join the week-long program, presenting and discussing the latest advances in the field.

We look forward to seeing you at TQC 2024!

TQC 2024



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TQC 2024





# Invited speakers



**Jens Eisert** FU Berlin



**Dakshita Khurana**University of Illinois Urbana-Champaign



**Zhengfeng Ji**Tsinghua University



Tomoyuki Morimae Yukawa Institute for Theoretical Physics, Kyoto University

	Mon 9/9	Tue 10/9	Wed 11/9	Thu 12/9	Fri 13/9
	TQC 2024				
09:00					
	Registration 09:00 - 10:00	Invited talk   09:00 - 10:00	A: talk, 09: B: talk, 09: 00 - 09:30  A: talk, 09: B: talk, 09: B: talk, 09:	Invited talk   09:00 - 10:00	Invited talk   09:00 - 10:00
-			30 - 10:00 30 - 10:00		
10:00	Coffee break, 10:00 - 10: 30	Coffee break, 10:00 - 10: 30	Coffee break, 10:00 - 10: 30	Coffee break, 10:00 - 10: 30	Coffee break, 10:00 - 10:
11:00	Opening, 10:30 - 11:00	A: talk, 10: B: talk, 10: 30 - 11:00	A: talk, 10: B: talk, 10: 30 - 11:00	A: talk, 10: B: talk, 10: 30 - 11:00	A: talk, 10: B: talk, 10: 30 - 11:00
	Invited talk	A: talk, 11: B: talk, 11:	A: talk, 11: B: talk, 11:	A: talk, 11: B: talk, 11:	A: talk, 11: B: talk, 11:
	11:00 - 12:00	00 - 11:30 00 - 11:30 A: talk, 11: B: talk, 11:	00 - 11:30	00 - 11:30 00 - 11:30 A: talk, 11: B: talk, 11:	00 - 11:30 00 - 11:30 A: talk, 11: B: talk, 11:
		30 - 12:00 30 - 12:00	30 - 12:00 30 - 12:00	30 - 12:00 30 - 12:00	30 - 12:00 30 - 12:00
12:00					
13:00					
-				<del> </del>	
14:00	A: talk, 13: B: talk, 13: 30 - 14:00	A: talk, 13: B: talk, 13: 30 - 14:00	Excursions 13:30 - 18:00	A: talk, 13: B: talk, 13: 30 - 14:00	A: talk, 13: B: talk, 13: 30 - 14:00 30 - 14:00
14.00	A: talk, 14: 00 - 14:30 B: talk, 14: 00 - 14:30	A: talk, 14: B: talk, 14: 00 - 14:30		A: talk, 14: B: talk, 14: 00 - 14:30	A: talk, 14: B: talk, 14: 00 - 14:30
15:00	Coffee break, 14:30 - 15:	Coffee break, 14:30 - 15:		Coffee break, 14:30 - 15:	Coffee break, 14:30 - 15:
-	A: talk, 15: B: talk, 15: 00 - 15:30 00 - 15:30	A: talk, 15: B: talk, 15: 00 - 15:30 00 - 15:30		A: talk, 15: B: talk, 15: 00 - 15:30 00 - 15:30	A: talk, 15: B: talk, 15: 00 - 15:30 00 - 15:30
	A: talk, 15: B: talk, 15:	A: talk, 15: B: talk, 15:		A: talk, 15: B: talk, 15:	A: talk, 15: B: talk, 15:
16:00	30 - 16:00 30 - 16:00	30 - 16:00 30 - 16:00		30 - 16:00 30 - 16:00	30 - 16:00 30 - 16:00
	A: talk, 16: 00 - 16:30 B: talk, 16: 00 - 16:30	A: talk, 16: B: talk, 16: 00 - 16:30 00 - 16:30		A: talk, 16: B: talk, 16: 00 - 16:30 00 - 16:30	A: talk, 16: B: talk, 16: 00 - 16:30 00 - 16:30
17.00				<b> </b>	<b> </b>
17:00	Reception and Industry	Poster session		Poster session	
	Gala	17:00 - 19:00		17:00 - 19:00	
-	17:00 - 19:00				
18:00					
-		-			
19:00					
			Conference banquet 19:00 - 21:00	<b></b>	
			10.00 - 21.00	<b> </b>	<b> </b>
20:00					
20.00					
				<b></b>	
			-	<b></b>	
		11	1	71	<u> </u>

## Schedule



### **FOLLOW FOR UPDATES**

The exact schedule will be announced on the website in July.

There will be 92 talks in parallel sessions, 4 invited talks, 2 poster sessions, an industry gala and a conference banquet.

## Registration and deadlines

Register at tqc-conference.org

23rd of February 2024: Talk submission deadline.

20th of March 2024: Poster-only submission opens.

15th of April 2024: Notification for talk submissions.

**16th of April 2024:** Early bird registration opens. Student support applications open.

20th of April 2024: Poster-only submission deadline.

30th of April 2024: Notification for poster submissions.

7th of May 2024: Student support applications deadline.

15th of May 2024: Notification for student support.

8th of June 2024: Visa application: if you need a visa to visit Japan, you can now apply for it (3 months before arrival).

30th of June 2024: Early bird registration deadline. Late bird registration opens.

31st of July 2024: Late bird registration deadline. Super late bird registration opens.

9-13th of September 2024: 19th TQC Conference



#### **INFORMATION**

All information on travel logistics can be found at <a href="https://tqc-conference.org/travel2024/">https://tqc-conference.org/travel2024/</a>



#### **STUDENT SUPPORT**

A limited number of grants is available.

More information on the website.

# Travel support

Deadline for applications: 7th of May



### **VISA APPLICATION**

See information on the website.
Applications are possible 3 months in advance.

# GOOGLE AI





### **BECOME A SPONSOR**

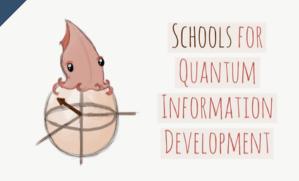
If you are interested in joining TQC 2024 as an official sponsor, please contact us at tqc@squids.ch

# Sponsors





# Organizing committee



## **International organizers**

Nuriya Nurgalieva, University of Zurich & Squids Lídia del Rio, University of Zurich & Squids

## **Local organizers**

David Elkouss Coronas, OIST

Kae Nemoto, OIST

Slawomir Rosiek, OIST

Yukari Yoseda, OIST



# Steering committee

## **Committee chairs**

Min-Hsiu Hsieh, Hon Hai (Foxconn)

François Le Gall, Nagoya University

## **Committee members**

Andris Ambainis, University of Latvia

Kai-Min Chung, Academia Sinica

Eric Chitambar, University of Illinois at Urbana-Champaign

Steve Flammia, AWS Center for Quantum Computing

Kae Nemoto, OIST

Lídia del Rio, Squids

## Programme committee

Frédéric Mangiez, CNRS [chair]
Alex Bredariol Grilo, CNRS [co-chair]

Srinivasan Arunachalam, IBM

Alexander Belovs, University of Latvia

Mario Berta, RWTH Aachen University

Xavier Bonnetain, Inria Nancy

Jop Briet, CWI

Marco Cerezo, LANL

Nai-Hui Chia, Rice University

Nicolas Delfosse, IonQ

Ernesto Galvão, INL

Uma Girish, Princeton

Tom Gur, University of Cambridge

Yassine Hamoudi, CNRS Bordeaux

Dominik Hangleiter, QuICS (UMD & NIST)

Chris Heunen, University of Edinburgh

Christoph Hirche, TU Munich & CQT NUS

Nick Hunter-Jones, UT Austin

John Kallaugher, Sandia National Laboratories

Shelby Kimmel, Middlebury College

Robert Koenig, TU Munich

Felix Leditzky, UIUC

Tongyang Li, Peking University

Jiahui Liu, MIT

Alex May, Perimeter Institute & University of Waterloo

Mio Murao, University of Tokyo

Ion Nechita, CNRS, Toulouse

Harumichi Nishimura, Nagoya University

Tom O'Brien, Google Quantum Al

Subhasree Patro, Utrecht University & QuSoft

Supartha Podder, Stony Brook University

Alexander Poremba, MIT

Luowen Qian, Boston University

Patrick Rebentrost, CQT

Norbert Schuch, University of Vienna

Thomas Schuster, Caltech

Makrand Sinha, UIUC

Fang Song, Portland State University

David Sutter, IBM Zurich

Mario Szegedy, Rutgers University

Marcelo Terra Cunha, Unicamp

Dave Touchette, Sherbrooke University

Dominic Verdon, University of Bristol

Nathan Wiebe, University of Toronto

Dominic Williamson, University of Sydney

Penghui Yao, Nanjing University

Ted Yoder, IBM

# See you at TQC 2024!



Okinawa, Japan 9-13 September 2024

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