

ISCO 2023

Opening Remarks



IPMU Institute for Physics and Mathematics University of Tsukuba

OIST OKINAWA INSTITUTE OF SCIENCE AND TECHNOLOGY

iTHEMS Institute for Information Technology and Health Science

科研費 KAKENHI

Interdisciplinary Science Conference in Okinawa

ISCO 2023

Physics and Mathematics meet Medical Science

Credit: Dr. Hideo Fujiwara - Subaru Telescope, NAOJ

Courtesy of RIKEN

SUSTAINABLE DEVELOPMENT GOALS

2023 Feb. 27th ▶ Mar. 3rd

OIST Okinawa Institute of Science and Technology

Deadline of Abstract Submission 30. Nov. 2022

Deadline of Registration 31. Jan. 2023

<https://indico.ipmu.jp/e/ISCO2023>

Scan this QR code for more information

Tadayuki Takahashi on behalf of the Organizing Committee

Interdisciplinary Science Conference in Okinawa (ISCO 2023)



Recent Photo of OIST



ISCO 2023

This poster shows the connection between the fields of fundamental science through the famous Ouroboros serpent.

The message is that we, who live in a modern society with many challenges, can help each other in our research to solve our own problems and welcome the dawn of a new era.

Key word
Interdisciplinary approach

The poster for ISCO 2023 features a central blue Ouroboros serpent. Surrounding it are various scientific images: a particle accelerator, a molecular model, a galaxy, Earth, a DNA helix, a hand holding a syringe, and a person in a lab. Logos for IPMU, OIST, iTHEMS, and KAKENHI are at the top. The text 'Interdisciplinary Science Conference in Okinawa' and 'ISCO 2023' are prominent. Below, it says 'Physics and Mathematics meet Medical Science'. At the bottom, it gives the dates '2023 Feb. 27th ▶ Mar. 3rd', the OIST logo, and the deadline for abstract submission as '30. Nov. 2022'. A QR code is in the bottom right corner.

IPMU INSTITUTE FOR THE PHYSICAL AND MATHEMATICS OF THE UNIVERSE

OIST OKINAWA INSTITUTE OF SCIENCE AND TECHNOLOGY

iTHEMS

2023 Interdisciplinary Theoretical and Mathematical Science Program

科研費 KAKENHI

Interdisciplinary Science Conference in Okinawa

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Physics and Mathematics meet Medical Science

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ISCO2023 is organized and sponsored by

two institutes and a graduate school created with an emphasis on an inter-disciplinary approach



The goal of the institute is to discover the fundamental laws of nature and to understand the universe from the **synergistic perspectives** of mathematics, statistics, theoretical and experimental physics, and astronomy. (2007-)



Interdisciplinary Theoretical and Mathematical Sciences Program (iTHEMS) is an international research program at RIKEN. It facilitates close collaborations among **researchers from different disciplines** in theoretical, mathematical and computational sciences. (2016 -)

A pioneering graduate university, conducting **research that bridges disciplines to explore new frontiers of scientific knowledge.** (2005 -)



ISCO2023 is organized and sponsored by

Grant-in-Aid for scientific Research on Innovative Area (2018–2022), MEXT, Japan

Toward new frontiers : **Encounter and synergy of state-of-the-art astronomical detectors** and exotic quantum beams



宇宙観測検出器と量子ビームの出会い。新たな応用への架け橋。



新学術領域研究 (2018-2022)

From Atomic physics to Medical Imaging

https://member.ipmu.jp/SpaceTech_to_QuantumBeam/index_e.html

The purpose of ISCO 2023 is

to discuss the challenges we face

**to discuss the latest advancements in the fields
of space science, particle and nuclear physics,
quantum computing, life sciences, and medicine**

Invited Speakers

1. Ugur G Abdulla (OIST)
2. Toshiyuki Azuma (RIKEN)
3. Gordon Baym (University Illinois at Urbana-Champaign)
4. Thomas Busch (OIST)
5. Piero Carninci (RIKEN)
6. Neil Davies (University of California, Berkeley)
7. John Girkin (Durham University)
8. Shiro Ikeda (Institute of Statistical Mathematics)
9. Aya Ishihara (Chiba University)
10. Barbara Jacak (University of California, Berkeley)
11. Keiko Kono (OIST)
12. Motoko Kotani (Tohoku University)
13. Alexander Kusenko (University of California, Los Angeles)
14. Tom Melia (Kavli IPMU, The University of Tokyo)
15. Hitoshi Murayama (Kavli IPMU, The University of Tokyo/University of California, Berkeley)
16. Shigehiro Nagataki (RIKEN)
17. Hidetoshi Nishimori (Tokyo Institute of Technology)
18. Mihoko Nojiri (KEK)
19. Milind Purohit (OIST)
20. David C. Reutens (University of Queensland)
21. Nami Sakai (RIKEN)
22. Misao Sasaki (Kavli IPMU, The University of Tokyo)
23. Hideyuki Saya (Fuiita Health University, School of Medicine)
24. Nic Shannon (OIST)
25. Masahiro Teshima (Max Planck Institute for Physics)
26. Yasunobu Uchiyama (Rikkyo University)
27. Yasuyoshi Watanabe (RIKEN)
28. Matthias Wolf (OIST)

Contributed Talks

1. Catherine Beauchemin:
2. Tsuyoshi HONDOU:
3. Gen Kurosawa:
4. Akihiko Monnai:
5. Shinji Okada:
6. Sho Ozaki:
7. Tomoki Ozawa:
8. Florian Pflug:
9. Takashi Tsuboi:

Science Organizing Committee:

Tetsuo Hatsuda (RIKEN, Co-Chair)
Motoko Kotani (Tohoku Univ.)
Alexander Kusenko (UCLA)
Nicholas M. Luscombe (OIST, Co-Chair)
Shigehiro Nagataki (RIKEN)
Misao Sasaki (Kavli IPMU)
Amy Shen (OIST)
Tadayuki Takahashi (Kavli IPMU, Co-Chair)
Tadashi Yamamoto (OIST)

35 poster presentations

The purpose of ISCO 2023 is

**to explore methods for solving issues through
the fusion of different fields**

to form a new network of researchers.

of RIKEN

ENABLE
MENTALS
ALS
Optimizing Goals



Feb 27 ▶ Mar 3

Sci

This conference is supported by



Nicon Solutions



トミー沖縄ノボサイエンス



IMAGINE-X



SEIKO
正晃株式会社



RIKEN SUURI
CORPORATION

Welcome to ISCO2023

Toward the dawn of a new era.

