

# BROOKHAVEN WOMEN IN SCIENCE

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*Promoting Women, Advancing Science*

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RHIC & AGS Users meeting  
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# BROOKHAVEN WOMEN IN SCIENCE

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An organization started in 1979 for all men and women who:

- Contribute to and/or support science and technology at BNL,
- Recognize that helping women advance at the laboratory is beneficial to everyone and everything at BNL,
- Support programs that encourage women to enter scientific fields.

We get financial support from BSA and we have a small membership fee

# BWIS GOALS

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- To increase the Laboratory's awareness of the accomplishments of women in science and to provide our members with role models of their own,
- promote a long-term commitment to diversity in BNL staff,
- promote the advancement of women in scientific and technical careers,
- assist in the development of policies and practices which enhance the quality of life for BNL employees,
- provide a forum for the exchange of scientific, technical, and professional information,
- encourage students especially women to consider careers in science, mathematics, engineering, and technology,
- support each other's efforts on the job, and encourage each other's successes.

# BWIS ACCOMPLISHMENTS

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## Quality of life Initiatives

- In 1982, a branch of a federal credit union was established at Brookhaven Lab, as a result of a BWIS proposal to ensure equal credit opportunity for all Laboratory employees and facility-users.
- BWIS initiated day-care center studies which resulted in the Child Development Center, the first to be built on a DOE facility.
- Because of BWIS's efforts to extend the ability to take maternity leave to male employees, Brookhaven Lab's policy on parental leave was instituted in 1988, permitting both women and men employees to take up to three months of leave following the birth or adoption of a child.

# BWIS Seminar Series

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Seminars by prominent women scientists

Or lectures of interest to our members eg  
Science, health, finance, etc.

3 seminars per year since 1980

# BWIS SCHOLARSHIPS

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1. The Chasman Scholarship, an award of \$2,000, is targeted at Long Island women returning to school after an interruption in their studies, and pursuing an education in the natural sciences, engineering, or mathematics. Established 1986.
2. The Gertrude Scharff-Goldhaber Award, first awarded in 1992, to honor an outstanding female physics graduate student studying at Stony Brook or performing her research at BNL.
3. BWIS together with Battelle established the Battelle/BWIS Award for graduating seniors (women) from five neighboring high schools, who excelled in math or science. Awarded from 1999 to 2008.

# EDUCATIONAL OUTREACH GOALS

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- Increasing scientific literacy
  - Better K-12 science education
- Encouraging/nurturing future scientists by
  - Providing positive role models
  - Communicating the excitement of doing science

# BWIS EDUCATIONAL OUTREACH

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- BWIS participates in Brookhaven Lab's speakers' bureau., OEP, Science Learning center activities
- Career days have been held since 1981, to encouraging hundreds of female high school students, to consider careers in science and engineering.
- WISE program partnership with SUNY Stony Brook  
Partner with LI organizations  
SUNY Stony Brook
- LI Fund for women and girls - their Women and Girls Gender Equity Committee sponsors "Careers for Girls in Science and Technology"
- Collaboration with Quarknet and LIPTA (Long Island Physics teachers Association)



# LEAKY PIPELINE

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Almost 50% women in medicine and law  
Increasing numbers in biotech and business  
Why not physics, engineering and mathematics?

## Discouraging answers

National Academies of Sciences report finds bias against women in science and engineering.

# BWIS action on retention problem at BNL

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BWIS presentation in May 2000  
to then new BNL Director Marburger  
and BSA President Shirley Strum Kenny

Documenting (using HR data) that the numbers of women on  
scientific staff had been decreasing

## Proposed solutions:

Recruit more women

Provide them equal opportunities

Take their career aspirations seriously

Gender-neutral retention: subtle discrimination against women  
should not be allowed.

New initiative for hiring research associates was started.

## Number of women scientists at BNL is increasing

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	% of women 9/30/1998	% of women 9/30/2002	% of women 9/30/2008
Research Associates	24	25	26.4
Assistant scientists	10.3	16	19.6
Associate Scientists	9.8	16.7	18.9
Scientists without tenure	7.7	10.4	12.3
Scientists with tenure	2.1	4.8	6.4

## Scientific, professional, management positions at BNL

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	Total Number 9/30/2002	% of women 9/30/2002	Total Number 9/30/2008	% of women 9/30/2008
Scientific	394	9	427	11
Professional	435	16	410	15
Management	152	21	152	26

Professional staff jobs lost 25: 10 were women, 15 were men

# New Initiatives for BWIS - Networking

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- Providing networking opportunities is one of the best ways to improve retention of women. (Abigail Stewart, ADVANCE program, University of Michigan)
- BWIS formed networking committee and is in the process of surveying BNL to determine most popular networking opportunities
- BWIS will host regular networking events

# New Initiatives for BWIS – APS Site Visit

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- APS site visit was suggested at a BWIS seminar
- APS will send a committee to BNL to evaluate the climate for women scientists and submit a report on their findings
- BWIS will facilitate aspects of the APS site visit

# BWIS – Promoting Women, Advancing Science

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- BWIS has a long and distinguished history of assisting women at BNL
- Workforce diversity remains a difficult issue despite measurable progress
- BWIS has exciting new initiatives to improve climate for women

**BWIS homepage: <http://www.bnl.gov/bwis>**

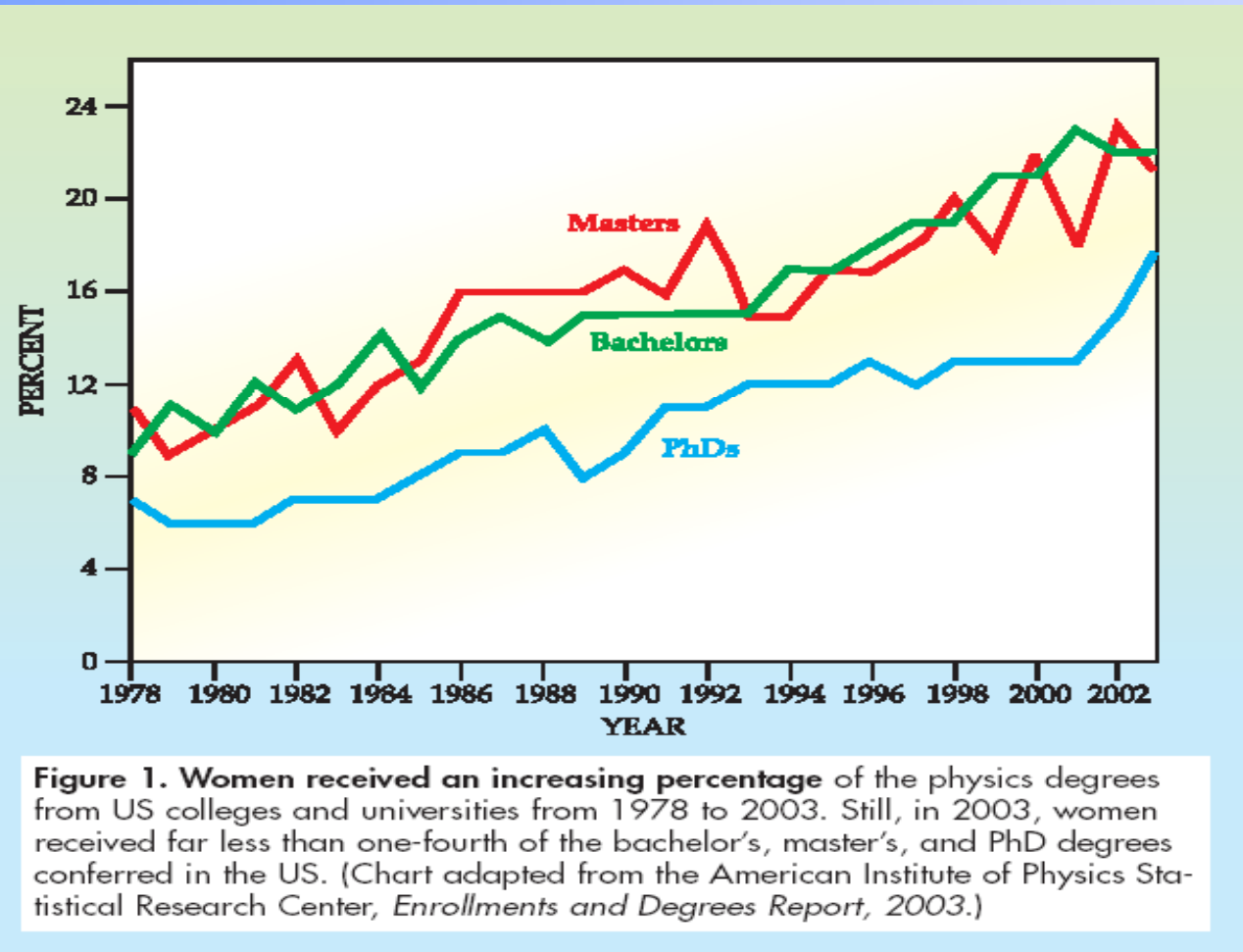
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- Invitation to join BWIS:  
Membership form available at our website
- Members: People affiliated with BNL/BSA
- Affiliate members: Anyone sympathetic to the objectives of the organization



# Diversity in Physics, Shirley M. Malcolm

## Physics Today, June 2006



# Diversity in Physics, Shirley M. Malcolm

## Physics Today, June 2006

**Table 1. Doctorates by field, sex, and race, class of 2004**

Field	All	US*	Women	American Indian*	Asian*	African American*	Hispanic*
Physics	1186	559	184	1	44	13	13
Chemistry	1987	1180	629	4	110	46	43
Mathematics	1075	510	305	0	54	10	26
Computer & Information Science	949	448	195	2	72	17	13
Engineering	5776	2182	1014	6	354	94	88

Source: T. B. Holfer et al., ref. 1

\*US citizens and permanent residents

Field	%women	% US*
Physics	16	47
Chemistry	32	59
Mathematics	28	47
C&I Science	21	47
Engineering	18	38