MPOWIR: Mentoring Physical Oceanography Women to Increase Retention

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What is MPOWIR?

MPOWIR is a community effort that provides mentoring to physical oceanographers from late graduate school through their early careers. MPOWIR is funded by NSF, ONR, DOE, NASA and NOAA.

MPOWIR’s steering committee includes 6 senior scientists:

Silvia Garzoli (NOAA/AOML)
Sonya Legg (Geophysical Fluid Dynamics Laboratory/NOAA)
Susan Lozier, chair (Duke University)
Jeffrey Paduan (Naval Postgraduate School)
Fiamma Straneo (WHOI)
Geoffrey Vallis (Geophysical Fluid Dynamics Laboratory)
Motivation for MPOWIR: Oceanography

- For ~5-10 years oceanographic graduate students have been ~50% female.
- As of 2008, only 20-25% women filled assistant level faculty positions.
- The leakage occurs in women’s careers after Ph.D. and postdoc.

Data from nsf.gov and www.awg.org/gendereq.html#wwgp
Pattullo* Conference: Goals

1. To bring junior women together with senior scientists for them to gain input on research projects and career possibilities

2. To build community networks with peers and senior scientists

3. To raise awareness of issues confronting junior women among the senior scientist community

* Named for June Pattullo, the first woman to receive a Ph.D. in physical oceanography in the U.S. in 1957
The first Pattullo Conference was held May 18-21, 2008 in Charleston, South Carolina. Subsequent conferences were held in 2010, 2011, and an upcoming conference is planned for 2013. In total, the Pattullo Conference has reached:

- 54 universities and labs across the US.
- Senior scientists: 45
- Junior scientists: 74
Pattullo Conference: Jr. Scientist Feedback

<table>
<thead>
<tr>
<th>Area</th>
<th>Rating</th>
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<tbody>
<tr>
<td>Networking opportunities</td>
<td>4.78/5.00</td>
</tr>
<tr>
<td>Professional development opportunities</td>
<td>4.62/5.00</td>
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<tr>
<td>Research opportunities</td>
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<td>Value to current position</td>
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<tr>
<td>Value to future position</td>
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</tr>
<tr>
<td>Overall value</td>
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</tr>
<tr>
<td>Recommend to fellow Jr. Scientist</td>
<td>4.95/5.00</td>
</tr>
</tbody>
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Data represents participant responses from 2008, 2010, and 2011 Pattullo conferences on a scale of 1-5 (poor to excellent)

“The MPOWIR conferences was enriching and fun. I have recommended this conference to another female oceanographer who is at a different university.”
-- Jr. Scientist

“I was really impressed that the senior scientists and program managers were willing to spend so much time at the conference. That made me and several others I talked with feel that the community really cares strongly about retention of junior women.”
-- Jr. Scientist

“The small atmosphere was fantastic.”
-- Jr. Scientist
Pattullo Conference: Sr. Scientist Feedback

<table>
<thead>
<tr>
<th></th>
<th>Rating</th>
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<tbody>
<tr>
<td>Worthwhile time investment</td>
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<td>My expertise was utilized</td>
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<tr>
<td>Would attend again</td>
<td>4.78/5</td>
</tr>
<tr>
<td>Recommend to Jr. Scientist</td>
<td>4.97/5</td>
</tr>
</tbody>
</table>

“It was a productive and enjoyable experience, professionally and personally.”

--Sr. Scientist

“I found the junior scientists' research stimulating and a few presentations gave me ideas to consider in my own research, which naturally led to follow up communication with several of the junior scientists.”

-- Sr. Scientist
Mentor Groups

6 mentor groups and 2 peer groups (both Pattullo and non-Pattullo participants)

Current mentor group enrollment: 12 senior scientists and 49 junior scientists

• In October 2008, 2010, and 2012 group leaders participated in a leader training call and each member received a mentoring guide.

• Meetings focus on the individual goals of junior scientists as well as topics of general discussion.

• Groups also provide an opportunity for peer mentoring and junior participants network with each other “offline.”

• Feedback is very positive in all surveys distributed to mentor group.
Mentor Group Feedback

Based on 2012 mentor group survey:

- Participants all rated mentor group participation as a valuable experience.
- Participants indicated particular emphasis on feedback about professional development and on personal matters.
Forums at National Meetings

- Town hall meetings open to all conference attendees
  - Dual career couples (Ocean Sciences 2008)
  - Careers in oceanography (Ocean Sciences 2010)
  - Balancing work and family (Ocean Sciences 2012)
MPOWIR Surveys: an example

If you could start your doctoral program over, which decisions would you change?

Based on responses from 51 current and recently graduated physical oceanography PhDs
NASA MPOWIR Speaker Series

- The goal is to familiarize junior women in the field of physical oceanography with the research conducted at the NASA labs
- Each year, two scientists are chosen to give a seminar at either JPL or Goddard

NOAA MPOWIR Internship

- Each year, two junior scientists are chosen for an internship at either AOML, GFDL or PMEL
- Students are integrated into an ongoing program of mutual interest for a period of 8 to 10 weeks.
- Students are supervised and mentored by a designated NOAA researcher
Summary

- Three Pattullo Conferences have been executed
- Eight mentoring groups have been formed
- An active MPOWIR website continues to facilitate this effort
- Three national events have been held
- An MPOWIR database has been created and is actively updated
- A speaker series and internships have been created

Additionally, six articles have been published:

Final Thoughts

• Since the overall goal of MPOWIR is to improve the retention of women in physical oceanography, the effectiveness of this effort can most readily be quantified by a change in the rate of retention. Our plan is to provide such quantification at the 5-year mark for MPOWIR in 2013.

• MPOWIR is interested in providing input and advice to other community groups interested in a similar mentoring program and to institutions interested in the best practices of mentoring.

• MPOWIR is interested in focusing the community’s attention to the recruitment of underrepresented minorities in oceanography.

• Ultimately, MPOWIR will be a success if it can drive itself out of business.

Acknowledgements

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