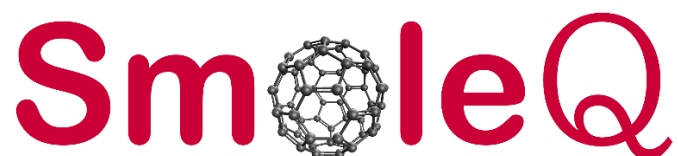


The 2nd SmoleQ Workshop



Let's meet at **the reception of Hotel Concorde at 12:15**. From there, we will head to Shouintei (<https://www.shouintei.jp/>) for tea and group photos. Please have your lunch beforehand. At Shouintei, we will also handle participant registration. Yanagisawa will give a short welcome speech, and we will take a moment to introduce ourselves to each other. After tea and photo session, we will return to Hotel Concorde.

Day 1 (5 talks)

13:45 - 14:40 (talk 30 min + discussion 25 min)

Akihito Ishizaki

[Exploring the dynamics in molecular systems with quantum science/technology]

Chair: Paul Mencil

5 min break

14:45 - 15:40 (talk 30 min + discussion 25 min)

David Pomaranski

[Time-bin architecture for electronic qubits with quantum Hall edge channels]

Chair: Paul Mencil

5 min break

15:45 - 16:40 (talk 30 min + discussion 25 min)

Murooka Yoshie

[A New Relativistic Ultrafast Electron Diffraction and Imaging (RUEDI) National Facility
for nanoscience in the U.K.]

Chair: Abhisek Sinha

5 min break

16:45- 17:40 (talk 30 min + discussion 25 min)

Ikutaro Hamada

[Exploring chemical processes of single molecules on solid surfaces via density
functional theory: Adsorption, reactions, and manipulation]

Chair: Ravi Kumar

5 min break

17:45 - 18:40 (talk 30 min + discussion 25 min)

Hirofumi Yanagisawa and Abhisek Sinha

[Optical control of coherent electron emissions from single molecules]

Self-moderating

Let's go to Bistro Kuroneko for dinner and further discussion.

Day 2 (7 talks)

9:00 – 9:30 **Coffee**

9:30 - 10:25 (talk 30 min + discussion 25 min)

Vandana Sharma

[Imagine the unseen]

Chair: Abhisek Sinha

5 min break

10:30 - 11:25 (talk 30 min + discussion 25 min)

Marcelo Chiappina

[Strong Field Quantum Optics: The ongoing journey and beyond]

Chair: Abhisek Sinha

5 min break

11:30 - 12:25 (talk 30 min + discussion 25 min)

Taichi Okuda

[Recent progress of spin-resolved photoelectron spectroscopy and its application]

Chair: Abhisek Sinha

Let's have lunch boxes from OMG Kitchen together in the workshop room.

After lunch, we'll take a stroll through Hamamatsu Castle Park with anyone
interested in joining the tour.

14:30 - 15:25 (talk 30 min + discussion 25 min)

Alex W Chin

[Simulating ultrafast quantum dynamics in molecular excited states with
MPS Dynamics]

Chair: Paul Menczel

5 min break

15:30 - 16:25 (talk 30 min + discussion 25 min)

Lewis Antill

[Single-photon quantum effects in fluorescent biomolecules]

Chair: Paul Menczel

5 min break

16:30 - 17:25 (talk 30 min + discussion 25 min)

Hitoshi Ishiwata

[Defining the Boundaries of Matter and Life through Quantum
Measurement]

Chair: Abhisek Sinha

5 min break

17:30 - 18:25 (talk 30 min + discussion 25 min)

Neill Lambert and Paul Menscel

[From open quantum systems to electron transport through single molecules]

Self-moderating

Let's go to Kelapa for dinner and further discussion.

Day 3 (3 talks)

9:00 – 9:30 **Coffee**

9:30 - 10:25 (talk 30 min + discussion 25 min)

Zaki Zakaria

[Nanomaterials and Nanofabrication for Sensing Applications]

Chair: Abhisek Sinha

5 min break

10:30 - 11:25 (talk 30 min + discussion 25 min)

William Dawson

[Productive Large Scale DFT Calculations on Supercomputer Fugaku]

Chair: Ravi Kumar

5 min break

11:30 - 12:25 (talk 30 min + discussion 25 min)

Ravi Kumar and Hirotaka Kitoh-Nishioka

[Development of large-scale DFT simulations under strong electric fields
environment]

Self-moderating

12:25 - 12:30 (5 min)

Hirofumi Yanagisawa

Closing remark

Let's quickly tidy up the room and meet at the hotel entrance at 12:45.
Two taxis will be waiting for us, and we'll head to Yamamoto-tei for lunch
and further discussion.

-Meeting Venue

Concorde Hotel Hamamatsu

<https://www.concorde.co.jp/>

The venue is on the **third floor**. When you exit the elevator, you will find the workshop room at the far right corner.

Here's how to get to the hotel from the Shikansen exit at Hamamatsu station:

1. After exiting the Shinkansen, turn right and walk straight.
2. You will find an escalator going down. Please take it.
3. After reaching the lower level, walk straight ahead.
4. You will come across an escalator going up. Please take it.
5. You will arrive at the bus terminal. Proceed to **Bus Stop No. 13**.

(Note that buses No. 50, 53, and 56 depart from Bus Stop No. 13, and all of them go to the destination. You can find the timetable at the following link:

https://files.microcms-assets.io/assets/fcf72c24b7c7487fae30725c53626d54/87cde3412dca47df8f88021e559c2ef1/20250321_10_13.pdf

Sorry, the timetable is written in Japanese. However, the left half (highlighted in white) shows the schedule for Monday to Friday, while the right half is for Saturdays, Sundays, and national holidays.)

6. From Hamamatsu Station, it's about a 10-minute bus ride. Get off at "**Hamamatsu Castle Park Entrance**". The hotel will be easily visible from there.

How to pay for the bus:

When you get on the bus, please take a small numbered ticket from the entrance. This number indicates the stop where you boarded. At the front of the bus, there is a display showing the fare corresponding to your boarding stop. The fare is likely around 200 JPY for a one-way trip. You'll need to pay in cash when you get off. Please prepare the exact amount in coins, as the fare machine does not give change. If you don't have coins, you can exchange a 1,000 JPY note at the machine located next to the driver. If you're unsure what to do, you can show your 1,000 JPY note and your ticket to the driver—they are usually very kind and will help you. *(If not... I'm sorry in advance!)*

-Purpose of this meeting

The **SmoleQ (Single Molecule Quantum) Workshop** is organized to accelerate progress in our SmoleQ project, funded by KAKENHI, and to grow the broader research community around it. After the current SmoleQ project concludes, our goal is to launch even larger, international initiatives with this expanded network.

To support this vision, we have invited top-tier researchers to join us. This workshop is not only an opportunity to present our own work, but also a chance to actively listen and learn from these distinguished guests—especially about the topics they are currently most passionate about and wish to share with the community.

While the presentations do not need to align strictly with the SmoleQ project's focus, we encourage inclusion of at least one of the following themes: **single molecules, quantum physics, microscopy, or ultrafast phenomena**.

-Participants (Total number: 20)

1. Lewis Antill (Sungkyunkwan University)
2. Parishkrith Aravind (IIT Hyderabad)
3. Alex W Chin (CNRS)
4. Marcelo Chiappina (Guangdong Technion Israel Institute of Technology)
5. William Dawson (RIKEN)
6. Ikutaro Hamada (Osaka University)
7. Akihito Ishizaki (Tokyo University)
8. Hitoshi Ishiwata (QST)
9. Hirotaka Kitoh (Kindai)
10. Ravi Kumar (Kindai)
11. Neill Lambert (Riken)
12. Paul Menczel (Riken)
13. Yoshie Murooka (Liverpool University)
14. Mizuki Nakamura (Shizuoka University)
15. Taichi Okuda (Hiroshima University)
16. David Pomaranski (Riken)

17. Abhisek Shinha (Shizuoka University)
18. Vandana Sharma (IIT Hyderabad)
19. Hirofumi Yanagisawa (Shizuoka University)
20. Zakaria Ziadi (OIST)

-Refund

Shizuoka University will reimburse your travel expenses and provide **12,000 JPY per night** for accommodation and **2,000 JPY per day** as a daily allowance.

Hotel:

We have reserved single rooms with breakfast at **Hotel Concorde Hamamatsu** for all participants, so there is no need for you to book a hotel yourself. The cost per night is **9,900 JPY**, which should be paid at the hotel reception.

Transportation:

Please arrange your own train or flight tickets — these will be reimbursed later.

If you are traveling by flight, please keep both your flight and train tickets (train tickets are likely not required, but please keep them just in case). Although electronic tickets are common nowadays, **please request a paper ticket at the airport**. We will also ask you to send us the original return ticket after you return home.

-Lunch and Dinner

We are planning to have **lunch together on July 24 and 25**, and **dinner on July 23 and 24**. These meals will be covered by Kindai University. However, there is a budget limit of **1,500 JPY for lunch** and **3,000 JPY for dinner**, and we may exceed these amounts depending on the menu. Any costs beyond the coverage limit will need to be paid by each participant, using the daily allowances provided by Shizuoka University. If we are able to estimate the excess cost in advance, we will include it in the workshop participation fee (see below).

-Social program Fee

We will collect 4,000 JPY from each participant to cover expenses that cannot easily be financed through our research budget. This fee can be paid using the daily allowances provided to participants.