# Grant Awards - Fiscal Year 2003

<table>
<thead>
<tr>
<th>Graduate fellowship: Xinglong Wu</th>
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<tbody>
<tr>
<td><strong>PI:</strong></td>
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<tr>
<td>C.N.K. Mooers</td>
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<tr>
<td><strong>Contract No:</strong></td>
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<tr>
<td>03-10-21</td>
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<tr>
<td><strong>Award Amount:</strong></td>
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<tr>
<td>$25,000</td>
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<td><strong>Term:</strong></td>
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<tr>
<td>9/1/03 - 8/31/04</td>
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<tr>
<td><strong>Affiliation:</strong></td>
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**Scope of Work:**

The Extended Prince William Sound - Princeton Ocean Model (EPWS-POM) was the domain in Mr. Wu’s previous study. It included, as well as PWS, the continental shelf of the Northern Gulf of Alaska as part of the assessment of Open Boundary Conditions from NRL’s data on North Pacific POM. The coupling between the two models occurs in the vertical transect at 59.5N. To better assess the efficiency of the coupling method, the only one open boundary is the southern boundary in the EPWS-POM. The relevant information from NPAC-POM is transferred to force EPWS-POM through this open boundary. The reasons for expanding the model domain outside PWS itself are summarized. Simulations suggest that the physical ocean variability inside the two main entrances from PWS to the Gulf of Alaska are very complex and unstable. There are never enough observations available for numerical simulation if the OBCs are simply set inside the two straights. Outputs from the numerical model may be very sensitive to imposed boundary conditions. This project seeks to develop an accurate model which will employ data from other effective models. NPAC-POM is usable if we place the southern boundary outside PWS at 59.5N, where all the relevant oceanographic information, such as velocity, temperature and salinity, is ready for use. The best estimation from the numerical model may be obtained after testing cases according to the upper and lower bounds.