

The 18th NAPROCK International Programming Contest, Takamatsu, Japan (NAPROCK PROCON 2026) “Algorithms of Challenge, Created in Kagawa”

Call for Participation

This is the Call for Participation for foreign teams, which is slightly different from the one for Japanese KOSEN teams released on Procon official website. Foreign participants can see the Japanese version as well, but they should follow THIS DOCUMENT for application to the contest.

Organizer: Nourishment Association for Programming Contest KOSEN (NAPROCK)

Co-organizer: Japan Federation of KOSEN Association

Supporters and Sponsors: Same as those for the 37th KOSEN PROCON

Host Institution: National Institute of Technology, Kagawa College, Takamatsu Campus

Organizing Office:

Student Support Section, Academic Affairs Division, National Institute of Technology, Kagawa College

PROCON Official Website: <https://www.procon.gr.jp/>

NAPROCK Official Website: <https://www.naprock.jp/>

Judging Panel: Approximately 40 members, including the chair

Introduction

In the 18th NAPROCK International Programming Contest (NAPROCK PROCON 2026), attending students will make use of the results of their daily studies to compete in ideas for information and communication technologies and in abilities to realize those ideas. This year's contest will be divided into three sections: "Themed Section," "Original Section," and "Competition Section". This is an excellent opportunity for students to show their abilities to the world. We encourage them to develop original ideas that students can come up with, and to take challenge in creating works that make full use of information and communication technology, which has been developing remarkably in recent years. The contest consists of a preliminary round and a final round. In the preliminary selection process, we evaluate the originality of the idea. The work may be incomplete when entering for the preliminary round, but it must be feasible.

The contest has been highly acclaimed by various circles for the flexibility and the high level of the ideas that are

submitted to the contest. It has also been widely covered by the mass media and has attracted attention as a project for creativity education. Furthermore, the contest can be considered as a venue for international exchange with Japanese KOSEN students in the competition of information processing techniques.

This contest is supported by many co-sponsoring and supporting organizations including the Ministry of Education, Culture, Sports, Science and Technology (MEXT), and sponsoring companies and institutions.

Dates and Venue

1. Preliminary Round (document screening): Saturday, June 27, 2026

2. Preliminary Round Results:

The results will be announced on the Procon official website and NAPROCK official website by Monday, June 29, 2026.

Notifications will also be sent via email to each KOSEN/university/institution.

3. Final Rounds (details will be provided separately to those who pass the preliminary round)

Dates: October 10 to 11, 2026

Venue: Sunport Hall Takamatsu (2-1 Sunport, Takamatsu City, Kagawa, Japan)

Application Period

Monday, May 18, 2026, 8:30 – Monday, May 25, 2026, 17:00(JST)

Eligibility for Application

- Japanese KOSEN students (including advanced course students)
- Students in foreign KOSENs / universities / institutes

Sections for Application

(For details on each section, please refer to the information for each section and the Procon official website)

Applications will be accepted for each KOSENs/universities/institutions as follows:

Themed Section:	2 teams or less	Each team should consist of 2 to 5 student members
Original Section:	2 teams or less	Each team should consist of 2 to 5 student members
Competition Section:	1 team	Each team should consist of 2 to 3 student members

Please submit one entry per team. **Duplicate registrations by students are prohibited. In other words, the same student cannot belong to multiple teams.** Additionally, **mixed teams composed of students from multiple KOSENs/universities/institutions (including multiple campuses) are prohibited.**

No changes to the registration for the Themed and Original Sections will be allowed after the team has

applied. For the Competition Section, changes to registered students are allowed after the preliminary rounds; however, **changes to the supervising teachers are not permitted**.

About Submitted Works

Submissions should be software that can execute on personal computers, tablets, or similar devices, and that can be demonstrated, presented, or used for contest during the finals.

However, since the preliminary round is a document review, you may apply even if you only have the concept or idea of the system. In other words, you may complete the system after passing the preliminary round. Please be sure to read the **Code of Conduct** carefully before applying. **Code of Conduct** will be released in early April on the Procon official website and NAPROCK official website.

How to Apply

Details will be announced on the Procon official website and NAPROCK official website around late April.

Judging Process

This contest consists of two stages: the preliminary round and the final round. Throughout both rounds, we place a high value on the rich creativity of the students.

Judging method for the preliminary round

1. The preliminary round will consist of a document review based on the PDF files submitted in accordance with the application guidelines.
2. Five foreign teams will be selected for each of Themed, Original and Competition Sections. Selection will be made for each section based on the evaluation results. The preliminary rounds will focus on the originality of the works, while usefulness and feasibility will also be taken into consideration.
3. For the Themed Section, entries will be judged on their appropriateness to the designated theme of the contest.
4. In the Competition Section, entries will be evaluated based on the quality of the ideas and the feasibility of the solution algorithms for the assignments described in the entry form. In case the entry is insufficient or inadequate, it may not pass the preliminary round.

Judging method for the Final Round

The teams that pass the preliminary round will compete in the final round.

1. Themed Section and Original Section

The works will be judged comprehensively based on the presentation and the demonstration. Judging criteria include originality, usefulness, operability, technical skills in system development, quality of operation instructions, and presentation skills (presentation and documentation skills).

The operation instructions and program source code are also subject to judging. Teams participating in the final round are required to submit the operation instructions and program source lists prior to the final round. Details on how to submit these documents will be announced separately to the teams that qualify for the final round after the preliminary round.

2. Competition Section

The winner will be determined through matches.

Special prizes will be awarded based on a comprehensive evaluation based on the system outline, program source code, user interface of the developed competition program, and detailed system description. The system outline, program source code, and detailed system description must be submitted prior to the final round. Details on how to submit these documents will be announced separately to the teams participating in the final round after the preliminary round.

Prizes

The following prizes will be presented in both the Themed Section and the Original Section:

Grand Prize: 1 team

Second Prize: 1 team

Special Prize: several teams

The following prizes will be presented in the Competition Section:

Champion: 1 team

First Runner-up Prize: 1 team

Special Prize: several teams

Notices

1. System Completion

Teams participating in the final round should make every effort to fully implement the ideas they presented during the preliminary round. Please note that failure to sufficiently implement the ideas presented during the preliminary round may result in disqualification.

2. Travel Expenses

The organizers will cover **only accommodation expenses for 4 people (students and/or teacher) for each team** participating in the final round. Detailed information will be sent to each team with the results of

preliminary round. However, **participating teams are responsible for managing and covering their own transportation fees including airfare.** If you have any questions and difficulties for reserving the accommodations, please contact to the organizers (NAPROCK).

3. System Transportation

Participants are responsible for covering the costs of transporting the systems required for demonstrations of the Themed Section and the Original Section as well as PCs and devices required for the Competition Section. Please note that the organizers will not provide computers or other equipment to individual teams.

4. Demonstration Exhibition Space and Internet Access for the Themed and Original Sections

The exhibition space is limited to 1800mm * 1500mm * 2100mm (width * depth * height) for each team.

For this contest, the organizers will not provide any wired internet connections to individual booths. Wireless LAN access points are installed throughout the venue and are available for use, but there is a risk that connectivity may not perform as expected. Therefore, if your demonstration relies on an internet connection, please prepare your own internet connections. Please note that even if you prepare your own connections, connectivity may be unstable depending on the location of your booth. Therefore, please ensure your system can operate using dummy data or similar alternatives in case an internet connection is unavailable.

Power supply at the demonstration venue is prepared on the assumption of 500W per booth. Power outages, voltage drops, or other issues will cause inconvenience to surrounding teams. If you anticipate excessive or fluctuating power consumption—such as when using high-power computers or high-output motors—please arrange your own power source, such as renting a battery power supply.

5. Intellectual Property Rights, etc.

When submitting your work, please take great care to ensure that you do not infringe on the intellectual property rights of others, and take the necessary precautions to protect your own intellectual property rights. Please note that while the copyright for submitted works remains with the entrant, the following materials may be published in video recordings, on the Procon/NAPROCK official websites, in the official guidebook, etc. Please also be aware that these materials may be used for educational purposes.

- (1) Documents and files submitted at the time of application (work introduction, entry details file)
- (2) Documents and files submitted for the final round (manuscript for official guidebook, operation instructions, system overview, detailed system descriptions, team introduction video file, etc.)
- (3) Photos, videos, and presentation data taken during the final round
- (4) Competition response data submitted during the final round

6. Entry to Similar Contests

Entries must be original. Entries that have been submitted to other contests of the same type are not accepted. However, the improved versions of previous entries that did not pass the preliminary rounds may be submitted.

7. Inquiries

Please direct all inquiries to the following e-mail address. Responses to inquiries will be published on the Procon official website and NAPROCK official website as they are received. Please be aware that your

questions may be made public.

Inquiry Deadline: Friday, May 8, 2026, by 17:00 (JST)

Inquiry Email Address: **procon@naprock.jp**

* Please be sure to make inquiries through your faculty advisor.

*We cannot answer questions received after the deadline.

Related Sites

Kosen Procon Official Website: <https://www.procon.gr.jp/>

Kosen Procon X Official Account: @KosenProcon

Kosen Procon Official Facebook Page: <https://www.facebook.com/KosenProcon/>

NAPROCK International Procon Official Website: <https://www.naprock.jp/intprocon/>

The 18th NAPROCK International Programming Contest, Takamatsu, Japan

Themed Section

“Improving Work Efficiency through the use of ICT”

Overview of the Themed Section

In recent years, Japan has been experiencing rapid population aging, and it is expected that by 2040, approximately 35% of the total population will be 65 years of age or older (*1). As we face this super-aging society, the decline in the total labor force has become a serious challenge (*2). Labor shortages risk causing economic stagnation and diminishing the vitality of society as a whole. As the total labor force shrinks, efficiently utilizing the limited workforce is essential to achieving sustainable economic growth.

In response, the Japanese government is promoting “Work Style Reform” (*3) and implementing measures to support diverse work styles. These include promoting telework, streamlining operations through the use of AI and robotics technologies, and establishing flexible work environments. In particular, improving operational efficiency through the use of AI and robotics technologies is crucial for compensating for labor shortages and creating workplace environments where a diverse range of people can continue to thrive. Applications are conceivable in various fields, such as streamlining production lines in manufacturing, automating office tasks, and improving agricultural productivity (*4).

At the same time, activities aimed at improving efficiency are important not only at the government and corporate levels but also at the individual and community levels. Examples include personal task management, time management, and community project management. System design involves selecting programming languages and tools, collecting and analyzing data, developing algorithms, and designing user interfaces. It is also necessary to consider evaluation methods for actually running the system and measuring its effectiveness. Through these activities, students can cultivate problem-solving abilities, programming skills, teamwork, and practical application skills. This will broaden the scope of their learning and serve as a valuable experience for acquiring knowledge and skills that will be useful in their future careers.

The Themed Section of the 18th NAPROCK International Programming Contest is calling for entries aimed at “improving work efficiency through the use of ICT.” The scope of work efficiency improvement covers a wide range of issues, from everyday tasks to the whole society. We hope that the creative ideas of students will contribute to economic growth as we enter an era of a shrinking workforce.

*1 Ministry of Internal Affairs and Communications: Statistical Topics No. 138 – Japan’s Elderly Population as Seen Through Statistics – In Commemoration of Respect for the Aged Day

<https://www.stat.go.jp/data/topics/pdf/topics138.pdf>

*2 Ministry of Land, Infrastructure, Transport and Tourism: White Paper on Land, Infrastructure, Transport and Tourism 2024, Section 1: Challenges Amid the Accelerating Decline in Birth Rates, Aging Population, and Population Decline

<https://www.mlit.go.jp/hakusyo/mlit/r05/hakusho/r06/pdf/kokudo.pdf>

*3 Ministry of Health, Labour and Welfare: Toward the Realization of “Work Style Reform”

<https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/0000148322.html>

*4 Ministry of Agriculture, Forestry and Fisheries: (Reference Material) Bill on the Promotion of the Utilization of Smart Agricultural Technologies to Improve Agricultural Productivity (March 2024)

<https://www.maff.go.jp/j/council/seisaku/kensho/attach/pdf/18siryō-13.pdf>

Notices

1. You are free to use original peripheral devices, but your ability to effectively incorporate them into your programming will be evaluated. Please ensure that they fit within the exhibition space. Additionally, for the final round, please ensure that setup is completed within the designated time (approximately 40 minutes).
2. The relevance of your entry to the contest theme will also be evaluated. While the originality of your work will be the primary focus of the judging, programming skills—including usefulness, feasibility (method of implementation), and level of completion—will also be evaluated.

The 18th NAPROCK International Programming Contest, Takamatsu, Japan

Original Section

Overview of the Original Section

The Original Section of the 18th NAPROCK International Programming Contest calls for original computer software created by applicants with open and creative minds.

With the widespread adoption of smartphones and tablets, new devices such as wearable computers have recently emerged. In addition, the environment surrounding the Internet has been undergoing significant changes, including the advancement of cloud computing, the utilization of open data, and the growing need for cybersecurity. As a result, our daily lives are on the verge of major transformation. How can open data and ICT technologies be utilized beyond the boundaries of space and time, such as where we work, live, and relax, as well as across different times of the day, seasons, and eras? These technologies have the potential to dramatically address many of today's challenges, including education, ecology, food security, telemedicine, and adapting to the "new normal" brought about by infectious diseases.

In the Original Section, we are seeking original works developed from free and innovative ideas that are not bound by conventional frameworks within this social context. We look forward to receiving submissions that showcase the unique creativity of students.

Notices

1. You are free to use original peripheral devices, but your ability to effectively incorporate them into your programming will be evaluated. However, please ensure that they fit within the exhibition space. Additionally, for the final round, please ensure that setup is completed within the designated time (approximately 40 minutes).
2. While the originality of the work will be the primary focus of the judging, programming skills, usability, feasibility (method of implementation), and level of completion will also be evaluated.