



SCIENCE & TECHNOLOGY ORGANIZATION  
CENTRE FOR MARITIME RESEARCH AND EXPERIMENTATION

ORGANISATION POUR LA SCIENCE ET LA TECHNOLOGIE  
CENTRE DE RECHERCHE ET D'EXPÉRIMENTATION MARITIME

## VACANCY NOTIFICATION

### Scientist (Underwater Communications) (260875)

**Primary Location:** Italy-La Spezia

**NATO Body:** Centre for Maritime Research and Experimentation (CMRE)

**Schedule:** Full-time

**Application Deadline:** 11 June 2026

**Salary (Pay Basis):** 4,584.89 EUR (Monthly)

**Grade** NATO SSS Grade G11 (ABCL A1)

**Clearance Level** NS

Appointment will be subject to receipt of a NATO SECRET security clearance (provided by the national Authorities of the selected candidate) and approval of the candidate's medical file by the CMRE Medical Adviser.

**We are seeking a passionate and talented Signal Processing and Communications Scientist to support the program of work in developing and investigating innovative and cutting-edge underwater scientific research.**

#### 1. POST CONTEXT

This is a position within the Centre for Maritime Research and Experimentation (CMRE), an organization of the North Atlantic Treaty Organization (NATO).

CMRE is an established, world-class scientific research and experimentation facility that organizes and conducts scientific research and technology development, centred on the maritime domain, delivering innovative and field tested Science & Technology (S&T) solutions to address defence and security needs of the Alliance.

The position is within the Research Division (RD) which is responsible for identifying, developing and delivering Science & Technology (S&T) solutions to the needs of the Alliance in the maritime domain.

The Division leads the development of CMRE's scientific strategy and through its capability in ocean sensing, numerical modelling, big data analytics, artificial intelligence and autonomy, delivers the Centre's S&T goals while maintaining CMRE's reputation within the scientific community.

The Research Division is comprised of the five following Branches:

- Antisubmarine Warfare (ASW)
- Autonomous Naval Mine Warfare (ANMW)
- Environmental Knowledge and Operational Effectiveness (EKOE) & Climate Change (CC)
- Data Knowledge and Operational Effectiveness (DKOE)
- Maritime Unmanned Systems Enablers (MUSE)



The Scientist will be part of the Underwater Communications and Networks (UWNet) Project within the MUSE branch, responsible to support the program of work in developing and investigating innovative and cutting edge scientific research.

The expected scientific focus is the area of underwater acoustic communications specifically targeting the physical layer (sound propagation, channel modelling, modulation, coding, signal processing), networking, security and standardization aspects with the aim to contribute to the underwater communications capability within CMRE and the NATO Nations.

The Scientist may be assigned within a specific Team and may also be involved within other projects within the CMRE Program of Work. Under the guidance of the MUSE Programme Manager the incumbent will be responsible to support CMRE's research in Underwater Communications and to work in close collaboration with other researchers to support the overall execution of the Programme of Work.

## **2. PRINCIPAL DUTIES**

The incumbent is responsible for the development and implementation of algorithms based on theory and observed data to approximate and predict environmental and systems states for applications within the context of systems design, risk analysis and optimization for underwater acoustic communications. Responsibilities will include undertaking concept and design studies, performing signal/data processing, developing data-driven modelling approaches and implementing communications protocols. The scientist will work in close collaboration with CMRE scientists working on interoperability, networking, command and control and underwater communications architecture in the NATO context. The goal is to develop a scalable and flexible underwater communications architecture capable of supporting the integration of networked robotic Maritime Unmanned Systems (MUS) into military operations across the warfare areas, with an emphasis on formalizing this architecture through the NATO standardization process.

Scientific duties include the following:

- Plan and execute simulated and field (at sea) trials and demonstrations;
- Plan and conduct experimentation including theoretical and data analysis, properly documenting and reporting all steps of the work;
- Document the performed work in technical and scientific Centre reports, short papers, refereed scientific journals and internal/external presentations;
- Interact with national and international scientific establishments in order to remain abreast of the latest technical and scientific principles and practices on these matters ;
- Be able to perform and decompose the assigned scientific work under the guidance of supervisor;
- Perform specialist research and development on all these themes, receiving guidelines from the Project Leader and Programme Manager.

## **3. SPECIAL REQUIREMENTS AND ADDITIONAL DUTIES**



a. Flexibility Clause

The incumbent may be required to perform other related duties as directed.

All other related duties should correspond with the required competencies for the job.

b. Deployment/Travel

The incumbent may be required to perform their duties onboard Centre or chartered vessels. The incumbent may be required to undertake TDY assignments within and outside NATO boundaries.

c. Certification

The incumbent needs to hold a fit for sea certificate in line with the International Maritime Organization (IMO) and International Labour Organization (ILO) standards before taking up duty.

#### 4. ESSENTIAL QUALIFICATIONS

a. Professional/Experience

- Sound experience in signal processing techniques in application to digital communications.
- Sound knowledge and proven experience of engineering technologies and tools relevant to the maritime domain.
- Solid knowledge and scientific experience in physics, mathematics, engineering or related field, demonstrated by scientific and technical publications in the field of digital communications.
- Experience in proposing and conducting scientific project work within a multi-national environment and interacting with research sponsoring agencies, demonstrated through projects participation.

b. Education/Training

- MSc degree at a nationally recognised/certified University in physics, mathematics, engineering or related field with a specific focus on signal processing may be accepted and at least 3 years post-MSc related experience with a specific focus on digital communications and signal processing;

Or

- PhD degree at a nationally recognised/certified University in physics, mathematics, engineering or related field with a specific focus on signal processing and digital communications.

c. Language Requirements

A thorough knowledge of one of the two NATO languages, both written and spoken, is essential and some knowledge of the other is desirable.



English SLP 3333

**NOTE:** Most of the work of CMRE is conducted in the English language.

## 5. DESIRABLE QUALIFICATIONS

- Programming skills (e.g. MATLAB, C++, Python).
- Experience in Machine Learning and AI technics and tools.
- Proven experience on digital communications and signal processing with specific focus on underwater applications.
- Sea-trial participation experience.
- Scientific research excellence, evidenced by publications and objective quantitative metrics (e.g. h-index).
- Experience to work with Navy's and/or Defence organizations.
- Knowledge of standardization initiatives and procedures.
- Internationally recognised member of their scientific community of interest.

## 6. ATTRIBUTES/COMPETENCIES

The successful candidate possess the following competencies / personal attributes:

- Excellent communication skills, both oral and written – able to communicate at all levels.
- Very good interpersonal skills. Solicits inputs and encourages others.
- Innovative and driven. Always displaying sound judgement.
- Excellent time management and organizational skills.

All CMRE personnel are expected to conduct themselves in accordance with the current NATO Code of Conduct agreed by the North Atlantic Council (NAC), and thus display the core values of integrity, impartiality, loyalty, accountability, and professionalism.

## 7. REMARKS

The duties are performed in an office, laboratory, workshop environment or on-board Centre ships. Slightly undesirable working conditions may apply.

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### **About Us:**

The Centre for Maritime Research and Experimentation (CMRE) is part of the NATO Science and Technology Organization (STO). The mission of the STO is to help



position both national and NATO science and technology investments as a strategic enabler and technology advantage for the defence and security posture of NATO Allies and partners. The Centre conducts scientific research and technology development and delivers innovative field-tested S&T solutions to address the defence and security needs of the Alliance. CMRE has more than 60 years of experience and has produced a cadre of leaders in ocean science, modelling and simulation, acoustics and other disciplines, as well as producing critical results and understanding that have been built into the operational concepts of NATO and the Nations.

**What we offer:**

- Salary (Pay Basis): 4,584.89 (EUR) Monthly\*.  
\*Salary value as per 2026. Subject to future adjustments in accordance with North Atlantic Council decisions.
- Grade ABCL grade A1 / NATO grade G11
- A world class research facility located in the sea port of La Spezia, Italy supported by two specialised research vessels.
- An exciting place in which to work situated at an ideal location, the port of La Spezia, Italy, enabling synergy with regional and global academic institutes and industry.
- Salary and conditions of employment will be in accordance with the NATO Civilian Personnel Regulations (NCPR), which includes a rewarding salary and a comprehensive system of allowances, supplements and insurances to support families and, in case of expatriated staff, offers an interesting “expatriate” package.
- A generous annual leave and, (where eligible) home leave.
- The successful candidate will be offered a three years’ definite duration contract which may be renewed for subsequent periods subject to business needs, satisfactory performance and the need to rotate skills and talent within the Organization.
- Applicants who prove to be competent for the post but who are not successful in this competition may be offered an appointment to another post of a similar nature, which might become vacant in the near future, albeit at the same or a lower grade, provided they meet the necessary requirements.

**Our recruitment process:**

- Please note that we can only accept applications from nationals of NATO member countries.
- Applications (including the most relevant publications, the diplomas - stating the highest level of education - and a CV) for this vacancy are to be submitted using the E-recruitment system;
- Appointment will be subject to receipt of a security clearance (provided by the national Authorities of the selected candidate) and approval of the candidate’s medical file by the CMRE Medical Adviser.

**Additional information:**

- CMRE values diverse backgrounds and perspectives and is committed to recruiting and retaining a diverse and talented workforce. We welcome applications of nationals from all Member States and strongly encourage women to apply.



- Selected candidates are expected to be role models of integrity, and to promote good governance through ongoing efforts in their work.

**For more information on how to apply:**

[How to apply for posts within NATO](#)

[6 tips to apply for posts within NATO](#)

**NOTE:**

**NATO will not accept any phase of the recruitment and selection prepared, in whole or in part, by means of generative artificial-intelligence (AI) tools, including and without limitation to chatbots, such as Chat Generative Pre-trained Transformer (Chat GPT), or other language generating tools. NATO reserves the right to screen applications to identify the use of such tools. All applications prepared, in whole or in part, by means of such generative or creative AI applications may be rejected without further consideration at NATO's sole discretion, and NATO reserves the right to take further steps in such cases as appropriate.**

**HOW TO APPLY:**

Applications are to be submitted using the NATO Talent Acquisition Program (NTAP)

<https://nato.taleo.net/careersection/2/jobdetail.ftl?job=260875&lang=en>

Applications submitted by other means are not accepted. NTAP allows adding attachments. Essential information must be included in the application form. Particular attention should be given to Education and Experience section. Each question should be answered completely. Expressions such as “please see annex / enclosed document” or invitations to follow links to personal webpages are not acceptable and will be disregarded. All answers should be in English preferably, or French.