

Call for applications: Online Seminar on

“Satellite Remote Sensing and Cybersecurity in the Marine & Maritime Sector”

『人工衛星リモートセンシングと海洋・海事分野のサイバーセキュリティ』

1. Background and Program Objectives / 背景およびプログラムの目的

Satellite remote sensing has become an essential technology for observing the Earth and its oceans from space. It is widely used in our daily lives for weather forecasting, disaster monitoring, and environmental protection. At the same time, as the maritime sector becomes increasingly digitalized, cybersecurity has become a key issue for ensuring safe and sustainable maritime operations. These topics are attracting growing attention around the world.

In this seminar, participants will explore two timely topics: "Seeing the Earth and Oceans from Space: An Introduction to Remote Sensing" and "Recent Developments in Cyber Security in the Maritime Sector." Through these lectures, participants will learn the fundamentals of satellite remote sensing, its applications in marine and ocean observation, and recent developments in maritime cybersecurity in an easy-to-understand manner. No prior knowledge of these subjects is required.

Participants will also have the opportunity to interact and exchange ideas with students from partner universities in Europe, helping them broaden their international perspectives, develop intercultural understanding, and enhance their English communication skills.

This seminar is organized as part of Hiroshima University's "Training Program for Next Generation Leaders in AI in Maritime Economic Security and Sustainability (Japan–Europe)," conducted in collaboration with partner universities in Italy, Austria, Sweden, Spain, and Germany. We welcome undergraduate and graduate students who are interested in marine and maritime issues, science and technology, new learning opportunities, or international exchange.

近年、人工衛星による地球・海洋観測（リモートセンシング）は、天気予報や災害監視、環境保全など、私たちの暮らしを支えるさまざまな場面で活用されています。また、海運や港湾など海洋・海事分野のデジタル化が進む中で、サイバーセキュリティの重要性もますます高まっています。これらは、持続可能で安全な社会の実現に向けて、世界中で注目されているテーマです。

本セミナーでは、「宇宙から見る地球と海洋：リモートセンシング入門」と「海洋・海事分野におけるサイバーセキュリティの最新動向」の2つの講義を通じて、人工衛星を利用した地球・海洋観測の仕組みや海洋分野での活用事例、海洋・海事分野におけるサイバーセキュリティの動向について、基礎から分かりやすく学びます。

さらに、欧州の連携大学の学生との交流やディスカッションを通じて、多様な価値観に触れながら、国際的な視点や英語によるコミュニケーション能力を養うことができます。本セミナーは、広島大学と欧州の連携大学（イタリア、オーストリア、スウェーデン、スペイン、ドイツ）が実施する「日・欧州の海洋経済安全保障と持続可能性を支える AI 次世代人材プログラム」の一環として開催します。海洋・海事分野や科学技術、新しい学びや国際交流に興味のある学部生・大学院生の参加を歓迎します。

2. Course Details / コース詳細

(1) What you can obtain: / 取得できる内容：

- Basic knowledge of satellite remote sensing and its applications in marine and ocean observation
- Understanding of recent developments in cybersecurity in the maritime sector
- Experience in international discussion and English communication

- ✓ 人工衛星リモートセンシングの基礎知識と海洋・海洋観測への活用方法
- ✓ 海洋・海事分野におけるサイバーセキュリティの最新動向への理解
- ✓ 国際的なディスカッションや英語によるコミュニケーションの経験

(2) Course Overview / コース概要

Course Title	① <i>Seeing the Earth and Oceans from Space : An Introduction to Remote Sensing</i> ② <i>Recent Developments in Cyber Security in the Maritime Sector</i>
Course Instructors	① Prof. Hirokazu Yamamoto, Professor (Special Appointment), Research Institute for Ocean and Maritime Futures, Hiroshima University ② Prof. Henning Jessen, Professor, Maritime Law and Digital Change (Nippon Foundation Chair)
Course Date and Time	23 July 2026, :5:00-7:00pm JPT (10:00-12:00 noon CET)
Language to be used	English
Communication platform	Zoom *The meeting link will be sent to participants separately.
Recommended background knowledge	Basic understanding of or interest in remote sensing, maritime issues, or cybersecurity *No specialized knowledge is required.
Number of participants	Hiroshima University: 13 students, Collaborative universities: 10 students (2 students from each university)
Schedule	17:00–18:00 – Lecture and Group Discussion (Prof. Yamamoto) 18:00–19:00 – Lecture and Brief Introduction for the World Maritime University Summer Course (Prof. Jessen)

3. Application Requirements / 応募条件

- Graduate and undergraduate students enrolled at Hiroshima University, World Maritime University, Ca' Foscari University of Venice, Leipzig University, the University of the Basque Country, or the University of Graz.
- Applicants should have sufficient English communication skills (e.g., a TOEIC L&R score of approximately 680 or above) and be willing to actively communicate in English.
- Students with a strong interest in international exchange and study abroad, and high motivation
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- 広島大学、ベニス大学、グラーツ大学、世界海事大学、バスク大学、又はライプツィヒ大学に在籍する学部生および大学院生
- 英語による十分なコミュニケーション能力（例：TOEIC L&R 約 680 点以上）があり、積極的に英語での交流に取り組む姿勢を持つこと
- 国際交流や留学に強い関心を持ち、意欲的な学生

4. Pre-seminar Assignment / 事前課題

- Participants are required to complete a short pre-seminar assignment before the seminar.
- The assignment consists of watching a pre-recorded video (approximately 15 minutes) and reading approximately 10 pages of English materials.
- *The assignment will be announced to participants at a later date.

5. Fees for Program Participation / 参加費

Free of charge / 無料

6. Application / 申込フォーム（締切: 7 月 17 日（金）正午）

If you wish to apply for this program, please fill out the application form via the link below **by noon, July 17 (Fri).**

Link for Application : <https://forms.cloud.microsoft/r/mB4kJhESqC>

7. Digital Badge / デジタルバッジ

Students who complete the program will be issued a digital badge as a certificate of completion.
(The digital badge is expected to be issued around October or November.)

修了者には修了証としてデジタルバッジが発行されます。（10 月～11 月頃に発行予定です）