Title: Physical Oceanographer
Division: MetOcean Solutions (MOS)
Location: Raglan
Responsible to: Team Lead Moana Modelling Suite
Date: October 2019
Term: Start Date – 30 September 2023
Code: TBC

Purpose
The primary role of the Physical Oceanographer is to participate in the dynamical and statistical analysis of Moana Project (www.moanaproject.org) outputs to ensure the scientific quality of the products delivered by the Moana Project Oceanography Team. This includes configuration and implementation of advanced methods in hydrodynamical modelling and dynamical analysis for the evaluation of model results. In addition, the Physical Oceanographer will foster the understanding of the main processes influencing the ocean state around New Zealand. The role includes the publication and communication of the results to ensure scientific robustness and public awareness.

Accountabilities

Moana Modelling Suite 0.7 FTE
- Research and deliver innovations that align with the Moana Project planned benefits and impact for New Zealand Inc.
- Develop and deliver key Moana Modelling Suite work packages, including the development and maintenance of the Moana Modelling Team model simulations.
- Participate in the integration of the model improvements and developments achieved during the Moana Project into the MOS operational forecast system.
- Develop downscaling and nesting approaches for nested high resolution models
- Conduct rigorous analysis of the Moana Project results to ensure scientific quality and integrity.
- Conduct research aimed at improving the knowledge of ocean dynamical processes around New Zealand.
- Publish the results in international journals and present results at national and international conferences and Moana Project huis.

MetOcean Operations 0.2 FTE
- Contribute to the development and maintenance of the MOS operational system.

Related Research 0.1 FTE
- Support further applications for funded research derived from the Moana Project activities, and that are aligned with MOS business goals.
- Develop and deliver key hydrodynamical work packages

**Key Relationships**

**Internal:**
- MetOcean GM
- MRD Team members
- MetService Head Research Partnerships
- Moana Project Director
- Moana Project Management Team

**External:**
Research partners nationally and internationally.

**Staff Responsibility:**
- Direct Report: Nil
- Indirect Report: Nil

**Financial Responsibility:**
- Budget: Nil
- Delegated Authority: Nil
Person Specification

Knowledge, Skills & Qualifications:

Essential:
- A PhD in Physical Oceanography,
- Experience with configuring and running the ROMS hydrodynamic model including nesting,
- Track record in analysing and critically assessing oceanographic models and data,
- Expert understanding of ocean and coastal circulation dynamics,
- Experience working with large geophysical datasets,
- Experience working on a Linux HPC environment,
- Scientific programming ability,
- Experience with software development and data analysis related to forecasting and hindcasting metocean environmental conditions, and
- Strong technical and scientific writing skills in English with a track record in scientific publication.

Desirable:
- Experience with operational oceanography / forecasts,
- Experience in grid nesting techniques,
- Experience in or willingness to learn Data Assimilation techniques,
- Experience in acquisition and quality control of oceanographic observations,
- Experience with Python and LaTeX,
- A curious mind that will explore new technologies,
- Enjoy being part of an international team that moves quickly,
- A quick learner with a “can do” attitude,
- A methodical logical approach to solving problems, and
- An ability to prioritise tasks and manage projects in a timely fashion.

Note: The requirements of this position description may change from time to time to meet operational or other requirements.
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<thead>
<tr>
<th>Our Values</th>
<th>Values in Action</th>
<th>Values Descriptor</th>
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<tbody>
<tr>
<td><strong>Embrace Change</strong></td>
<td>Recognises that change is at the core of our business. Knows how to make change work, by thinking ahead or being open minded to new ideas.</td>
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<td><strong>Optimise our Business</strong></td>
<td>Makes the most of our business opportunities. Is responsive, makes smart decisions and positions our business to achieve its goals.</td>
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<td><strong>Recognise Success</strong></td>
<td>Takes the initiative to bring out the best in themselves and others. Celebrates successful outcomes.</td>
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<td><strong>Collaborate</strong></td>
<td>Actively contributes to a work environment where together we achieve our goals. Openly communicates and cooperates with colleagues, customers and suppliers.</td>
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<td><strong>Respect All</strong></td>
<td>Recognises and shows a genuine appreciation for the strengths and opinions of others. Engages in debates in a respectful manner.</td>
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<td><strong>Take Ownership</strong></td>
<td>Takes responsibility for their own decisions and actions. Always works with the best business interests of MetService at heart.</td>
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<td><strong>Support Growth</strong></td>
<td>Future focused or an advocate for continued improvement where we learn from experiences and mistakes.</td>
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<td><strong>Enable Innovation</strong></td>
<td>Supports a climate of creativity and new ways of doing things.</td>
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