

IGERT Inquirer  
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Week of February 21, 2005

WSU-IGERT Fellows Annual Reviews,

WSU-IGERT Annual Reviews will begin April 2005. As part of the structure of the program, fellows are evaluated on an annual basis. These reviews began in 2002, and serve a mechanism to ascertain fellows' progress. Furthermore, these sessions give the three member review committee insights on how fellows research meet the high performance and computing simulation component of the overall program.

It is mandatory that all fellows schedule a session. The presentations take about an hour, on average. The primary focus of the session is to cover any associated articles drafted as well as an evaluation of the fellow's presentation outlining their research.

Select forms need to be completed and submitted to Doris King. If you are in need of a form or have any general question(s), contact Doris King. If you have any materials or packages to submit, leave them in Doris' mailbox in the CS office. She will then distribute these items to the committee. Lastly, your scheduling purposes please provide Doris with your availability in April. If you have any specific question(s) feel free to contact Vipin.

John Knox Dissertation Defense

WSU-IGERT is pleased to announce the successful final defense of John Knox. John was a member of Berny Schelgel's research group. Dr. Knox had an excellent public presentation that lasted a little under an hour. Picture of this event can be accessed in the events portion of the WSU-IGERT website.

John had immediate plans after his defense. In fact, WSU-IGERT wanted to acknowledge John's accomplishment by scheduling a celebration. But, John is off to a post-doc in Singapore with Novartis. John is out of the country looking for cures associated with tropical disease.

A WIGSCO Thank You

The WIGSCO committee would like to take this opportunity to express our sincere appreciation to Hrant Hrachian for the dedication he has shown to the development of this student-led committee. WIGSCO (WSU-IGERT Student Committee) is responsible for serving the interests of the WSU-IGERT fellows by communicating program policies to the fellows and providing constructive input to the IGERT faculty.

In particular, WIGSCO organized the fall IGERT introductory session that allowed IGERT fellows the opportunity to speak informally about their projects. WIGSCO is also represented on the IGERT curriculum committee, providing student feedback on the required IGERT courses. WIGSCO is also in the process of planning several summer IGERT activities.

As the WIGSCO's senior fellow, Hrant provided invaluable advice and feedback. He was particularly helpful in defining the goals and purpose of the WIGSCO committee. His unique perspectives helped shape WIGSCO's advice on the IGERT coursework, IGERT recruiting/retention and defining the expectations of the IGERT fellows.

WIGSCO would like to thank Hrant for his dedication to the committee and the IGERT program in general. Good luck as you complete the final stages of your Ph.D. And we wish you all the best in your future endeavors.

Sincerely,  
WIGSCO

Cristina Piluso  
JP Walters

## FEATURED ARTICLES

### Attending Professional Meetings

#### OVERVIEW

Professional meetings are gatherings of individuals with related professional interests, often from across the country and even around the world. Such events range from highly focused meetings of a few dozen participants to much broader meetings of several hundred or even several thousand individuals. Indeed, the very largest of these meetings can involve as many as 60,000 people. Such events provide a formidable challenge to even the most experienced professional if the attendee is to profit from the experience and not succumb to "meeting trauma syndrome."

#### Why Attend a Professional Meeting?

There are many benefits to attending a professional meeting, including the following:

- learn about new developments in your area of research

Many people present their latest results at professional meetings. Because it can be a year or two before such work appears in print, meetings provide a mechanism to gain the most current information about the field.

- broaden your knowledge of the field

Professional meetings provide a way to learn about different areas of research, often via general lectures by prominent members of a field.

- get experience making presentations

At most professional meetings there are opportunities to present a "poster" or a short talk.

- get feedback on your work

Several dozen to several hundred people will see your presentation and many may provide feedback on your work.

- develop your network of contacts

Professional meetings provide an opportunity to meet new people and strengthen existing contacts through formal and informal interactions.

- learn about funding opportunities and meet program officers from granting agencies

Participants often can meet with staff members from public and private funding agencies officers and get the latest information on grants available for training, research, and other professional activities.

- learn about employment opportunities and interview for positions Employment services, career workshops, and informal discussions can assist you in obtaining your next position.

- see the newest tools for conducting research

Vendors exhibit their latest products at displays staffed by technical

*Taken from*

**ATTENDING**

**PROFESSIONAL MEETINGS**

**SUCCESSFULLY**

*Beth A. Fischer & Michael J. Zigmond*

*University of Pittsburgh*

*revised: September, 1999*

## MentorNet

As young women look to make decisions on graduate school, jobs and careers, what can be most valuable is hearing from women and men who went through the same decision processes." - MentorNet Mentor

MentorNet is the award-winning nonprofit e-mentoring network that addresses the retention and success of those in engineering, science and mathematics, particularly but not exclusively women. Founded in 1997, MentorNet provides highly motivated protégés from many of the world's top colleges and universities with positive, one-on-one, email-based mentoring relationships with mentors from industry and academia. In addition, the MentorNet Community provides opportunities to connect with others from around the world who are interested in diversifying engineering and science. Learn more about MentorNet: <http://www.mentornet.net/>

*Retrieved from*

[onlineethics.org](http://onlineethics.org) The Online Ethics Center for Engineering and Science

## Engendering Equity: Fostering Computer Science Success Among Women and Minorities

*Debra Clingsm, U.S. Woman Engineer: Magazine of the Society of Women Engineers, May/June 1993, pp. 38-41.*

Statistics show a decrease in the number of students enrolled in computer science courses. This decline has been attributed to a decrease in the enrollment of women students in computer science. The decrease has been linked to female students' "turnoff" to math at an early age and their tendency to avoid computing courses and clubs in high school.

Studies show that very few women enroll in computer science majors and the few who enroll generally switch to nontechnical majors after the first year. The Campbell and McCabe study ("A Comparison of Male and Female Computer Science Students' Attitudes Towards Computers") has shown that the ratio of males to females in introductory computer science classes is approximately 2:1. This ratio increases in favor of men as the level of difficulty of the courses increases. From this, McCabe and Campbell conclude that males are better able to deal with more demanding situations than females. Evidence exists to prove that the answer is more complex than this.

#### Gender Studies in Computing

Teachers were asked to design software for boys, girls, or children of an unspecified gender. The results of the investigation were:

- Programs for boys emphasized time, eye and hand coordination, and competition.
- Programs for girls emphasized conversation and goal-based learning.
- Programs for children in general had the same structure as programs for boys.
- More situational stress was experienced by students who use software designed for the opposite gender
- Situational stress arose in both genders when the program was used in public and not in private; however, the females' level was much higher than the males'.

Two major conclusions were drawn from the study:

- A gender bias in favor of males exists in educational software regardless of whether the creator is male or female.
- Social setting influences performance and stress levels. For women, the social setting is one in which they are not expected to perform well at computer- and science-related tasks. This fosters lowered self-esteem and reduced success in such fields.

#### Antecedents of Computing Success

The following is a list of factors that influence the differences in the success rates of males and females:

- A gender gap exists between the self-esteem of boys and of girls, and this gap increases with age.
- The declining sense of well-being strongly inhibits girls' actions and abilities. Boys are more likely to "speak up." This higher self-esteem translates into higher career aspirations.
- Relationships between teachers and female students are important in the development of the female students' self esteem.
- Gender stereotypes are still a major factor in shaping the career aspirations of young women. Women "learn that they are not as good in these subjects (science and math) as boys." Their enthusiasm for these subjects drops much lower than boys'.

### Impact on Women of Color

- In an executive summary report the [AAUW](#) examines the differences in the treatment of male and female students. The report has two major conclusions:
- Female students receive less attention than males.
- Females of different ethnic/racial backgrounds perceive sexism differently. Women of color face the problem of sexism within the context of racism.

The AAUW report notes that more studies focusing on women by ethnic group must be done.

### Strategies for Change

To obtain equity for females in computer science, the following should be done:

- Teachers should be made aware of gender differences in learning styles.
- Projects should be designed to determine what types of computer environments relate to boys and what types relate to girls.
- Educational software which is gender appropriate and which models ethnic diversity should be developed.
- Classroom computer projects should be introduced in a socially relevant context
- Timetables should be made which allow males and females equal access time to computer facilities.

*abstract by Rae Lewis*

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**onlineethics.org** *The Online Ethics Center for Engineering and Science*

### Re-emphasizing Teaching

*Ed Wiley, III Black Issues in Higher Education, July 29, 1993 (9-11).*

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Emphasis on research in recent years has caused several universities to move far off their teaching and research mission. There is a need for the reallocation of faculty time between teaching, research and service. A study on this subject indicated that this could only be achieved if the system for recognizing and rewarding effective teaching was changed. The study showed that professors are spending less time in the classroom and an even smaller share of their time is being devoted to advising and mentoring students.

### Minority Rewards

The study showed that a new system has to be developed to evaluate faculty contributions. One suggestion was peer evaluation. This arose out of a complaint by many women and minority faculty that white, male professors are frequently exempt from the unrewarding task of mentoring students. They believe that this takes away from the time that the minority and female faculty can spend doing research. At present most universities use student evaluation. However, the committee thought that peer

evaluation would be better because peers have a better means of evaluating course content and teaching style than students do.

#### Resistance to Change

The study showed that many white institutions did not respond well to the need for diversification, and suggested that a system for rewarding schools that voluntarily initiated efforts to increase diversity would increase the rate at which change would occur.

#### The Black College as a Guiding Light

Historically Black Colleges and Universities (HBCUs) have been recognized as teaching institutions, focusing less on the research aspect. The teaching quality and success rate of graduation is extraordinarily good. Their method of mentoring is also different. The schools motivate students to make them successful, instead of setting up barriers for them to jump over. The study found that HBCUs have the reverse problem: trying to put more emphasis on research. They hope that more research will mean more corporate funding into the institutions as well as keep them at the cutting edge of technology. They are trying to strike a balance between teaching and research. At the HBCUs a variety of criteria are used to evaluate the faculty. It involves a mixture of peer evaluation, student evaluation and evaluation of community service on a regular.

#### WSU-IGERT Fellows Seminars Winter '05

The list of fellows will be presenting seminars in the months of January and February on the followings dates. See below.

DATE	PRESENTER
2/18/05	Yugang Xiao – Recent Research
3/11/05	Jiangping Wang
3/25/05	Jason Caravas
4/8/05	Nhi Pham

The seminars will be held on Fridays in 313 State Hall from 1:00P to 2:00P. If fellows would like to have the titles of their presentations added to this text please send them to Keith Williams at [kbw@chemwayne.edu](mailto:kbw@chemwayne.edu).

#### March Social

WSU-IGERT will have its March social immediately after the Friday March 11, 2005 seminar. The group will meet for dialogue and a late lunch at Traffic Jam Restaurant on Canfield between Cass and Second at 3:00P. All WSU-IGERT faculty advisors are invited to this event as well.

As you know, the purpose of these events is to provide fellows and their faculty advisors a venue where they can enhance their social skills. Furthermore, these events provide attendees an opportunity to relax away from the stresses of advanced research. Over the past couple of months, WSU-IGERT has not

offered many of these events, but it plan to increase these offerings as the weather improves. WSU-IGERT hopes to schedule these sorts of events opposed to additional mandatory summer seminars.

### Inquirer Calendar

Retention/Recruitment meeting	February 23 <sup>rd</sup>
WSU-IGERT March Social	March 11 <sup>th</sup>
Retention/Recruitment meeting	March 2 <sup>nd</sup>
Spring Break	March 14 <sup>th</sup>
Retention/Recruitment meeting	March 9 <sup>th</sup>
WSU-IGERT Annual Review	April 1 <sup>st</sup>

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### Inquirer Statement

The *Inquirer* was originally designed as part of the WSU-IGERT Summer Internship program. This document's main purpose was to inform readers about policies and issues related to this summer project. Clearly, communication was vital to the development of an effort such as the WSU-IGERT Internship program. With the success of the *Inquirer*, it was decided that the format of the *Inquirer* would be changed to a monthly, year round component. Moreover, it was decided that the scope of this document would be changed to reflect the activity of the WSU-IGERT program in high performance computing and simulation in its entirety. Thereby, evolving into a resource that can be used by a larger audience.

With this in mind, the *Inquirer* will target text that introduces its readers to the highlights of some of the accomplishments of its members. It would also inform readers about the structure of WSU-IGERT. The *Inquirer* will look to become a feedback mechanism relative to policy, course work and most importantly, promoting the concept of "Interdisciplinary research."

### Solicitation

Anyone who has "items of interest" to share with the rest of the group is encouraged to send a note to Doris King so that the information can be submitted or the issues can be addressed. We are especially looking to inform fellows about various activities such as additional seminars, workshops, and conferences that would enhance their research experience especially if a fellow is presenting at the conference.

The *Inquirer* looks to not only inform, but also to become a vehicle to be used by faculty, staff, associates, supporters and fellows to improve the overall program. Hence, we welcome any feedback that may arise from this text. All views will be evaluated and posted.

### Next Month's issue

Next month, the *Inquirer* will present additional articles associated with ethics in technology. Also, articles will be presented by WIGSCO as the group looks to solicit replacement committee members and featured articles. Of course, there will be profiles, local articles and other text of interest.