PEA Job Description

1. Position Identification

<table>
<thead>
<tr>
<th>Position Number</th>
<th>991740, 993533, 994320, 994321, 994323, 993498</th>
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<tbody>
<tr>
<td>Position Title:</td>
<td>Senior Staff Scientist</td>
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<tr>
<td>Department:</td>
<td>Ocean Networks Canada</td>
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<td>Reports to:</td>
<td>Associate Director, Science Services</td>
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<tr>
<td>Number of Direct/Indirect Reports</td>
<td>Direct <strong>1</strong>__ Indirect_________</td>
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<tr>
<td>Classification Level</td>
<td>SG 14</td>
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<tr>
<td>Last Updated</td>
<td>September, 2019</td>
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2. Position Summary

Ocean Networks Canada (ONC) is a world-leading organization supporting ocean discovery and technological innovation. ONC is as a not-for-profit society that operates and manages innovative cabled observatories on behalf of the University of Victoria that supply continuous power and Internet connectivity to various scientific instruments located in coastal, deep-ocean and Arctic environments. ONC’s cable arrays host hundreds of sensors distributed in, on and above the seabed, along with mobile and strategically located land-based assets, and instruments that address key scientific and policy issues (subsea earthquakes and tsunamis, ocean acidification, marine biodiversity, etc.) within a wide range of environments.

The core ONC user base is composed of scientists accessing the facility and data archives to conduct world-leading research. The ONC Science Services department provides a wide range of services to assist in the planning, execution, and completion of marine research, with the primary outcome being world leading scientific publications.

Within the Science Services department, itself a part of the User Engagement Division, the Senior Staff Scientist contributes to the execution of science-based services as articulated in the Strategic Plan of ONC, in which serving the research users and providing scientific solutions to stakeholders are core mandates. The Senior Scientist interacts with and provides support to a diverse national and international user community within a specific science and research area, with the goal of increasing the number of scientific publications, the number and breadth of users accessing the facility, broadening the awareness and utility of the observatories in the science community, and encouraging its use by an ever-widening community of interdisciplinary users and research topics. The Senior Scientist supervises and works with Junior Staff Scientists to facilitate research support activities for ONC users and stakeholders across all ONC installations. As an enabling catalyst, the Senior Staff Scientist acts to drive and integrate advances in interdisciplinary marine science, information technology, and multivariate earth-ocean informatics, as required by external users to analyze and use the complex data produced from ONC instruments and sensors. In conjunction with ONC Observatory Operations and User Engagement staff, the Senior Scientist ensures that engineering, software, and data delivery solutions developed and provided to stakeholders are scientifically accurate, functional, validated, and meet the highest standards for performance and integrity.

This position is required to travel nationally and internationally, approximately 8 times a year, for up to a week. This position may be required to participate in Sea expeditions from time to time.
### 3. Key Responsibilities and Expectations

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<th>Expectations:</th>
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| Proposal development and implementation 40% | • Identify, enable and champion research opportunities within the user community encouraging and supporting the development of research proposals.  
• Collaborate with Principle Investigators within the user community or senior ONC leaders, in the design and development of grant-funded proposals.  
• Participate in internal and external proposal reviews.  
• Contribute to the prioritization of ONC science projects by providing input on the organizational resources required, organizational capacity and the strategic value of proposals.  
• Oversee a portfolio of science and research projects across the discipline from concept, to proposal development, and implementation ensuring project schedules are met, effective solutions are developed to research challenges and publication goals are achieved.  
• Utilize the User Engagement Cycle and the ONC Project Management Office web-based tools to report and track progress of science and research projects.  
• Liaise with internal teams such as Marine Operations, Observatory Systems, Software Engineering, and Data Teams in the planning and implementation of projects to assess and resolve issues improve instrument performance, instrument configuration, data assessment procedures, data quality standards and ensure accuracy of meta-data etc.  
• Manage enhanced support projects identified for accelerated publication of observatory research results. |
| Engagement 35% | • Develop, implement and assess a program plan, tailored to the science and research area that:  
  o Promotes the ONC facility to the science and research community and thereby grows ONC’s user community;  
  o Builds a comprehensive program of research projects that increases the scientific output of ONC’s science and research community;  
  o Contributes to internal strategies to meet science and research growth and output goals;  
  o Develops research programs and opportunities to enhance and expand the capabilities of ONC.  
• Build on existing relationships and networks within the science and research community to leverage increased use of the ONC facilities.  
• Maintain expert knowledge of ONC data streams in area of expertise including the signals they contain, the data quality, and how the data can be used by the scientific and research community. |
- Stay abreast of the latest developments in their science and research areas.
- Plan and lead off-site meetings (e.g. workshops, conferences and symposia) with existing and potential research groups to assess their specific scientific goals and data needs, their requirements and how to translate those requirements into actions, and how to enhance their facility experience.
- Collaborate with ONC staff to identify, facilitate and promote multi-disciplinary use of the instruments and data by individual users and user groups.
- Solicit and encourage the development of research proposals within the science and research community.
- Represent ONC and make presentations at national and international conferences, symposia, workshops and lectures at universities and research institutions.
- Provides reports on science and research program activities and outcomes to the ONC Executive, Board of Directors, International Science Advisory Board, and Ocean Observatory Council.

User Support
15%

- Supervise and direct the Junior Staff Scientists in the provision of user support.
- Guide and oversee system and instrument configuration, field operations, and sample collection and analysis (e.g. Winkler oxygen analysis) for sensor data validation and calibration-check purposes.
- Use expertise to define data quality standards and procedures.
- Ensure the quality of user directed data analysis and integration meets ONC user needs as they relate to publishing scientific papers.
- Oversee the development and delivery of research and scientific support activities.
- Provide assessment, review, and sign-off authority on instrument performance and data products associated with sensor systems on ONC installations.
- Collaborate with the science and research community to assess and understand the signals and environmental processes represented in observatory observations in their research area.
- Oversee, validate, and lead efforts to publish ONC related data sets.
- May be required to act as Chief Scientist during maintenance cruises.

Department
5%

- Collaborate with other Science Program Managers to coordinate and leverage support for users.
- Oversee the update and maintenance of content on the various ONC web pages and portals that are related to marine science disciplines, serve the science user community and/or are accessed as part of their research activities.
- Contribute to the compilation, tracking and compilation of facility use summaries, status reports, data publication, and research product metrics.

4. Classification Factors:
**Problem-Solving:**

Expertise in their research area, and knowledge of ONC data streams and current research, is used to develop, implement and assess a tailored science and research program that meets ONC’s scientific and research objectives. Expertise, knowledge and analytic skills enable the position to understand the researchers’ goals, data needs and requirements, and the research opportunities. Knowledge and skill are then used support the design and development of innovative grant funded proposals that translate science and research objectives into action. Senior Staff Scientists must also be able to assess the organizational resources required, organizational capacity and strategic value of proposals.

Project management knowledge and skills are used to oversee successful project implementation. The position must assess and resolve issues related to instrument performance and configuration, data quality, assessment and analysis, data quality standards, data interpretation, etc. Effective solutions must be developed to novel research challenges in order to facilitate publications objectives.

**Responsibility for Financial & Material resources:**

Develops, administers and monitors a $30,000 annual workshop budget.

Additionally, the position collaborates with Principle Investigators to develop and implement grant funded proposals valued up to $200-300,000 each. During proposal development, the position works with other ONC staff and senior leaders to development proposal requirements and budgets for the installation of additional specialized instrumentation on the ONC observatory.

Manages proposal development and project implementation including budget management of projects where the position serves as Principal Investigator.

**Responsibility for Human Resources:**

Directly supervises a Junior Staff Scientist. Supervision responsibilities include selection and evaluation, performance management and determination of training and development requirements.

Provides guidance and direction to other ONC staff supporting projects overseen by this position.

May be required to supervise interns or to act as Chief Scientist during maintenance cruises.

**Impact of Decisions and Actions:**

Contributes to the execution of science-based services as articulated in the ONC Strategic Plan, in which serving the science and research community and providing scientific solutions to stakeholders are a core mandate. Accountable for the development, implementation and assessment of a program plan tailored to a specific science and research area. Program and project-related actions and decisions taken by this position support researchers’ scientific publications, and demonstrate ONC’s successful achievement of their science objectives.

**Independence:**

Independently develops a research program plan tailored to a specific science and research area; however, approval by ONC’s senior leaders is required prior to implementation. Proposal development is undertaken in collaboration with external researchers except where this position serves as the Principal Investigator. Provides input into internal strategies to meet growth and output goals, and the development of research program opportunities that enhance and expand the capabilities of ONC.
The unique nature of the research projects requires the development of new practices, processes etc., often in collaboration with others. Science and research expertise is not readily available within ONC.

5. Summary of qualifications:

This position requires a PhD and a minimum of 2 years post-doctoral experimental or modelling experience in a relevant science discipline including a proven record of publication within the discipline.

The Senior Staff Scientist must be eligible for Adjunct Professor status at a post-secondary institution.

Required Knowledge and Experience:
- Established Leadership in the science community, nationally or internationally
- Demonstrated background, knowledge and qualifications in a major marine science discipline
- Oceanographic experience including collecting, processing, and analyzing samples at sea
- Facilitation and coordination of interdisciplinary scientific programs and teams
- Organizing, running and chairing a scientific workshop
- Management of multi-dimensional numerical databases
- Quantitative multi-variate data analysis and date visualization using high-level data analysis languages such as Matlab, R and/or IDL
- Production and presentation of accurate scientific communications, including peer-reviewed publications, conference abstracts and presentations, and summaries for both broader audiences (public, outreach and education)
- Coordinating and writing research grant proposals
- Supervisory experience with junior staff, interns and/or students
- Demonstrated understanding of project management processes, tools and best practices

Skills and attributes:
- Excellent analytical, critical thinking and problem solving skills
- Superior communication skills, both written and verbal
- Ability to build and maintain productive working relationships with all stakeholders
- Ability to work independently and collaboratively in a team environment
- Proven track record achieving project goals on time and produce deliverables of a high quality
- Ability to work effectively with a diverse population and with all levels of university personnel
- Demonstrated administrative and organizational skills
- Demonstrated leadership, supervisory skills and the ability to inspire a team

Assets or Preferences:

Other:
- Travel (domestic and international) is required
- Must be legally entitled to work in Canada
- Must be able to participate in Sea expeditions as required

Employee’s Signature:  Date:
| Manager's/Supervisor's Signature | Date: |