

**VACANCY ON THE STAFF OF  
NATO UNDERSEA RESEARCH CENTRE**

**Vacancy Number: 1/2012**  
**Post Title: SCIENTIST (DECISION SUPPORT)**  
**NATO Grade A-3**  
**Location: NURC, La Spezia, Italy**  
**Closing Date: 21 May 2012**

Applications are being accepted from qualified candidates for the position of Scientist (Decision Support), in the Applied Research Department at NURC. This post is offered at the NATO grade A3 level.

**A. General**

NURC conducts a basic and applied research program that is dedicated to fulfilling NATO's Operational Requirements in the maritime environment and undersea domain. Unique in its international makeup, NURC maintains a strong reputation for bringing the best and brightest scientists in maritime disciplines together to solve future problems. NURC has been an international leader in underwater research for over fifty years. The Centre has an interdisciplinary scientific complement of more than 40 scientists drawn from NATO member nations on a rotational basis. Technical support is provided by a permanent staff, trained in the related engineering and technical disciplines. The Centre operates two of the finest research vessels in the world, the Alliance and the Leonardo. NURC is one of three research and technology organizations in NATO. NURC conducts studies, develops prototype systems, and performs experimentation to validate new concepts and to demonstrate and evaluate new capabilities.

This position is in the area of Decision Support for the Environmental Knowledge Operational Effectiveness (EKOE) programme. The candidate will lead one or more projects to predict and manage risk in the maritime environment, to optimize asset allocation for intelligence, surveillance, and reconnaissance, and to provide decision makers with recommended courses of action. The research will depend on meteorological and oceanographic forecasts, including those based on a combination of persistent, controlled mobile sensors and advanced geophysical models. The research will also depend on application specific non-environmental factors that may form part of the recognized maritime picture.

Successful candidates for this position would be expected to have significant interaction with potential customers within NATO and its member nations. The work will be performed in close cooperation with other team members, projects, and organizations, and with the nations via partnerships.

**B. Reports to: Head of Applied Research Department****C. Project**

The scientist may be assigned as Project Leader and/or perform individual research. Under the guidance of Department Head or Programme Manager, will be responsible for conducting and leading research in the following areas:

- Development of tactical decision aids based on measurements from ships, aircraft, autonomous vehicles (underwater, surface air), and other platforms.
- Implementation of tactical decision aids in Submarine and Surface Warfare, Counter Piracy, Port Protection, and other NATO missions.
- Processing, management, and fusion of sensor data in multiple platform scenarios that leads to assessing risk and providing informed and optimal courses of action.

#### **D. Responsibilities and duties of the post**

- Developing and testing algorithms for decision support, optimized to the operating environment (including but not limited to the natural environment), and processed sensor data.
- Developing measures of performance and effectiveness, and their evaluation by statistical analysis of data.
- Leading at-sea evaluation and validation activities of decision support algorithms
- Documenting all research activity in reports and publications
- Supervising team scientists and scientific assistants
- Identifying new ideas and opportunities for research in this field and preparing proposals for funding organizations

#### **E. Essential Qualifications**

##### **1. Professional/Experience**

- A minimum of 4 years postgraduate experience in basic or applied research as a senior scientist or engineer with demonstrated knowledge in fields related to physical sciences, information fusion, decision support systems, statistical signal processing, and/or autonomous maritime vehicles.
- Strong research record as evidenced by peer-reviewed publications and well-written technical reports.
- Ability to communicate effectively orally and in writing. Demonstrated leadership ability and experience in the management of research efforts (e.g., leading project teams).

2. **Education/Training:** A Master degree in operations research, mathematics, physics, engineering, acoustics, oceanography or a related discipline.

3. **Security Clearance.** NATO Secret

4. **Language.** Standard Language Proficiency: English 3333 (Listening, Speaking, Reading and Writing)

##### **5. Standard Automated Data Processing (ADP) Knowledge**

- a. Word Processing: Working Knowledge
- b. Spreadsheet: Working knowledge
- c. Graphics Presentation: Working knowledge

- d. Database: Working Knowledge
- e. Project Management: Working Knowledge
- f. E-Mail Clients/Web Browsers: Working Knowledge
- g. Web Content Management: Basic Knowledge

## F. Desirable Qualifications

### 1. Professional/Experience

- Experience with Bayesian methods and machine learning
- Experience with asset optimization and operations research
- Experience with human cognitive processes and knowledge elicitation
- Experience with the development and delivery of Tactical Decision Aids (TDAs) for Submarine and Surface Warfare, including the effects of the natural environment.
  - For Submarine warfare, oceanography, geology, ambient noise, reverberation, transmission loss, target strength, and sonar system parameters are some of the aspects of TDAs with which the ideal candidate would be familiar.
  - For Surface warfare, oceanography, meteorology, radio frequency and infrared propagation are some of the aspects of TDAs with which the ideal candidate would be familiar.
- Proven ability to plan and conduct sea/field trials.

### 2. Education/Training

- Doctorate (PhD) in a physical science, engineering, or operations research.

### 3. Language

- SLP English: 4444

## G. Civilian Posts

1. **Personal Attributes:** The successful candidate will participate in stimulating, collaborative research and contribute significantly to a culture of innovation at NURC. Individuals must be self-motivated, and have the temperament to work harmoniously with a wide diversity of colleagues and staff from civilian, military, academic and industrial organizations. The successful candidate should also demonstrate creative and critical thinking and sound technical judgment based on rigorous analysis and be open to new ideas. To work effectively with NATO, the successful candidate's personality must exhibit the ability to provide a thoughtful analysis of a situation, develop a tactful response, and the ability to adapt as and when necessary. The successful candidate must be in good health and able to travel and conduct field work as part of the appointment.
2. **Managerial Responsibilities:** May be required to be a project leader/manager and supervise a project-based group with one or two scientists, one or two scientific assistants, as well as one or two visiting researchers (interns, fellows, visiting scientists). Financial responsibilities may include the formulation of budgets for project proposals and the monitoring of budgets during project execution. Leaders

must be able to champion new ideas, provide clear communication of expectations, mentoring, and constructive feedback, and be flexible.

3. **Professional Contacts:** Regular professional contacts with others inside and outside the Centre are anticipated. Inside contacts include colleagues working on the same or related project(s) as well as interaction with senior management. Outside contacts may include senior military or civilian representatives, with and without scientific backgrounds, within NATO or its member nations. Outside contact may also include senior scientists within academic, government, and industry research centres.
4. **Contribution to the Objectives:** The work undertaken by the successful candidate will directly impact the successful execution of the consolidated program of work that is delivered annually to NATO commands, nations, and external funding agencies.
5. **Work Environment:** This work is normally performed in an office environment. However, experimentation at sea on any of the Centre's ships or other ships or platforms may be required.

## H. Contract

The successful candidate will be offered a definite duration contract not exceeding three years' duration which, subject to satisfactory performance and organizational requirements, may be renewed by mutual consent for further periods of up to two years. NURC offers a comprehensive benefits package including tax-free remuneration, 6 weeks annual vacation, life and medical insurance, a retirement plan, educational allowance for dependent children and paid travel to the home country for the member and family every two years.

## I. Application Procedures

Qualified candidates must submit the official NURC application form (available at <http://www.nurc.nato.int/employment/app-form.rtf>) indicating vacancy number and job title. In addition to the application form, candidates must also submit the 'post requirement form' that will explain how their experience and qualifications fit the specified requirements. Applicants should answer each question on the application form and post requirements form completely, avoiding expressions such as: "please see attached résumé/CV", or "please see annex; please see enclosed document", etc. Such referrals will not be regarded. If necessary, attach a continuation page to include important information.

A maximum of 2 attachments may support the application form, and should include a copy of the qualification/certificate covering the highest level of education required by the vacancy announcement. At this stage in the recruitment process, applications are accepted in electronic format only, without a photograph. No original documents should be sent unless requested by NURC Civilian Human Resources.

Applications must be submitted electronically to: [recruitment@nurc.nato.int](mailto:recruitment@nurc.nato.int)

Signed application forms with photograph are required from candidates invited for interviews. Original supporting documents and a set of copies shall be provided during the interview.

Applications will be accepted and considered until **21 May 2012**.

**Notes for candidates:** the candidature of NATO redundant staff will be considered and evaluated before any other candidature.

Serving NATO international civilian staff must send their application forms through their own Civilian Human Resource/Personnel Office. If successful, they will be offered a contract in accordance with the NATO Civilian Personnel Regulations.

Applicants who are not successful in this competition may be offered an appointment to another post of a similar nature, albeit at the same or a lower grade, provided they meet the necessary requirements.

Appointment will be subject to the deliverance of a NATO Secret security clearance by the national authorities of the selected candidate and approval of the candidate's medical file by the NATO Medical Adviser and the Organization's insurers.

Tests/interviews for this post are intended to take place on 18 and 19 June 2012 at the NURC located in La Spezia, Italy.

**Notes for NATO Civilian Human Resource Managers/Personnel Officers:** if you have any qualified redundant staff of same grade, please advise NURC by e-mail to [recruitment@nurc.nato.int](mailto:recruitment@nurc.nato.int) no later than 14 May 2012. If a redundant staff member is appointed, this vacancy notice will be withdrawn.

**Remarks:** Only nationals of the 28 NATO member countries can apply for vacancies at NURC. The NATO member countries are: Albania, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, the Netherlands, Turkey, United Kingdom, United States.

**POC:** Human Resources Branch ([recruitment@nurc.nato.int](mailto:recruitment@nurc.nato.int))